

George Mason University
College of Education and Human Development
Kinesiology

KINE 370.DL2 —Exercise Testing and Evaluation
3 Credits, Fall 2021
M, W 10:30 – 11:45 AM, HYBRID

Faculty

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Prerequisites/Corequisites

BIOL 124, BIOL 125, ATEP 300, KINE 310

University Catalog Course Description

This course provides students with an opportunity to develop an understanding of the assessment and evaluation process in the determination of physical fitness.

Course Overview

This course provides students with an opportunity to develop a solid understanding of the assessment and evaluation process used in physical education and exercise science.

Course Delivery Method

This course will be delivered using a hybrid (2-75% online) format. Course will be available via Blackboard Learning Management system (LMS) housed in the MyMason portal. You will log in to the Blackboard (Bb) course site using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on August 23, 2021. Overall, this will be a highly interactive class and students will be encouraged to participate.

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.

Technical Requirements

To participate in this course, students will need to satisfy the following 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:** Our course week will begin on Sundays and finish on Saturdays. Assigned readings and video lectures must be reviewed prior to synchronous meeting. For example, chapter readings for week 2 and video lecture viewings must be completed by the weekend of week 1.
- **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 5 times per week. In addition, students must log-in for all scheduled online synchronous meetings.
- **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. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. 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 Disability Services.

Learner Outcomes or Objectives

At the completion of the course, students should be able to:

1. Apply basic statistical analysis to data collected in the assessment process.
2. Develop health-related fitness plans for clients in recreational and rehabilitative settings.
3. Develop sport/motor fitness programs for work performance programs or clinical settings.
4. Identify fitness-related psychological testing protocols.
5. Interpret and apply assessment information by identifying summative and formative fitness, skill, cognitive, and affective measurement and evaluative techniques.

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
	GENERAL POPULATION/CORE: PATOPHYSIOLOGY AND RISK FACTORS

1.2.2	Knowledge of cardiovascular pulmonary, metabolic, and musculoskeletal risk factors that may require further evaluation by medical or allied health professionals before participation in physical activity.
	GENERAL POPULATION/CORE: HEALTH APPRAISAL, FITNESS AND CLINICAL EXERCISE TESTING
1.3.2	Knowledge of the value of the health/medical history.
1.3.3	Knowledge of the value of a medical clearance prior to exercise participation.
1.3.4	Knowledge of and the ability to perform risk stratification and its implications towards medical clearance prior to administration of an exercise test or participation in an exercise program.
1.3.5	Knowledge of relative and absolute contraindications to exercise testing or participation.
1.3.6	Knowledge of the limitations of informed consent and medical clearance prior to exercise testing.
1.3.7	Knowledge of the advantages/disadvantages and limitations of the various body composition techniques including but not limited to: air displacement plethysmography (BOD POD®), dual energy X-ray absorptiometry (DEXA), hydrostatic weighing, skinfolds and bioelectrical impedance.
1.3.8	Skill in accurately measuring heart rate, blood pressure, and obtaining rating of perceived exertion (RPE) at rest and during exercise according to established guidelines.
1.3.9	Skill in measuring skinfold sites, skeletal diameters, and girth measurements used for estimating body composition.
1.3.11	Ability to locate the brachial artery and correctly place the cuff and stethoscope in position for blood pressure measurement.
1.3.12	Ability to locate common sites for measurement of skinfold thicknesses and circumferences (for determination of body composition and waist-hip ratio).
1.3.13	Ability to obtain a health history and risk appraisal that includes past and current medical history, family history of cardiac disease, orthopedic limitations, prescribed medications, activity patterns, nutritional habits, stress and anxiety levels, and smoking and alcohol use.
1.3.14	Ability to obtain informed consent.
1.3.15	Ability to explain the purpose and procedures and perform the monitoring (HR, RPE and BP) of clients prior to, during, and after cardiorespiratory fitness testing.
1.3.16	Ability to instruct participants in the use of equipment and test procedures.

1.3.17	Ability to explain purpose of testing, determine an appropriate submaximal or maximal protocol, and perform an assessment of cardiovascular fitness on the treadmill or the cycle ergometer.
1.3.18	Ability to describe the purpose of testing, determine appropriate protocols, and perform assessments of muscular strength, muscular endurance, and flexibility.
1.3.19	Ability to perform various techniques of assessing body composition.
1.3.21	Ability to identify appropriate criteria for terminating a fitness evaluation and demonstrate proper procedures to be followed after discontinuing such a test.
1.3.22	Ability to identify individuals for whom physician supervision is recommended during maximal and submaximal exercise testing.
	GENERAL POPULATION/CORE PROGRAM ADMINISTRATION, QUALITY ASSURANCE, AND OUTCOME ASSESSMENT
1.11.13	Knowledge of the importance of tracking and evaluating health promotion program results.
	CARDIOVASCULAR: PATHOPHYSIOLOGY AND RISK FACTORS
2.2.1	Knowledge of cardiovascular risk factors or conditions that may require consultation with medical personnel before testing or training, including inappropriate changes of resting or exercise heart rate and blood pressure, new onset discomfort in chest, neck, shoulder, or arm, changes in the pattern of discomfort during rest or exercise, fainting or dizzy spells, and claudication.
	PULMONARY: PATHOPHYSIOLOGY AND RISK FACTORS
3.2.1	Knowledge of pulmonary risk factors or conditions that may require consultation with medical personnel before testing or training, including asthma, exercise-induced asthma/bronchospasm, extreme breathlessness at rest or during exercise, bronchitis, and emphysema.
	METABOLIC: PATHOPHYSIOLOGY AND RISK FACTORS
4.2.1	Knowledge of metabolic risk factors or conditions that may require consultation with medical personnel before testing or training, including obesity, metabolic syndrome, thyroid disease, kidney disease, diabetes or glucose intolerance, and hypoglycemia.

Required Texts

ACSM's Guidelines for Exercise Testing and Prescription. 10th ed. Philadelphia, PA: Lippincott Williams & Wilkins (2018). ISBN-13: 9781496339065

Course Performance Evaluation

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

- **Assignments and/or Examinations**

Labs/Workshop - There will be 8 labs due during the semester. These are intended to give students hands-on, practical experience with concepts that are covered in class. In addition to the labs, there will be three workshops that will provide an opportunity for students to apply content covered during lecture.

**The venue for all labs is the freedom aquatic fitness center (FAFC) at the SciTech campus. Prior to lab 1, make sure to visit the facility and set up your student membership.*

Laboratory Quizzes - These quizzes will assess your preparedness for each lab. The format of quizzes may be true/false, multiple choice, short answer and/or problem solving.

Reading Comprehension Quizzes - These quizzes will assess your comprehension of the assigned readings. The format of quizzes may be true/false, multiple choice, short answer and/or problem solving.

Exams - Each student will be required to complete two exams and a final exam. The final exam will be cumulative. The format for all exams will be multiple choice, true/false, short essays, and problem-solving questions.

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 undergraduate Kinesiology students in a classroom setting professionalism generally consists of the following components:

Attendance and Participation (25% of Professionalism Grade) – 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 missed classes. 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. Students who unexpectedly miss a class for an excused reason should contact the instructor within 24 hours of missing the class. 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.

Discussion Board (50% of Professionalism Grade) – Students are required to author a minimum amount of original discussion board post during the semester. In addition, students are expected to respond/comment on a minimum of 3 unique posts by colleagues during the semester. Detailed instruction is available on blackboard.

Communication (25% of Professionalism Grade) – 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.

Example email with instructor:

Dr. Last Name,

I have a question regarding....

Regards,

Student's Name

Example in-person interaction with instructor:

Student: Professor (*instructor's last name*) I have a question regarding....

Professor: (Student's name) I would be happy to help you. What is your question?

Student: My question is.....

Professor: The answer to that question is...

Student: Professor (*instructor's last name*) thank you for your time and availability to answer my questions.

Responsibility/Accountability/ Honesty/Integrity– Professionals take responsibility for their actions and are accountable. This can occur at multiple levels but generally consists of completing assignments on time, submitting work that is of the appropriate quality, honoring commitments and owning up to mistakes. Students are expected to be honest with the instructor, classmates and themselves. Professionals keep their word when committing to something and act in an ethical manner. See George Mason University policy for further guidance.

Self-Improvement/Self-awareness– One should be aware of their strengths/weaknesses and constantly seek to improve. Professionals regularly seek out opportunities to increase their knowledge and improve their current skill set. Specific to this class an example of how a student may demonstrate self-improvement/self-awareness is by attending office hours following a poor grade on an exam or assignment.

Professionalism evaluation – *Any professionalism violation will be documented by the instructor. Violations will result in a 1-point deduction from the final average. In extreme cases the student may be dismissed from the class at the discretion of the instructor.*

- **Other Requirements**

- **Email Correspondence**

- Only messages that originate from a George Mason University email address will be accepted. ***Emails with no subject or no text in the body will not be acknowledged.*** All email will be responded to in the order in which it is received. Students should allow 48 hours for a response.

- **Course Performance Evaluation Weighting**

This course will be graded using the percentage system.

Evaluation	Frequency	% of Grade
Labs	8	32%
Assignment	1	7.5%
Attendance, Participation, and Professionalism	NA	10%
Exams	2	20%
Final Exam (Cumulative)	1	15%

Labs Quizzes	8	8%
Reading Comprehension Quizzes (RCQ)	7	7.5%
Total		100%

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 about it. After that period, your grade will be posted as final on Patriot Web.

Notes:

- 1) 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.
- 2) 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.

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, complete in-class exercises and fulfill 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.

No late work will be accepted in this course without a submitted extension request. The extension request must be submitted in place of the assignment, to the course instructor, by the assignment deadline. Extension requests must be submitted with an 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. Students are allowed one 24-hour extension per course. Extensions approved beyond 24 hours are at the discretion of the instructor. Extensions cannot be requested for exams or presentations. In dire or extenuating circumstances, students may be allotted additional extensions or make up opportunities at the instructor's discretion.

Class Schedule

Date		Topic	Assigned readings	Assignments & Due Dates
Module 1	Week 1 8/23-28	Synchronous Meeting – Date @ Time	AHA/ACSM Joint Position Statement	
		Course Introduction	<i>Recommendations for Cardiovascular Screening, Staffing, and Emergency Policies at Health/Fitness Facilities</i>	
		EIM	ACSM Guidelines Chapter 1 ACSM Resources Chapter 1	Weekly discussion board post
		Video Lecture Slides – Chapter 1		
Module 1	Week 2 8/29-9/4	Synchronous Meeting – Date @ Time		Benefits and Risks Associated with PA RCQ Due 9/4 by 11:59PM on BB.
		Par Q+ & Informed Consent (Virtual)**		
Module 2	Week 3 9/5-9/11	Labor Day - No Class Meeting		
		Resting Heart Rate Lab quiz*	ACSM Guidelines Chapter 2 ACSM Resources Chapter 2	Weekly discussion board post
		Video Lecture Slides – Chapter 2		
Module 2	Week 4 9/12-9/18	Synchronous Meeting – Date @ Time		Exercise Preparticipation Health Screening RCQ Due 9/18 by 11:59PM on BB.
		Blood Pressure Lab quiz*	ACSM Guidelines Chapter 3	
		Video Lecture Slides – Chapter 3		Weekly discussion board post
Module 2	Week 5 9/19-9/25	Synchronous Meeting – Date @ Time		Preexercise Evaluation RCQ Due 9/25 by 11:59PM on BB.

			No Lab. Work on data analysis assignment.	ACSM Guidelines Chapter 4 (pp 66-69) Video Lecture Slide – Data Collection/ Measures of Central Tendency/ Variability	Weekly discussion board post
Module 3	Week 6	9/26-10/2	Synchronous Meeting – Date @ Time		
			Exam 1 review virtual		
	Week 7	10/3-10/9	Exam #1		
			Body composition 1 (D)	ACSM Guidelines Chapter 4 (pp 69-79) ACSM Resources Chapter 6 Video Lecture Slide – Body Composition	Weekly discussion board post
Week 8	10/10-10/16	Synchronous Meeting – Date @ Time		Body Composition RCQ Due 10/16 by 11:59PM on BB.	
		Body composition 2 Lab quiz*	ACSM Guidelines Chapter 4 (pp 79-94) ACSM Resources Chapter 3 Video Lecture Slides – Cardiorespiratory Fitness	Assignment 1 Due 10/16 by 11:59PM on BB. Weekly discussion board post	
Module 4	Week 9	10/17-10/23	Synchronous Meeting – Date @ Time		CRF RCQ Due 10/23 by 11:59PM on BB.
			Cardiorespiratory Fitness 1 (D)	ACSM Guidelines Chapter 4 (pp 94-102) ACSM Resources Chapter 4 Video Lecture Slides – Muscular Fitness part 1	Weekly discussion board post

Module 5	Week 10	10/24-10/30	Synchronous Meeting – Date @ Time		Weekly discussion board post
			Cardiorespiratory Fitness 2 Lab quiz*	Video Lecture Slides – Muscular Fitness part 2 <i>Review readings from previous week.</i>	
	Week 11	10/31-11/6	Synchronous Meeting – Date @ Time		Muscular Fitness RCQ Due 11/6 by 11:59PM on BB.
			Muscular Endurance Lab quiz*	ACSM Guidelines Chapter 4 (pp 102-105) ACSM Resources Chapter 5 Video Lecture Slides – Flexibility and Neuromotor	Weekly discussion board post
	Week 12	11/7-11/13	Synchronous Meeting – Date @ Time		
			Muscular Strength Lab quiz*	ACSM Guidelines Chapter 5 ACSM Resources Chapter 7 Video Lecture Slides – Clinical Exercise Testing and Interpretation	Weekly discussion board post
	Week 13	11/14-11/20	Synchronous Meeting – Date @ Time and Exam 2 review		Clinical Exercise Testing and Interpretation RCQ Due 11/20 by 11:59PM on BB.
			FMS Lab quiz*		
	Week 14	11/21-	Exam #2		

		11/27	Thanksgiving - No Class Meeting		
	Week 15	11/28-12/4	Reading day		
			Skill/sport related physical fitness components Lab quiz*		
	Week 16	<i>Exam Period</i>	Final Exam		Final Exam 12/8 @ 10:30AM

Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

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 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/>.

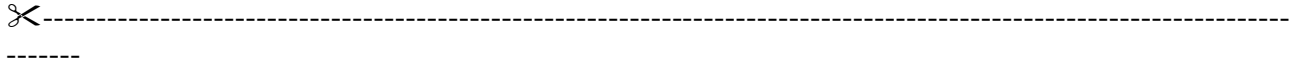
Student Acknowledgement of Syllabus

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

- *I have read the course syllabus for KINE 370 in its entirety, and I understand the policies contained therein. This syllabus serves as a binding contract for KINE 370 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 as late work will not be accepted.
- *I understand that if I am using emitting sound technology or personal computers I will be dismissed from class for the day, counted as an absence, 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)

(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 week)