PET 5936
Motor Output Variability
Spring 2019

Instructor:	Dr. Evangelos A. Christou
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Office Hours:	By Appointment

Class Room:	FLG 245
Class Days:	M
Class Time:	Period 11-E2 (6:15-7:05, 7:20-8:10; 8:20-9:10)
Class #:	19812

Course Overview

Designed to provide an in-depth analysis of motor output variability. The course will cover the factors that influence motor output variability, the underlying mechanisms of motor output variability, and the functional consequences of motor output variability.

Textbook

Handouts and review papers will be provided for specific topics (see schedule).

General Course Policies

Attendance:
This is a graduate course that meets every Monday evening. I will take attendance every time. You are allowed one absence throughout the semester. For any unexcused absence beyond that I will take away 5% from your total grade.
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx

Accommodations: Students requesting classroom or other special accommodations must first register with the Dean of Students Office—Disability Resource Center (DRC).

The Dean of Students Office will provide documentation to the student who must then present the documentation to the instructor when requesting accommodation. For optimal consideration, you must see the professor within the first three days of class.

Technology: The use of cell phones* (and the like) is strictly prohibited during lectures and exams. Any cell phone or other electronic device used during an exam will be considered a violation of the student honor code (i.e., cheating) and will result stiff penalties. Laptop computers are welcome in class as long as you are using it for class-related work. Surfing the web, checking your email, making Facebook posts, or anything of that nature is strictly prohibited. Violation of this policy will result in point deductions at

the discretion of the instructor.

Communication: You are responsible for checking announcements and course postings on E LEARNING. This is how your course instructor will communicate with you. All course grades will be posted on E LEARNING. Any discrepancies should be pointed out to the instructor on or before the last day of finals week.

Academic Honesty: On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied***: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."*** Any student found violating this honor code will receive a zero for that exam or assignment and may be assigned other educational sanctions at the instructor's discretion. https://sccr.dso.ufl.edu/process/student-conduct-code/

Evaluations: Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of the assessments will also be available to students at website.

Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies

Student Learning Objectives
Knowledge: Discuss, explain, and defend subject matter relevant to Motor Output Variability.

Skills: Discuss, explain, and defend specific skills related to Motor Output Variability.

Professional Behavior: Demonstrate proficiency in presenting and explaining concepts related to motor output variability in a professional manner.

Course Examinations and Grading

Activity/Assignment	Points
1. Paper Presentation	30
2. Group Review Presentation	30
3. Final Group Review Paper	40
TOTAL POINTS	100

Exams
There will be no final exam for this course.

Paper Presentation (30%)
This presentation will be based on a research article that you will identify in the first week on your own. At the first class you will sign-up to a presentation slot and you will identify a strong research paper that matches the weekly topic. The paper needs to be approved by me.
The length of the presentation should be **30 minutes** and should be in the format of a powerpoint presentation. The 30 minute limit is strict and you will be cut short if you go over your time. My suggestion, therefore, is to practice the presentation ahead of time. Conciseness, clarity, and information delivery will be part of your grade. There will be a 15-20 minutes question-answer and discussion session after each presentation.

Group Review Presentation (30%)
This presentation will be based on your extensive review of a topic you will choose at the first class (same as Group Review Paper).
The length of the presentation should be **60 minutes** and should be in the format of a powerpoint presentation. The 60 minute limit is strict and you will be cut short if you go over your time. My suggestion, therefore, is to practice the presentation ahead of time. Conciseness, clarity, and information delivery will be part of your grade. There will be a 15-20 minutes question-answer and discussion session after each presentation.

Group Review Paper (30%)
There will be two students for each group. This paper will be based on your review of a topic you will choose at the first class. This paper will lead to a specific hypothesis that needs to be tested in future work. Possible topics are on the final page of the syllabus.

Grades: The total points earned from quizzes and presentation will be summed. There is no curve for this course. I reserve the right to round up grades for students who show exceptional participation in class. However, under most circumstances GRADES WILL NOT BE ROUNDED UP!!! If you earn a 79.94%, you will receive a C+, not a B. The following grading scale will be used to assess students in this course. For more detailed information on current UF grading policies, please see the undergraduate catalog web page:

https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/

Letter Grade	Points Necessary for Each Letter Grade	Percent of Total Points	GPA Equivalent
A	93	93.00-100%	4.0
A-	90	90.00-92.99%	3.67
B+	87	87.00-89.99%	3.33
B	83	83.00-86.99%	3.0
B-	80	80.00-82.99%	2.67
C+	77	77.00-79.99%	2.33
C	70	70.00-76.99%	2.0
D+	67	67.00-69.99%	1.33
D	60	60.00-66.99%	1.0
E	<60	0-59.99%	0

Tentative Lecture Schedule

This approximates what the semester will consist of. This outline is subject to change at any point during the semester.

Week	Date	Lecture Topic	Assign.
1	M – Jan 7	Syllabus explanation / Organization Introduction to Motor Output Variability	
2	M – Jan 14	**Factors influencing Motor Output Variability** Lecture: Force, Movement Speed, Contraction type Paper 1	
3	M – Jan 21	MARTIN LUTHER KING DAY	
4	M – Jan 28	**Factors influencing Motor Output Variability** Lecture: Aging, Visual Feedback, Stress Paper 2	
5	M – Feb 4	**Factors influencing Motor Output Variability** Lecture: Fatigue, Pain, Movement Disorders Paper 3	
6	M – Feb 11	**Mechanisms of Motor Output Variability** Noise and Motor Unit Activity Paper 4	
7	M – Feb 18	**Mechanisms of Motor Output Variability** Oscillations Paper 5	
8	M – Feb 25	**Mechanisms of Motor Output Variability** Coordination Paper 6	
9	M – Mar 4	SPRING BREAK	
10	M – Mar 11	**Functional Consequences of Motor Output Variability** Motor Learning Paper 7	
11	M – Mar 18	**Functional Consequences of Motor Output Variability** Reaction Time, Reactive Driving, Gait Paper 8	
12	M – Mar 25	**Prof. Karl Newell – Guest Speaker**	**Paper Draft Due**
13	M – Apr 1	Presentation Group 1	
14	M – Apr 8	Presentation Group 2	
15	M – Apr 15	Presentation Group 3	
16	M – Apr 22	Presentation Group 4	
	F - May 3	***Final Exam Time: 10-12 pm*** There is no final REVIEW PAPER DUE	**Final Paper Due**

Possible Review Paper Topics

1. **Motor Output Variability in Movement Disorders**
2. **Motor Output Variability and Oscillations**
3. **Difference between trajectory variability and endpoint variability**
4. **Sports and Motor Output Variability**
5. **Factors Influencing Motor Output Variability**
6. **Mechanisms of Motor Output Variability**
7. **Functional Consequences of Motor Output Variability**