George Mason University
College of Education and Human Development
Kinesiology

KINE 360 (A02) — Strength Training: Concepts & Applications
3 Credits, Summer 2021
ONLINE

Faculty

Name:	Dr. Oladipo Eddo
Office Hours:	By appointment
Office Location:	Virtual
Office Phone:	703-993-7183
Email Address:	oeddo@gmu.edu (Preferred contact)

TA name:	TBD
TA email:	TBD

Prerequisites/Corequisites

BIOL 124, BIOL 125, ATEP 300, KINE 310

University Catalog Course Description

Provides students with an opportunity to develop an in-depth understanding of the principles of strength training and conditioning, including anatomical and physiological considerations, lifting techniques, equipment selection, program development/evaluation, and weightlifting safety; thus, enabling them to teach and train clients.

Course Overview

Emphasis will be placed on assessment, description, and analysis of sport movement and designing training programs to enhance performance variables. While this course will assist students, who desire to sit for the National Strength and Conditioning Association's (NSCA) Certified Strength and Conditioning Specialist (CSCS) Exam, it is **NOT** a preparation course for the NSCA-CSCS exam. Material for the course will be drawn from the required textbook and assigned readings.

Course Delivery Method

This course will be delivered online (76% or more) using asynchronous format via the Blackboard learning management system (LMS) housed in the MyMason portal. You will log in to the Blackboard course site using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on May 17, 2021.

Under no circumstances, may candidates/students participate in online class sessions (either by phone or Internet) while operating motor vehicles. Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.

Blackboard Login Instructions

Access to MyMason and GMU email are required to participate successfully in this course. Please make sure to update your computer and prepare yourself to begin using the online format BEFORE the first day of class. Check the IT Support Center website. Navigate to the Student Support page for help and information about Blackboard. In the menu bar to the left you will find all the tools you need to become familiar with for this course. Take time to learn each. Make sure you run a system check a few days before class. Become familiar with the attributes of Blackboard and online learning.

Technical Requirements

- High-speed Internet access with standard up-to-date browsers. To get a list of Blackboard's supported browsers see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers

  To get a list of supported operation systems on different devices see: https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems

- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
- The following software plug-ins for PCs and Macs, respectively, are available for free download:
  - Adobe Acrobat Reader: https://get.adobe.com/reader/
  - Windows Media Player: https://support.microsoft.com/en-us/help/14209/get-windows-media-player
  - Apple Quick Time Player: www.apple.com/quicktime/download/

Expectations

- Course Week: Because asynchronous courses do not have a "fixed" meeting day, our week will start on Monday, and finish on Sunday.
  - *Module 1: May 17 – 23*
  - *Module 2: May 24 – 30*
  - *Module 3: May 31 – June 6*
  - *Module 4: June 7 – 13*
  - *Module 5: June 14 – 19*

    - Asynchronous courses do not have a "fixed" meeting day, as such we will follow the modules dates.
- Log-in Frequency: Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least 3 times per week.
- Participation: Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence: Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- Technical Issues: Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.
- Workload: Please be aware that this course is not self-paced. Students are expected to meet specific deadlines and due dates listed in the Class Schedule section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- Instructor Support: Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Meetings will be conducted virtually via web conference or by telephone. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.
- Netiquette: The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. Be positive in your approach with others and diplomatic in selecting your words. Remember that you are not competing with classmates but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- Accommodations: Online learners who require effective accommodations to ensure accessibility must be registered with George Mason University office of disability services.

Learner Outcomes or Objectives

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

1. Demonstrate an understanding of the physiological adaptations to resistance training.
2. Explain the role of bioenergetics to metabolic specificity of training.
3. Evaluate and design programs for developing strength, power, speed, and conditioning.
4. Analyze the value of Olympic lifting to athletic performance.
5. Examine the difference between strength training and power training.

Professional Standards

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

Upon completion of this course, students will have met the following professional standards:

KSA	Description	Lecture, Lab, or both
	GENERAL POPULATION/CORE: **EXERCISE PHYSIOLOGY AND RELATED EXERCISE**	
1.1.6	Knowledge of the curvatures of the spine including lordosis, scoliosis, and kyphosis.	Lecture
1.1.7	Knowledge of the stretch reflex and how it relates to flexibility.	Lecture
1.1.10	Knowledge of the role of aerobic and anaerobic energy systems in the performance of various physical activities.	Lecture
1.1.14	Knowledge of the anatomical and physiological adaptations associated with strength training.	Lecture
1.1.15	Knowledge of the physiological principles related to warm-up and	Lecture
1.1.20	Knowledge of the characteristics of fast and slow twitch muscle fibers.	Lecture
1.1.21	Knowledge of the sliding filament theory of muscle contraction.	Lecture
1.1.22	Knowledge of twitch, summation, and tetanus with respect to muscle contraction.	Lecture
1.1.23	Knowledge of the principles involved in promoting gains in muscular strength and endurance.	Lecture
1.1.24	Knowledge of muscle fatigue as it relates to mode, intensity, duration, and the accumulative effects of exercise.	Lecture
1.1.32	Knowledge of the concept of detraining or reversibility of conditioning and its implications in exercise programs.	Lecture
1.1.33	Knowledge of the physical and psychological signs of overreaching/overtraining and to provide recommendations for these	Lecture
1.1.35	Knowledge of the effect of the aging process on the musculoskeletal and cardiovascular structure and function at rest, during exercise, and during recovery.	Lecture
1.1.36	Knowledge of the following terms: progressive resistance, isotonic/isometric, concentric, eccentric, atrophy, hyperplasia, hypertrophy, sets, repetitions, plyometrics, Valsalva maneuver.	Lecture
	GENERAL POPULATION/CORE	
1.7.1	Knowledge of the relationship between the number of repetitions, intensity, number of sets, and rest with regard to strength training.	Lecture
1.7.3	Knowledge of the benefits and precautions associated with exercise training in across the lifespan (from youth to the elderly).	Lecture
1.7.11	Knowledge of and the ability to describe exercises designed to enhance muscular strength and/or endurance of specific major	Both
1.7.13	Knowledge of the various types of interval, continuous, and circuit training programs.	Lecture
1.7.29	Ability to identify proper and improper technique in the use of resistive equipment such as stability balls, weights, bands, resistance bars, and water exercise equipment.	Both

1.7.31	Ability to teach a progression of exercises for all major muscle groups to improve muscular strength and endurance.	Both
1.7.42	Ability to design resistive exercise programs to increase or maintain muscular strength and/or endurance.	Lecture
1.7.44	Ability to design training programs using interval, continuous, and circuit training programs.	Lecture
1.7.45	Ability to describe the advantages and disadvantages of various commercial exercise equipment in developing cardiorespiratory fitness, muscular strength, and muscular endurance.	Lecture
	GENERAL POPULATION/CORE: **SAFETY, INJURY PREVENTION, AND EMERGENCY**	
1.10.5	Knowledge of the physical and physiological signs and symptoms of overtraining and the ability to modify a program to accommodate this condition.	Lecture

Required Texts

Haff, Gregory G. & Triplett, Travis N (ed.). *Essentials of Strength Training and Conditioning (4th edition).* Human Kinetics, Champaign, 2016. ISBN-13: 978-1-4925-0162-6

Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, Tk20, hard copy).

- **Assignments and/or Examinations**

A. Final Exam (Objectives 1 – 5)

B. Reading Comprehension Quizzes (Objectives 1 – 5)

C. Homework Assignment (Objectives 1 – 5)

D. Discussion Board (Objectives 1 – 5)

E. Activities (Objectives 1 – 5)

F. Project (Objectives 1 – 5)

G. Professionalism

*Each group should designate **one student** who will be responsible for submitting and posting group assignments. This include homework submissions, and group project related submissions.*

Assignments	**Quantity**	**Points**
Reading Comprehension Quizzes	12	15
Homework	4	10
Project	1	15
Activities	4	10
Final Exam	1	40%
Professionalism	NA	10%

Grading Scale

A+	= 95 – 100	B+	= 87 – 89	C+	= 77 – 79	D	= 60 – 69
A	= 94 – 100	B	= 84 – 86	C	= 74 – 76	F	= 0 – 59
A-	= 90 – 93	B-	= 80 – 83	C-	= 70 – 73		

Final Grades:

Once your FINAL GRADE, at the end of the semester is posted on mymasonportal/blackboard, you will have 24 hours to inquire. After that period, your grade will be posted as final on Patriot Web.

Note:
1) Assignments must be turned in at the specified **due date and time** or **no credit will be given**.
2) Although a B- is a satisfactory grade for a course, students must maintain a 3.00 average in their degree program and present a 3.00 GPA on the courses listed on the graduation application.
3) Any student asking for their grade to be rounded up, increased a letter grade, extra credit only for themselves at the end of the semester, etc. may have their final average reduced by up to 2 points at the discretion of the instructor.

Make-up Policy

- Make-up exams and assignments will only be offered for those who possess a University sanctioned excuse or doctor's note.

Professional Dispositions
See https://cehd.gmu.edu/students/polices-procedures/

Students are held to the standards of the George Mason University Honor Code. You are expected to attend all class sections, actively participate in class discussions, and complete all assignments. Make-up tests, quizzes, assignments, or other grades will be granted for excused absences only. Excused absences include: serious illness, official university excused absences and extenuating circumstances. It is the student's responsibility to contact the instructor in order to obtain the make-up work. Assignments must be turned in on the specified date due or **no credit will be given**.

Communication – When communicating with the instructor and classmates, students should address the other person with respect, use appropriate language, and maintain a pleasant demeanor.

E-mail Correspondence - Messages must be in a professional format and originate from a Mason address:

Dear Dr. Eddo *(Beginning salutation),*
I have a question regarding one of the assignments. *(Text body)*
Respectfully, *(Ending Salutation)*
Student's name *(Your name)*

Class Schedule

Date		Suggested Activity for the Day	Assignments Due
Module 1: Scientific Foundation Part 1	5/17	Course Introduction	**Discussion 1 Post**
	5/18	Read chapters 21 & 1	
	5/19	Lecture Slides - Periodization Part 1	
	5/20	Lecture Slides - Structure of the Body System	**Chapter 1 Quiz**
	5/21	Read chapters 2 & 3	
	5/22	Lecture Slides - Biomechanics	**Chapter 2 Quiz**
	5/23	Lecture Slides - Bioenergetics	**Chapter 3 Quiz** **HW 1**
Module 2: Scientific Foundation Part 2	5/24	*Warm up and flexibility training* **Activity 1:** Warm-up and Flexibility	***Finalize Groups & Sports*****
	5/25	Read chapters 4 & 7	
	5/26	Lecture Slides – Endocrine Responses	**Chapter 4 Quiz**
	5/27-28	Lecture Slides – Age and sex related differences	**Chapter 7 Quiz** **Activity 1 Due**
	5/29	Read chapter 5	
	5/30	Lecture Slides – Adaptations to Anaerobic training programs	**Chapter 5 Quiz** **HW 2**
Module 3: Practical/ Applied Part 1	5/31	*Exercise technique* **Activity 2:** Resistance Training	***Meet with Groups*****
	6/1	Read chapters 12 & 13	
	6/2	Lecture Slides - Performance testing	**Chapter 12 & 13 Quiz**
	6/3	**Activity 3:** Performance Assessment	
	6/4	Read chapters 21 & 17	**Activity 2 Due**
	6/5	Lecture Slides - Periodization Part II	**Chapter 21 Quiz**
	6/6	Lecture Slides - Resistance training	**Chapter 17 Quiz** **HW 3**

Module 4: Practical/ Applied Part 2	6/7	**Activity 4:** Olympic lifts & Kettlebells	
	6/8	Read chapters 18 & 19	
	6/9	Lecture Slides – Plyometric training	**Chapter 18 Quiz**
	6/10	Lecture Slides - Speed and Agility	**Chapter 19 Quiz**
	6/11	Read chapters 22	**Activity 3 Due**
	6/12-13	Lecture Slides - Rehabilitation and reconditioning	**Chapter 22 Quiz** **HW 4**
Module 5: Exams and Presentation	6/14	Project	**PowerPoint Due**
	6/15	Project	
	6/16	Presentation Due (Zoom)	**Presentation Due**
	6/17	Study	**Activity 4 Due**
	6/18	Study	
	6/19	**Final Exam**	

Note: The instructor reserves the right to make changes to the course syllabus and/or schedule at any time. Students will always be informed of any changes made

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/).
- 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 with disabilities 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/).

- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

Campus Resources

- Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or https://cehd.gmu.edu/aero/tk20. 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 360 in its entirety, and I understand the policies contained therein. This syllabus serves as a binding contract for KINE 360 between the instructor and me.
*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 dates assigned will result in no points awarded or reduced points per make-up policy.
*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)**

(Student Copy: This copy should remain attached to your syllabus)

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

_____ _____
(Signature) **(Date)**

(Instructor Copy: Submit to the instructor at the end of the first class meeting)