

KINE370 Testing and Evaluation (3 credits)

Fall 2020

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Faculty

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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.

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.

Required Textbooks

American College of Sports Medicine (ACSM), *ACSM's Guidelines for Exercise Testing and Prescription*, 10th Ed., Lippincott Williams & Wilkins, 2018.

ISBN-13: 978-1609139551

Course Learning Outcomes

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

1. Apply basic statistical analysis of data collected in the assessment process.
2. Develop health-related fitness assessment plans for clients in recreational and rehabilitation settings.
3. Develop sport/motor fitness assessments for work performance programs or clinical setting.
4. Identify fitness- related psychological testing protocols.
5. Interpret and apply assessment information by identifying formative and summative 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 following American College of Sports Medicine's Knowledge-Skills-Abilities (KSA's):

| KSA | Description | Lecture, Lab, or both |
|------------|--|------------------------------|
| | GENERAL POPULATION/CORE: PATHOPHYSIOLOGY 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. | Lecture |
| | GENERAL POPULATION/CORE: HEALTH APPRAISAL, FITNESS AND CLINICAL EXERCISE TESTING | |
| 1.3.2 | Knowledge of the value of the health/medical history. | Lecture |
| 1.3.3 | Knowledge of the value of a medical clearance prior to exercise participation. | Lecture |
| 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. | Lecture |
| 1.3.5 | Knowledge of relative and absolute contraindications to exercise | Lecture |

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| | testing or participation. | |
| 1.3.6 | Knowledge of the limitations of informed consent and medical clearance prior to exercise testing. | Lecture |
| 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. | Lecture/Lab |
| 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. | Lab |
| 1.3.9 | Skill in measuring skinfold sites, skeletal diameters, and girth measurements used for estimating body composition. | Lab |
| 1.3.11 | Ability to locate the brachial artery and correctly place the cuff and stethoscope in position for blood pressure measurement. | Lecture/Lab |
| 1.3.12 | Ability to locate common sites for measurement of skinfold thicknesses and circumferences (for determination of body composition and waist-hip ratio). | Lecture/Lab |
| 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 | |

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| | limitations, prescribed medications, activity patterns, nutritional habits, stress and anxiety levels, and smoking and alcohol use. | Lecture |
| 1.3.14 | Ability to obtain informed consent. | Lecture |
| 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. | Lecture |
| 1.3.16 | Ability to instruct participants in the use of equipment and test procedures. | Lecture/Lab |
| 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. | Lecture |
| 1.3.18 | Ability to describe the purpose of testing, determine appropriate protocols, and perform assessments of muscular strength, muscular endurance, and flexibility. | Lecture |
| 1.3.19 | Ability to perform various techniques of assessing body composition. | Lecture/Lab |
| 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. | Lecture |
| 1.3.23 | Ability to identify individuals for whom physician supervision is recommended during maximal and submaximal exercise testing. | Lecture/Lab |

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| | 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. | Lecture |
| | 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. | Lecture |
| | 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. | Lecture |

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| | 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. | Lecture |

Hardware: You will need access to a Windows or Macintosh computer with at least 2 GB of RAM and access to a fast and reliable broadband internet connection (e.g., cable, DSL). A larger screen is recommended for better visibility of course material. You will need speakers or headphones to hear recorded content and a headset with a microphone is recommended for the best experience. For the amount of Hard Disk Space required taking a distance education course, consider and allow for:

1. the storage amount needed to install any additional software and
2. space to store work that you will do for the course.

If you consider the purchase of a new computer, please go to [Patriot Tech](#) to see recommendations.

Software: Many courses use Blackboard as the learning management system. You will need a browser and operating system that are listed compatible or certified with the Blackboard version available on the [myMason Portal](#). See [supported browsers and operating systems](#). Log in to [myMason](#) to access your registered courses. Some courses may use other learning management systems. Check the syllabus or contact the instructor for details. Online courses typically use [Acrobat Reader](#), [Flash](#), [Java](#), and [Windows Media Player](#), [QuickTime](#) and/or [Real Media Player](#). Your computer should be capable of running current versions of those applications. Also, make sure your computer is protected from viruses by downloading the latest version of Symantec Endpoint Protection/Anti-Virus software for free [here](#).

Students owning Macs or Linux should be aware that some courses may use software that only runs on Windows. You can set up a Mac computer with Boot Camp or virtualization software so Windows will also run on it. Watch [this video](#) about using Windows on a Mac. Computers running Linux can also be configured with virtualization software or configured to dual boot with Windows.

Note: If you are using an employer-provided computer or corporate office for class attendance, please verify with your systems administrators that you will be able to install the necessary applications and that system or corporate firewalls do not block access to any sites or media types.

Course-specific Hardware/Software

Check the syllabus for your course or contact the instructor prior to the start of the course to find out about specific technical requirements for your class. Hardware or software required for your course or program may be available for purchase at [Patriot Computers](#) (the University's computer store that offers educational discounts and special deals).

Course Schedule

| Date | | | Topic | Readings/Assignment |
|------|--------------------|----|--|---------------------|
| T | August (RAC) | 25 | Pick up your equipment Review syllabi and health risk pre-assessment RHR, Body Fat BIA, | Read Chapter 1 ACSM |
| T | September (RAC) | 1 | Fitness assessment (Health related fitness components) Muscular strength, Flexibility, Muscular Endurance assessments | Read Chapter 2 ACSM |

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| T | September | 8 | Quiz ACSM (1-2) Data Collection/ Measures of Central Tendency/Variability//Lawfit Scoring | Read Chapter 3 ACSM |
| T | September | 15 | Data Collection/ Measures of Central Tendency/Variability//Lawfit Scoring | Study review for Exam 1 Read Chapter 4 |
| T | September | 22 | Exam 1 (Statistics/health risks/health related components ACSM Chapter 1- 4) | Read Chapter 5 |
| T | September | 29 | Body composition-Lecture Goniometers/anthropometric measurements Body composition-Lecture/ Skin Caliper Lab | Read Chapter 6 ACSM |
| T | October (RAC) | 6 | Exercise Prescription Skin caliper practical | |
| T | October | 13 | No Class | Study for Exam |

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| T | October | 20 | Exercise prescription/Skin caliper assessment/anthropometry assessments waist to hip ratio | |
| T | October | 27 | Exam 2 (Body comp/exercise prescription test) | |
| T | November | 3 | No Class | |
| T | November | 10 | Cardiorespiratory lecture | Read Chapter 5 |
| T | November (RAC) | 17 | Mile Run 1.5/Intensity HR check (Vo2max assessment) Blood Pressure Measurement Lab | |
| T | November | 24 | Exam 3 (cardiovascular fitness/Blood Pressure) | |
| T | December | 1 | Review for final | |
| T | December | 8 | Reading Day No Class | |
| T | December | 15 | Final Exam (7:30pm-10:15pm) | Celebrate! Have a great break! |

Assignments Description

1. Quizzes (25%): There are 4 quizzes on specific chapters. You will have two attempts for each quiz. The highest score will be your grade for that quiz. You will have three hours to complete the quiz. Quizzes are open book.

2. Online Discussion participation/ Collaborate Ultra Attendance (25%). Your discussion will be graded based upon the rubric, which looks to quality, timeliness, responsiveness, and moving the discussion forward. Discussions will run from **to Sunday**, after which discussion postings will not count. You are expected to participate throughout the week in the discussions -not clump them all together on one day (see rubric).

You will be given online discussion participation points based on the quality of your responses and participation.

3. Video assessment Assignments (25%)

4. Exams (25%)

Course Policies

Late Assignments: All assignments must be turned in on the due date given on the assignment sheet.

Instructor-Student Communication: I will respond to your emails within 48 hours. If I will be away from email for more than one day, I will post an announcement in the Blackboard course folder. Before sending an email, please check the following (available on your Blackboard course menu) unless the email is of a personal nature:

1. Syllabus
2. Ask Professor
3. On-demand Blackboard videos on how to use Blackboard features, and Technical Requirements.

Feel free to respond to other students in the Ask Professor forum if you know the answer.

Technology. You will need a reliable computer and internet access to view course materials in Blackboard. You will need to video record your two role-plays and you can do that with a smartphone or other video camera, such as Kaltura CaptureSpace in Blackboard.

Grading Scale

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| A = 94 – 100 | B+ = 88 – 89 | C+ = 78 – 79 | D = 60 – 69 |
| A- = 90 – 93 | B = 84 – 87 | C = 74 – 77 | F = 0 – 59 |
| | B- = 80 – 83 | C- = 70 – 73 | |

University Policies and Resources

- a. **Academic Honesty:** You are expected to be familiar with and abide by the University's Honor Code. The Code can be found [here](#). It is your responsibility to see me if you have questions about these policies. George Mason University has an honor code that states the following:
To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the University Community have set forth this:
- b. Students must follow the university policy for [Responsible Use of Computing](#)
- c. **Student services:** The University provides range of services to help you succeed academically and you should make use of these if you think they could benefit you. I also invite you to speak to me (the earlier the better).
- d. Students are responsible for the content of university communications sent to their George Mason University 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.
- e. [The George Mason University Counseling and Psychological Services \(CAPS\)](#) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance. Counseling Center: Student Union I, Room 364, 703-993-2380.
- f. Students with disabilities who seek accommodations in a course must be registered with the [George Mason University Office of Disability Services \(ODS\)](#) and inform their instructor, in writing, at the beginning of the semester. All academic accommodations must be arranged through that office. Please note that accommodations **MUST BE MADE BEFORE** assignments or exams are due. I cannot adjust your grade after the fact.
- g. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- h. [The George Mason University Writing Center](#) staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing.

University Writing Center: Robinson Hall Room A114, 703-993-1200. The writing center includes assistance for students for whom English is a second language.

- i. [Diversity](#): George Mason University promotes a living and learning environment for outstanding growth and productivity among its students, faculty and staff. Through its curriculum, programs, policies, procedures, services and resources, Mason strives to maintain a quality environment for work, study and personal growth.