KIN 479: Motor Control Syllabus

Sections 19236 and 18404

Instructor Information

Instructor: Ovande Furtado Jr, Ph.D.
Office: RE 289
Email: Use Canvas Inbox for communication
Phone: 818-677-5968

Office Hours:
Tuesdays & Thursdays: 9:00 AM – 12:00 PM
Also available by appointment: Schedule Appointment

Course Description

Welcome to Motor Control, a course that delves deep into foundational and applied aspects of human motor control. This is done through an integrated approach to the nature of human movement across the life span, with special emphasis on examining the perception-action loop, or the links between sensation, cognition, and movement. In this course, students will first gain foundational knowledge in motor control, including sensory and motor physiology and theories of motor control. Then they will apply this knowledge to better understand motor control of a variety of movements. Additionally, they will gain knowledge on the current state of motor control through reporting on recent applied research in a relevant area. The material learned from this course can be applied to a variety of future careers that involve rehabilitation, clinical practice, sport, and research.

- Foundational knowledge in motor control, sensory and motor physiology, and related theories.
- Applications to rehabilitation, clinical practice, sport, and research.
- Engagement with recent applied research in motor control.

Required Textbook:
Rosenbaum, D. A. *Human Motor Control* (2nd Edition).

> **!** Important
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> The required course text is the second edition of Human Motor Control by David A. Rosenbaum. Reading assignments should be done first, prior to starting other course-related tasks for the week. Your reading for the week is posted below. This course will be delivered through Canvas. All materials, grades, and discussions will be accessed through this site. Therefore, please take the time to familiarize yourself with the course pages during the first week of the course. Also, Microsoft Office is required, as we will discuss material through PowerPoint presentations, and some assignments require Excel.

Learning Objectives

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

1. Each learning objective for this course targets one or more of the Department of Kinesiology's Student Learning Outcomes. The department website provides a complete description of these Outcomes. By the end of this course, students will be able to:

- Describe different approaches to understanding motor control, including dynamical systems and other, more traditional approaches SLO 1, 4
- Apply foundational knowledge of sensorimotor structure and function to motor control applications SLO 1, 2
- Describe theories that frame and describe motor control SLO 1, 2
- Use articles to establish evidence-based approaches to designing exercises that influence motor control SLO 1, 3, 4
- Understand, interpret, and critique current motor control articles on different topics. SLO 3, 4
- Reflect on how historical concepts can influence the theories of motor control and action SLO 2, 4

Course Format and Attendance

This course will be delivered entirely online. All materials for a given week will be posted by 5:00 PM each Monday, and each set of posted materials is intended to cover an entire week. Each week's materials will have an associated page on the Canvas site. Students are encouraged to take advantage of the asynchronous online format and learn and digest the materials at their own pace. Any assignments given for a week will be due the Monday after

they are assigned. Therefore, students should review all material for the week, complete any activities, quizzes, and projects for the week, and submit them before the deadline. Lectures will be posted weekly to accompany the reading material.

No attendance will be taken for this course, and no participation points will be given. Due to its mostly asynchronous nature, students have the freedom to learn at their own pace and demonstrate their knowledge of the material through the quality of their assignments.

Communication, Sexual Misconduct Disclosures, and Respectful Environment

Proper communication etiquette is essential for fostering a respectful learning environment. Please:

- Use clear and respectful language in emails and discussion posts.
- Be mindful of diverse perspectives and identities.

Sexual Misconduct Disclosures:

One of your instructor's responsibilities is to help maintain a respectful learning environment. If a student chooses to write, speak, or otherwise disclose about having experienced sexual misconduct/sexual violence, including rape, sexual assault, sexual battery, dating violence, domestic violence, or stalking and specifies that this violence occurred while they or the perpetrator were a CSUN student, federal and state laws require that the instructor, as a "responsible employee," notify our campus Title IX coordinator.

CSUN Title IX Coordinator: Barrett Morris (barrett.morris@csun.edu)
Campus Care Advocate: (818) 677-4972
CSUN Title IX Website

E-mail Policy

To ensure efficient and effective communication throughout this course:

1. **Direct Email for Private Matters**: Contact me via Canvas Inbox for personal concerns, issues related to grading, or matters requiring confidentiality.
2. **Questions on Assignments**: Post them under each week's announcement on Canvas > Announcements.

Late Assignment Policy

- **Deduction**: Assignments submitted late without prior arrangements will incur a 5% deduction per day, up to four days.
- **After Four Days**: Assignments will no longer be accepted.

Graduate Student Expectations

Graduate students will complete presentations independently, following specific guidelines.

Student Performance Evaluation

- **Quizzes (25%)**: Weekly, timed quizzes administered on Canvas. Lowest quiz score dropped.
- **Presentation (15%)**: Group presentations on movement disorders. Due April 14 by 5:00 PM.
- **Midterm Exam (30%)**: Assigned March 10, due March 17.
- **Final Exam (30%)**: Assigned May 5, due May 13.

Grading Scale:

Grade	Percentage
A	93%-100%
A-	90%-92.9%
B+	87%-89.9%
B	83%-86.9%
B-	80%-82.9%
C+	77%-79.9%
C	73%-76.9%
C-	70%-72.9%
D+	67%-69.9%
D	63%-66.9%
D-	60%-62.9%
F	Below 60%

Accessibility and Support

Students with disabilities are encouraged to request accommodations early through the Office of Students with Disabilities Resources. Contact: (818) 677-2684.

Academic Integrity

All students are expected to adhere to CSUN's policies on academic honesty. Violations may result in a failing grade and further disciplinary actions.

Course Schedule[1]

The following sequence is a tentative outline of the topics and assignments for this semester. In most instances, the sequence of the course schedule is followed; however, due to extenuating circumstances, it is sometimes necessary for the instructor to make changes in either the schedule or assignments.

Week	Dates	Topics	Readings/Tasks	Assignments Due
1	Jan 20-27	Intro Course and Syllabus	Syllabus	Syllabus Quiz
2	Jan 27-Feb 3	Introduction to Motor Control	Chapter 1 (pgs. 1-8); Chapter 2 (pgs. 11-38)	Quiz Ch1-2
3	Feb 3-10	Sensory Physiology	Chapter 3 (pgs. 43-45; 50-55)	Quiz Ch3
4	Feb 10-17	Vision	Chapter 6 (pgs. 174-207)	Quiz Ch6
5	Feb 17-24	Motor Physiology	Chapter 3 (pgs. 46-49; 55-89)	Quiz Ch3
6	Feb 24-Mar 3	Psychology and Motor Control	Chapter 4 (pgs. 94-103; 106-131)	Quiz Ch4
7	Mar 3-10	Theories of Motor Control	Chapter 4 (pgs. 103-106); Chapter 12	Quiz Ch4
8	Mar 10-17	Midterm Exam	Study Materials	Midterm Exam Due Mar 17
9	Mar 17-24	Spring Break – No Class		

[1] *This schedule is subject to change.*

Week	Dates	Topics	Readings/Tasks	Assignments Due
10	Mar 24-31	Locomotion	Chapter 5 (pgs. 136-170)	Quiz Ch5
11	Mar 31-Apr 7	Reaching and Grasping	Chapter 7 (pgs. 214-247)	Quiz Ch7
12	Apr 7-14	Drawing and Writing	Chapter 8 (pgs. 254-272)	Quiz Ch8
13	Apr 14-21	Speaking and Singing	Chapter 10 (pgs. 324-358)	Presentations
14	Apr 21-28	Facial Control	Chapter 11 (pgs. 364-376)	Quiz Ch11
15	Apr 28-May 5	Final Exam Review	Chapter 12 (pgs. 379-394)	Quiz Ch12
16	May 5-13	Final Exam	Study Materials	Final Exam Due May 13