



George Mason University
College of Education and Human Development
School of Kinesiology
KINE 404.001.81134: Motor Control and Learning
KINE 604.001.81136: Motor Control Theory and Application
3 Credits, Spring 2024, T, Th 9:00 AM – 10:15 AM,
Katherine Johnson Hall 131 – SciTech Campus

Faculty

Name: Dr. Tiphanie Raffegeau
Office Hours: in-person Mondays 10 AM- 11:50AM in 201G *or by appointment (zoom)*
Office Location: 201G K Johnson Hall, SciTech Campus
Office Phone: 703-993-6929
Email Address: traffege@gmu.edu

Prerequisites/Corequisites

Enrollment is limited to students who have completed 90 credit hours of undergraduate work.

University Catalog Course Description

Covers motor control theory and application to common activities such as gait, balance and more complex movement skills.

Course Overview

The course is designed to expose students to the advanced principles and theory of motor control commonly used by practitioners working with patients across the lifespan and ability level.

Course Delivery Method

This course will be delivered using a mix of a lecture, in-class activities, discussions, lab reports, and online readings (~25% online). Other approaches may be used to facilitate learning, overall, this will be a highly interactive class and students will be encouraged to participate.

Learner Outcomes or Objectives

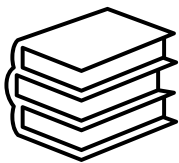
This course is designed to enable students to do the following:

1. Demonstrate an understanding of motor control concepts and theories
2. Compare strengths and weaknesses of common theories of motor control
3. Analyze how the neuromuscular system controls common movements across the lifespan
4. Design population-specific interventions that apply motor control theories to improve motor skill performance and acquisition

Professional Standards

This course meets the Commission on Accreditation of Allied Health Education Programs (CAAHEP) requirements and covers the following American College of Sports Medicine's Knowledge-Skills-Abilities (KSA's):

Required Texts



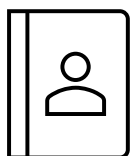
- Coker, C.A. (5th edition). Motor learning and control for practitioners. New York, NY: Routledge. (ISBN 9781138737013)

Supplementary materials

Supplementary materials will be used in class and posted on BlackBoard/MyMason Portal. Please bring your laptop/device to class so that you have access to them when needed, or be prepared to print the materials in advance.

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard).



Students will be evaluated on content standards (knowledge gained) and performance (demonstration of the content). Content standards will be assessed via exams, short quizzes, and homework assignments. Performance will be assessed through completion of class activities. Once your FINAL GRADE, at the end of the semester is posted on mymasonportal/blackboard, you will have 24 hours to inquire about it. After that period, your grade will be posted as final on Patriot Web.

Possible points earned for the course:

KINE 404		KINE 604	
<i>Activities</i>	<i>Points (%)</i>	<i>Activities</i>	<i>Points (%)</i>
Unit 1-15	30	Unit 1-15	15
Content Quizzes	40	Content Quizzes	25
Scientific Communication Final Project	10	Scientific Communication Final Projects	40
Professionalism	20	Professionalism	20
TOTAL	101	TOTAL	100

Grading Scale

A+ = 97 – 100	B+ = 87 – 89	C+ = 77 – 79	D = 60 – 69
A = 94 – 96	B = 84 – 86	C = 74 – 76	F = 0 – 59
A- = 90 – 93	B- = 80 – 83	C- = 70 – 73	

Assignments and/or Examinations

Unit Content

Each week you will have a series of activities (e.g. readings, worksheets, in-class activity summaries) to complete related to the textbook and course content, detailed in our course schedule (see table below). The activities will vary and may require anywhere from 3-9 hours to complete each week, depending on your learning style and the material. Each unit will open on Sunday at 12:30am, the weekend before we discuss the material in lecture. **Unit activity deadlines will vary as some activities will need to be completed before our meetings** to prepare you for

in-class discussion and collaborative work. Most work will be due at the same time as your content quizzes (see below), Sunday at midnight (really, 11:59 PM).

Weekly Quizzes

Instead of exams, each Unit will have a content quiz included that must be completed by the end of the week, due by Sunday at midnight (really, 11:59 PM). The quizzes will include multiple choice, matching, short answer, and essay questions. I expect you to be able to take these quizzes independently as they will be open-book/open-note quizzes (No need for LockdownBrowser).

Quizzes will be timed (~1 minute per multiple choice question) and administered in a random order. You will be able to retake quizzes once, but you will not get feedback about correct answers in the quiz. If you have questions about your performance on a quiz, you will need to meet with Dr. Raffegau in-person after class, during office hours, or by appointment as she will not share answers or guidance over email or zoom.

Scientific Communication Project: Effectively communicating scientific information is a critical workplace skill for all Kinesiology majors. *All students* will have the opportunity to practice their scientific communication skills in a traditional essay format, blog post, podcast, and tik-tok style video OR infographic. Students enrolled in 404 will choose 1 option to complete by their respective due dates (see below). Students enrolled in 604 will complete all 4 modalities of scientific communication by their respective due dates. See Blackboard tab 'Science Communication Assignments' for details of the project.

Professionalism



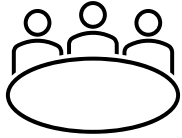
Students are expected to behave in a professional manner. Depending on the setting professionalism may look slightly different but generally consists of similar components. For Kinesiology students in a classroom setting professionalism generally consists of the following components (see <https://cehd.gmu.edu/students/polices-procedures/>). Students are held to the standards of the George Mason University Honor Code.

Attendance and Participation Show up on time to in-person and online class meetings, pay attention, and engage yourself in the lessons, discussions, class activities, etc. Demonstrate that you have an interest in the subject matter. Follow George Mason University policies for any excused absences (i.e. communicate with your professor in advance). Arriving to class late or leaving early will be counted as an absence. Students are expected to show up prepared to class and participate during class activities. Students who know they will need to miss a class for a legitimate reason should contact the instructor before the class. Make-up tests, quizzes, assignments, or other grades will be granted for excused absences (See [AP. 1.6](#)). Excused absences include: serious illness, official university excused absences and extenuating circumstances. It is the student's responsibility to contact the instructor ASAP to obtain the make-up work.

Attendance is required and will be recorded in the first five minutes of every class meeting.



Attendance will be taken in the first five minutes of class using a one-time Pincode through Blackboard using Qwickly (Go to Blackboard: Course Content: Qwickly). After the link is closed, you will be recorded as absent, and you will lose Professionalism points.

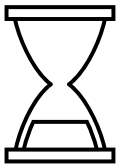


Professional Communication When communicating with the instructor and classmates, either face-to-face or via email, students should address the other person appropriately, use appropriate language and maintain a pleasant demeanor. Everyone should feel welcome in my classroom and all students will be treated equally. I have a zero-tolerance policy for intolerance and if you disrupt someone's learning experience, I reserve the right to remove you from the

class for the day. Before attending another class, any disruptions will be addressed outside of class with appropriate documentation.

Late Work Policy

No late work will be accepted for full credit without previous arrangement with the professor. Extension requests must be submitted with an excusable explanation as to why the student is unable to complete the assignment on time. No extension requests will be granted if submitted after the assignment deadline.



Any work submitted after the explicitly stated ***date and time*** (see below **and** on Blackboard) will lose 10% per 1-hour delay, up until a 50% reduction for submitting an assignment one day late. After 24 hours, the assignment will not be accepted.

If you are confused about this policy or you see a mistake or miscommunication somewhere on our syllabus or Blackboard course, it is your responsibility to contact Dr. Raffegau immediately. Not contacting Dr. Raffegau in advance indicates you understand and accept the course deadlines, including date and time.

Week	Dates	Topic	Text	Due Dates
<i>Week 1</i>	8/26-9/1	Introduction to Motor Control and Motor Learning	Ch 1	<i>Th: TED Talk Comment, Quote, Question due @9am</i> <i>Unit 1 Content (Syllabus Signature, ICA1) and Quiz due at 11:59PM 9/1</i>
<i>Week 2</i>	9/2-9/8	Understanding Movement Preparation	Ch 2 & Ch3	Last Day to Add Classes: 9/3/24 <i>Sci-Comm Project Topic Selection Due 9/8 at 11:59PM</i> <i>Unit 2 Content (ICA2) and Quiz due 9/8 at 11:59PM</i>
<i>Week 3</i>	9/9-9/15	Neural Mechanisms of Motor Control Part 1	Ch 5 Reading on BB	Last Day to Drop Classes (with 100% refund): 9/9/2024 <i>Sci-Comm Project Research Table Due 9/15 at 11:59PM</i>

Week 4	9/16-9/22	Neural Mechanisms of Motor Control Part 2	Ch 5 Reading on BB	Last Day to Drop Classes (with 50% refund): 9/17/2024 Unit 3 and 4 Content (Brain Worksheet) and Quiz due 9/22 at 11:59PM
Week 5	9/23-9/29	Behavioral Theories of Motor Control and Learning Part 1	Ch 4 Reading on BB	Unit 5 Content (Debate Prep) due 9/29 at 11:59PM
Week 6	9/30-10/6	Behavioral Theories of Motor Control and Learning Part 2	Ch 4 Reading on BB	<i>Th: Class Debate</i> Unit 6 Content (Debate Script) and Unit 5 and 6 Quiz due 10/6 at 11:59PM
Week 7	10/7-10/13	Defining and Assessing Stages of Motor Learning	Ch 6	<i>Sci-Comm Project: Essay/White Paper due Sunday 10/13 at 11:59PM</i> Unit 7 Content (ICA3) and Quiz due 10/13 at 11:59PM
Week 8	10/14-10/20	Motor Learning: The Instructor (Skill Presentation)	Ch 8	<i>Th: Article Reading and Discussion due 10/17 at 9AM</i> Unit 8 Content Quiz due 10/20 at 11:59PM
Week 9	10/21-10/27	Motor Learning: The Learner	Ch 7	<i>Sci-Comm Project: Blog Post due Sunday 10/27 at 11:59PM</i> Unit 9 due 10/27 at 11:59PM
Week 10	10/28-11/3	The Role of Attention, Arousal, and Visual Search in Motor Control and Learning	Ch 3	Unit 10 Content (ICA4) and Quiz due 11/3 at 11:59PM
Week 11	11/4-11/10	Principles of Practice Design and Schedules	Ch 9 & 10	<i>Sci-Comm Project: Infographic/Tik Tok video due Sunday 11/10 at 11:59PM</i> Unit 11 Content (Principles of Practice Worksheet) and Quiz due 11/10 at 11:59PM
Week 12	11/11-11/17	Diagnosing Errors	Ch 11	<i>Th: TED Talk Comment, Quote, Question due 11/14 at 9am</i> Unit 12 Content (Error Detection Reflection) and Quiz due at 11:59PM
Week 13	11/18-11/24	Thanksgiving Break-NO Class		

Week 14	11/25-12/1	Feedback for Correcting Errors	Ch 12	Unit 14 Content (ICA6) and Quiz due 12/1 at 11:59PM
Week 15	12/2-12/8	Motor Control, Development, and Aging	Reading on BB	Sci-Comm Project: Podcast due Sunday 12/8 at 11:59PM Unit 15 Quiz due 12/8 at 11:59PM
Week 16	12/9-12/15	Reading Days		Last Day of Classes: 12/9 Reading Days: 12/10 and 12/11 Scientific Communication Presentation due Thursday 12/12 at 10:15AM Scientific Communication Presentation replies due Sunday 12/15 at 11:59PM
Finals Week	12/16-12/22	KINE 404/604 <i>Final Exam Period: Thursday December 12th, 7:30-10:15AM</i>		Final Exams: Wednesday, Dec 11 th to Wednesday, Dec 18 th

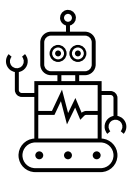
Technology Use During Class



Laptop computers (e.g., netbooks, notebooks, etc.) will be permitted for use during class time only to work on material for KINE 355. A smartphone, laptop, or tablet is required for taking attendance. A calculator with the capability to calculate sine, cosine, tangent, and convert units from radians to degrees is required for this class, a graphing calculator is recommended.

As per GMU policy, all sound emitting technology is required to be turned off during the class meeting time. No sound emitting technology (e.g., cell phones, smart phones, iPads, Tablets, pagers, etc.) is allowed at any time during the class period. Students who are observed using any form of technology inappropriately (e.g., sending text messages from cell phones, visiting social networking sites from laptops, etc) will be dismissed from class for the day, counted as an absence, and not permitted to make up missed assignments.

Generative AI Use Policy



Any student use of Generative-AI tools should follow the fundamental principles of GMU's Academic Standards policies. Generative AI can be an excellent starting point, but it is often wrong. Dr. Raffegau will check generative AI responses for all quiz questions, and as detailed above, any evidence of ***reliance on generative AI to complete your quizzes or assignments will result in zero points for that quiz or assignment.*** If Dr. Raffegau finds credible evidence of multiple instances of reliance on generative AI, you ***will earn a zero for the class.***

Academic Honesty

The integrity of the University community is affected by the individual choices made by each of us. As a Mason student, you should follow these fundamental principles at all times, as noted by the Honor Code: (1) All work submitted should be your own, without the use inappropriate assistance or

resources, as defined by the assignment or faculty member; (2) When you use the work, the words, the images, or the ideas of others--including fellow students, online sites or tools, or your own prior creations--you must give full credit through accurate citations; (3) In creating your work, you should not take materials you are not authorized to use, or falsely represent ideas or processes regarding your work. If you are uncertain about the ground rules or ethical expectations regarding the integrity of your work on a particular assignment or exam, you should ask your instructor for clarification. Support for you to complete your work is available; no grade is important enough to justify academic misconduct. Any student use of Generative-AI tools should follow the fundamental principles of the Honor Code.

disAbility Resources

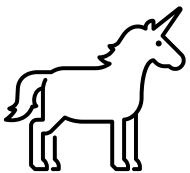


If you need accommodations for this course, please inform Dr. Raffegau as soon as possible. Differently-abled students who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see <https://ds.gmu.edu/>).

Disability Services at George Mason University is committed to upholding the letter and spirit of the laws that ensure equal treatment of people with disabilities. Under the administration of University Life, Disability Services implements and coordinates reasonable accommodations and disability-related services that afford equal access to university programs and activities.

Students can begin the registration process with Disability Services at any time during their enrollment at George Mason University. If you are seeking accommodations, please visit <http://ds.gmu.edu/> for detailed information about the Disability Services registration process. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu | Phone: (703) 993-2474.

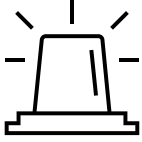
Diversity and Inclusion



This classroom is an intentionally inclusive community that promotes and maintains an equitable and just work and learning environment. We welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and ability status.

- We value our diverse student body and desire to increase the diversity of our faculty and staff.
- We commit to supporting students, faculty and staff who have been the victims of bias and discrimination.
- We promote continuous learning and improvement to create an environment that values diverse points of view and life experiences.
- We believe that faculty, staff and students play a role in creating an environment that engages diverse points of view.
- We believe that by fostering their willingness to hear and learn from a variety of sources and viewpoints, our students will gain competence in communication, critical thinking and global understanding, and become aware of their biases and how they affect their interactions with others and the world. [This statement was created by the School of Integrative Studies faculty.]

Campus Resources



If you are experiencing feelings of anxiety, panic, depression, sadness during the semester, Student Health Services and [Counseling and Psychological Services](#) Offices (703-993-2380) provides a range of resources to assist and support you. Students can call (703-993-2831) or walk-in during open hours to schedule an appointment to talk with a healthcare provider. If you or someone you know experiences a mental health crisis or emergency, seek help immediately. Call 911 for local emergency services, the National Suicide Prevention Lifeline (1-800-273-8255), or text the Crisis Text Line (741-741) anytime. Dr. Raffegeau is also available to speak with you about stresses related to your work in this course, please reach out.

Core Values Commitment



The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: <http://cehd.gmu.edu/values/>.

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see <https://catalog.gmu.edu/policies/honor-code-system/> <http://oai.gmu.edu/the-mason-honor-code/>).
- Students must follow the university policy for Responsible Use of Computing (see <https://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>).
- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.
- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

Campus Resources

- Support for submission of assignments to VIA should be directed to viahelp@gmu.edu or <https://cehd.gmu.edu/aero/assessments>. Questions or concerns regarding use of Blackboard should be directed to <https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/>.
- For information on student support resources on campus, see <https://ctfe.gmu.edu/teaching/student-support-resources-on-campus>

Notice of mandatory reporting of sexual assault, interpersonal violence, and stalking:

As a faculty member, I am designated as a “Responsible Employee,” and must report all disclosures of sexual assault, interpersonal violence, and stalking to Mason’s Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason’s confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance from Mason’s Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.

For additional information on the College of Education and Human Development, please visit our website <https://cehd.gmu.edu/students/>

Student Acknowledgement of Syllabus

I, _____, by signing below, attest to the following:
(Print First and Last Name)

- *I have read the course syllabus for KINE 404-604 in its entirety, and I understand the policies contained therein. This syllabus serves as a binding contract for KINE 404-604 between the instructor and myself.
- *I have a clear understanding of the due dates for assignments and examinations, and I accept responsibility for the material.
- * I am aware that failure to submit assignments by the assigned deadline will result in a loss of 10% per 1 hour delay up to 50% reduction for submitting a day late, and no work accepted will be accepted 24 hours after the deadline.
- *I understand that if I am using emitting sound technology or personal computers I will be dismissed from class for the day and not permitted to make up missed assignments
- *I understand the instructor reserves the right to alter the provided schedules as necessary and I am responsible for the assignments and examination dates for the most current version of the syllabus schedule.
- *I accept responsibility for reading announcements that are sent to me via e-mail through BlackBoard/MyMason Portal; it is my responsibility to access my Blackboard/MyMason Portal e-mail for messages, or forward Blackboard/MyMason Portal e-mail as per the directions provided in the syllabus.

Points cannot be earned in this class until you have signed and handed this form to the instructor.

(Signature)

(Date)

(Save a copy for your reference)