



Instructor Information:

Ovande Furtado Jr, Ph.D.

Office: RE 289

Email: use Canvas Inbox for communication with me

Phone: 818-677-5968

Office Hours:

Tuesdays & Thursday 9:00 AM – 12:00 PM

Also available by appointment

<https://bit.ly/drfurtado-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.

Required Textbook and Supplemental Materials

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 for Motor Control

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:

- (1) Describe different approaches to understanding motor control, including dynamical systems and other, more traditional approaches *SLO 1, 4*
- (2) Apply foundational knowledge of sensorimotor structure and function to motor control applications *SLO 1, 2*
- (3) Describe theories that frame and describe motor control *SLO 1, 2*
- (4) Use articles to establish evidence-based approaches to designing exercises that influence motor control *SLO 1, 3, 4*
- (5) Understand, interpret, and critique current motor control articles on different topics. *SLO 3, 4*
- (6) 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 the mostly asynchronous nature of the course, students have the freedom to learn at their own pace and demonstrate their knowledge of the material through the quality of assignments submitted.

Communication, Sexual Misconduct Disclosures, and Maintenance of a Respectful Learning Environment

Proper communication etiquette with the instructor and classmates is essential. Students are expected to maintain an appropriate level of respect when always communicating with others and can expect to receive the same level of respect from the instructor. Ultimately, everyone in this class can feel free to speak their mind, ask questions, and have intellectual conversations without feeling judged or marginalized. Students should make sure any questions asked through email or on the discussion board are clear and use appropriate email and discussion board etiquette. Students are welcome to ask questions in person, at the instructor's office hours or by appointment.

Professional courtesy and consideration for our classroom community are especially important concerning topics dealing with differences in race, color, gender and gender identity/expression, sexual orientation, national origin, religion, disability, and age. In this course, the topic of sex (including sexual misconduct/sexual violence) may emerge either purposefully or inadvertently in readings, videos, class discussions, or other materials. Such topics may be particularly upsetting for some survivors, and all students are encouraged to seek the support they need. *Please be aware of the following policy regarding confidentiality and disclosures of incidents of sexual misconduct/sexual violence:*

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. The Title IX coordinator will contact the student to inform them of their rights and options as a survivor and connect them with support resources. Know that the student will not be forced to share information, and their level of involvement will be their choice.

CSUN's Title IX coordinator is: Barrett Morris, University Hall, Room 285, (818) 677-2077, barrett.morris@csun.edu

Alternatively, students can speak confidentially with the Campus Care Advocate at (818) 677-4972.

Please visit the University's Title IX website at: <http://www.csun.edu/title-ix>.

Graduate Student Expectations

Students will be expected to perform their presentations alone instead of in a group for graduate credit. See presentation guidelines for more information.

Student Performance Evaluation

25% - Quizzes—Quizzes will be administered most weeks online. These will allow students to demonstrate their knowledge of the material learned that week. These will take place on Canvas, and each quiz will have a strict time limit. Students will only have one opportunity to take the quiz and will not be allowed to take a quiz after the deadline passes. If a student encounters any technical difficulties, they should email the instructor immediately with any relevant screenshots. *The lowest quiz score will be dropped at the end of the term.*

15%—Presentation—Students will be randomly assigned to a group that presents on a specific movement disorder. Part of the presentation grade is asking other groups questions about their presentation. Similarly, presenters will also be graded on their responses to questions asked by classmates. ***Presentations must be uploaded to Canvas by 5:00 PM on Monday, April 14th.***

30% - Midterm — Assigned Monday, March 10th @ 5pm, Due Monday, March 17th @ 5 pm

30% - Final Exam — Assigned Monday, May 5th @ 5pm, Due Monday, May 13th @ 5pm

Grading Scale

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

Requests for an Incomplete (I) must conform to [university policies](#). Among other requirements, "I" is possible only when you demonstrate passing work in the class.

Students with Disabilities

In conjunction with California State University Northridge, this instructor is committed to upholding and maintaining all aspects of the federal Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973. If you are a student with a disability and wish to request accommodations, please contact the office of Students with Disabilities Resources located in 110 Student Services Building, or call (818) 677-2684 for an appointment. Any information regarding your disability will remain confidential. Because many accommodations require early planning, requests for accommodations should be made as early as possible. Any requests for accommodations will be reviewed promptly to determine their appropriateness to this setting.

Statement of Cheating and Plagiarism

Each student is expected to be familiar with and abide by the conditions of student conduct, as presented in the CSUN Catalog, with emphasis on sections entitled Student Conduct Code, Academic Dishonesty, Faculty Policy on Academic Dishonesty, and Penalties. Any student engaging in academic dishonesty (e.g., cheating, fabrication, facilitating academic dishonesty, plagiarism) is subject to discipline, which may include a failing grade in the course and may also be subject to more severe discipline by the University.

E-mail Policy

To ensure efficient and effective communication throughout this course, I would like to establish clear guidelines regarding the preferred channels for course-related inquiries and personal matters.

1. **Direct email for private matters:** If you have any personal concerns, issues related to grading, or matters that require confidentiality, I kindly request that you contact me directly via **Canvas Inbox**.
2. **Questions related to assignments:** Post your question(s) each week's announcement post under Canvas > Announcements.

Course Sequence (subject to change)

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 | Topic | Reading | Due @ 5pm |
|--|--|---|--|
| 1 Jan 20-27 | Intro Course and Syllabus | Syllabus | -- |
| 2 Jan 27-Feb 3 | Introduction to motor control Current issues in motor control | Chapter 1-Introduction (pgs. 1-8) Chapter 2-Core Problems (pgs. 11-38) | Syllabus Quiz |
| 3 Feb 3-10 | Sensory physiology Presentation guidelines | Chapter 3-Physiological Foundations (pgs. 43-45; 50-55); <i>see posted slides</i> | Quiz Ch1 (1-8), Ch2 (11-38) |
| 4 Feb 10-17 | Vision | Chapter 6-Looking (pgs. 174-207) | Quiz Ch3 (43-45; 50-55) List of topics |
| 5 Feb 17-24 | Motor physiology | Chapter 3-Physiological Foundations (pgs. 46-49; 55-89) | Quiz Ch6 (174-207) |
| 6 Feb 24-Mar 3 | Psychology and motor control | Chapter 4-Psychological Foundations (pgs. 94-103; 106-131) | Quiz Ch3 (46-49; 55-89) |
| 7 Mar 3-10 | Theories of motor control Midterm review | Chapter 4-Psychological Foundations (pgs. 103-106) Chapter 12-Moving on (pgs. 395-420) | Quiz Ch4 (94-103; 106-131) |
| 8 Mar 10-17 | MIDTERM EXAM Assigned Mar 10 @ 5pm | Study for midterm | Quiz Ch4 (103-106); Ch12 (395-420) |
| 9 Mar 17-24 | Spring Break – no class | | |
| 10 Mar 24-31 | Locomotion | Chapter 5-Walking (pgs. 136-170) | Midterm exam due Mar 24 @ 5pm |
| 11 Mar 31-Apr 7 | Reaching and grasping | Chapter 7-Reaching and Grasping (pgs. 214-247) | Quiz Ch5 (136-170) |
| 12 Apr 7-14 | Drawing and writing | Chapter 8-Drawing and Writing (pgs. 254-272) | Quiz Ch7 (214-247) |
| 13 Apr 14-21 | Speaking and singing Watch presentations | Chapter 10-Speaking and singing (pgs. 324-358) | Quiz Ch8 (254-272) Presentations |
| 14 Apr 21-28 | Facial control | Chapter 11-Smiling (pgs. 364-376) | Quiz Ch10 (324-358) |
| 15 Apr 28-May 5 | Facial control Final exam review Watch presentations | Chapter 12-Moving on (pgs. 379-394) | Quiz Ch11 (364-376) Presentation Questions |
| 16 May 5-9 | Final exam assigned May 5 @ 5pm | Study for final | Quiz Ch12 (379-394) Presentation Answers |
| Finals May 10-16 | | | |
| **FINAL EXAM DUE MONDAY, MAY 13 @ 5PM** | | | |