

GEORGE MASON UNIVERSITY
School of Recreation, Health, and Tourism

KINE 370- 001 Measurement and Evaluation of Physical Fitness – 73211
Fall 2014

DAY/TIME: T: 7:20-10:00 pm LOCATION: RAC 2203
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PREREQUISITES/COREQUISITES

BIOL 124 and 125, ATEP 300, KINE 310

CATALOG COURSE DESCRIPTION

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. This is designated writing intensive course.

COURSE OBJECTIVES

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

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

COURSE OVERVIEW

Material for the course will be drawn from the required textbook and assigned readings of published research. Class lectures will be presented in PowerPoint with handouts posted on Blackboard in advance of class meetings.

- Assignments must be turned in at the beginning of class on the specified date due or **no credit will be given**.
- Classroom Demeanor - Students are expected to attend all class sections, actively participate in class discussions, complete in-class exercises, and fulfill all assignments. Anyone exhibiting inappropriate behavior may be asked to leave (e.g. sleeping in class, texting). University policy states that all sound emitting devices shall be turned off during class unless otherwise authorized by the professor.

ACCREDITATION 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 testing or participation.	Lecture
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 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
	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
	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

NATURE OF COURSE DELIVERY

Face to face

REQUIRED READINGS

Bever, David L.; (2012) *LawFit: Fitness Leadership Program*, National Center for Public Safety Fitness, George Mason University, 156 pages.

American College of Sports Medicine (ACSM), *ACSM's Guidelines for Exercise Testing and Prescription*, 9th Ed., Lippincott Williams & Wilkins, 2013.

ISBN-13: 978-1609139551

EVALUATION

- 60% Tests (Mid-terms & Final exam) and Written Assignments
- 20% Health-related motor fitness protocol & demonstrations/participation
- 20% Written assignments pertaining to fitness and motor testing

EXAMS:

- Exam #1 Material from weeks 1-4
- Exam #2 Material from weeks 5-8
- Exam # 3 Material from weeks 9-13
- Final Exam is cumulative

Exam 1	100 points
LawFit info sheet	50 points (25 each testing session)
Exam 2	100 points
5 Practical assessments (Blood pressure, skin calipers, bod pod, step testing, lawfit scoring)	100 points 20 pts each
Exam 3	100 points
Research Paper	100 points
Fitness testing pre/post	50 points
Final Exam	150 points
Total	750 points

- Research Paper - The paper needs to include an introduction, a statement of methodology and conclusion/recommendation
- APA format
- Research on either fire fighter; refuge workers; postal workers or air baggage handlers.
- Cite at least 5 sources
- What are the common injuries related to the profession?
- Design a work performance test and support this with your research. (actual graphic design of your work performance test)
- Design an exercise prescription program to rehabilitate or prevent injuries in the future.

Grading Scale

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	

TENTATIVE COURSE SCHEDULE

DATE			TOPIC	READINGS/ASSIGNMENT DUE
T	August	26	Review syllabus and health pre-assessment	Read Chapter 1 ACSM /Session 1 & 2 Lawfit Manual
T	September	2	Complete Lawfit info sheet Fitness assessment (Health related fitness components)	Read Chapter 2 ACSM / Read Lawfit Session 2
T	September	9	Cardiorespiratory Test 1.5 mile run	Read Chapter 3 ACSM / Sept. 16
T	September	16	Data Collection/ Measures of Central Tendency/Variability//Lawfit Scoring	Study review for Exam 1
T	September	23	Exam 1 (Statistics/health related components)	Chapter 4 ACSM / Sept 30
T	September	30	Review Exam /	Read Chapter 4 ACSM/Session 3 Lawfit
T	October	7	Cardiovascular Fitness / V02 Max Blood Pressure Measurement Lab/WP Review	Read Chapter 5 and 6 ACSM
T	October	14	No Class Columbus Day recess	
T	October	21	Work Performance/Job Task Analysis/Paper discussion	Research Topic/Study for Exam
T	October	28	Exam 2 (cardiovascular fitness/Blood Pressure)	Read Session 6 Lawfit
T	November	4	Body Composition Discussion	Read Session 8 Lawfit
T	November	11	Lecture/Skin Caliper Lab	Read Chapter 7 ACSM
T	November	18	Exercise Prescription Lab BOD POD Assessment (Location TBA)	Read Chapter 8 ACSM/Study for Exam

DATE			TOPIC	READINGS/ASSIGNMENT DUE
T	November	25	Exam 3 (Body comp/exercise prescription)	
T	December	2	Complete Post Fitness Testing	Paper Due (hard copy)
T	December	9	Reading Day No Class	Study
T	December	16	Final Exam	

Note: Faculty reserves the right to alter the schedule as necessary.

Professionalism

Kinesiology students are expected to behave in a professional manner. Depending upon the setting professionalism may appear different, but typically consists of similar components. For undergraduate Kinesiology students in a classroom setting professionalism generally comprises the following components:

Attendance – Show up on time to class and pay attention. If you cannot attend a class for a legitimate reason please notify the instructor ahead of time. If you have to unexpectedly miss a class due to something out of your control, contact the instructor within 24 hours to notify them what happened and to see if there is anything you need to do to make up your absence.

Communication – When communicating with the instructor and classmates, either face-to-face or via the assigned George Mason University email address, students should address the other person appropriately, use appropriate language and maintain a pleasant demeanor.

Participation – Participate in class discussions and activities. Demonstrate that you have an interest in the subject matter.

Responsibility/Accountability – 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.

Honesty/Integrity – 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.

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.

Student Expectations

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/the-mason-honor-code/>].
- 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 [See <http://ods.gmu.edu/>].
- Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>].
- 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.
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.

Campus Resources

- 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 [See <http://caps.gmu.edu/>].
- 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 [See <http://writingcenter.gmu.edu/>].
- For additional information on the College of Education and Human Development, School of Recreation, Health, and Tourism, please visit our website [See <http://rht.gmu.edu/>].

PROFESSIONAL BEHAVIOR: Students are expected to exhibit professional behaviors and dispositions at all times.

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.

