GEORGE MASON UNIVERSITY
School of Recreation, Health and Tourism
Division of Health and Human Performance

KINE 370-C01: Measurement and Evaluation of Physical Fitness (3)
Summer 2015

DAY/TIME: MTWR 10:00-12:15am LOCATION: 246 Bull Run Hall (PW)

PROFESSOR: Mr. Chris Dofflemyer OFFICE: 220A Bull Run Hall (PW)

OFFICE HOURS: MTWR 9:30am-10:00am or by appointment PHONE NUMBER: (703) 973-2006

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PREREQUISITES:
BIOL 124 and 125, ATEP 300, KINE 310

COURSE CATALOG DESCRIPTION:
Provide 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 a writing intensive course.**

COURSE OBJECTIVES:
At the completion of this course students should be able to:
1. Apply basic statistical techniques in the analysis of data collected in the assessment process.
2. Develop health-related fitness assessment plans for elementary and secondary school students as well as adult clients in recreational and rehabilitation settings.
3. Develop sport/motor fitness assessments for both elementary and secondary school settings.
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.

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	Lecture

	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.	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

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**.

- Attendance - Students are expected to attend all classes. A grade of zero will be assigned to any missed presentation without prior permission from the instructor.

- 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.

NATURE OF COURSE DELIVERY
This course will include both lecture and laboratory instruction.

REQUIRED READINGS:

ACSM's Guidelines for Exercise Testing & Prescription (9th ed), Lippincott, Williams & Wilkins, ISBN: 9781609139551

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

Exam 1	100 points
LawFit scoring sheet	50 points
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
Paper	100 points
Exam 4	100 points
Fitness testing pre/post	50 points
Final Exam	150 points
Total	850 points

EXAMS: Exam #1 Material from week 1
Exam #2 Material from week 2
Exam # 3 Material from week 3
Exam #4 Material from week 4
Final Exam is cumulative

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	

COURSE OUTLINE: **ACSM Text**

Week 1 Fitness Assessment Tools and Scoring Protocols — Chapters 5-7
A. Normative Data
B. Criterion Referenced Data

Data Collection: Measures of Central Tendency

Measures of Variability & Statistical Analysis

Exercise Testing
A. Health History
B. Informed Consent
C. Fitness Batteries

Fitness vs. Work Performance

Exam #1 **July 6th (stats/fitness assessment)**

Week #2

Health Appraisal and Risk Assessment Chapter 1-3
Work Performance Testing
Chapter 2 Health status assessment pg. 25
Health-Related and Skill Related Physical Fitness Components
Case study Box 2.1
Fitness and Its Relationship to Injury Reduction
(Occupational Injury Review)

Exam #2 **July 13th**

Week #3 Cardio Respiratory Fitness and Exercise prescription Chapters 8-9

A. Blood Pressure
B. Assigned Readings
C. RPE, Target Heart Rate
D. Submaximal vs. Maximal Testing

Exam #3 **July 20nd**

Week #4 Body Composition Chapters 4, 10-11
A. Body Mass Index
B. Bioelectrical Impedance
C. Skinfold Testing
D. Bod Pod
E. Body Weight Calculations

Sport Skill Testing Protocols

Exam # 4 **July 24th**

Fitness Post Testing

Reading date: July 28th no class

Final Exam: July 29th 10:30am-1:15pm

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

Honor Code, Copyright, & Computing Policies: **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 honor code: Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.**

Student Expectations

- Students must adhere to the guidelines of the George Mason University Honor Code [See http://oai.gmu.edu/the-mason-honor-code-2
- 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.
- Students are expected to exhibit professional behaviors and dispositions at all times.
- ***Don't Cheat The Dr.***

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].

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. [See http://cehd.gmu.edu/values/].