

**KINE 295**  
**SCIENTIFIC PRINCIPLES OF EXERCISE PRESCRIPTION**  
**FALL 2011**

**INSTRUCTOR:** Dr. Evie Burnet  
email: enburnet@wm.edu  
Office: Adair Hall 115-A  
Office Hours: By appointment

**CLASS MEETING:** Monday, Wednesday, and Friday 12:00 – 12:50 PM  
Morton 220

**REQUIRED READING:** *Exercise Testing and Prescription: A Health Related Approach*, 7<sup>th</sup> edition, David C. Nieman, McGraw-Hill Publishing Co., 2010.

Useful reference: *ACSM's Guidelines for Exercise Testing and Prescription*, 8<sup>th</sup> edition, Lippincott Williams & Wilkins, 2009.

Additional required class readings may be placed on Blackboard.

**DESCRIPTION:** This course addresses the scientific basis of designing effective and safe exercise programs. Principles of exercise prescription will focus on improving health-related fitness, rather than elite athletic performance. Since health-related fitness includes cardiovascular endurance, muscular fitness, body composition and flexibility, these fitness parameters will be emphasized.

**OBJECTIVES:** This course is designed to:

- differentiate between health related and performance related physical fitness.
- provide a scientific framework for various conditioning techniques used to enhance cardiovascular endurance, muscular fitness, flexibility and body composition.
- describe the relationship between cardiovascular fitness and health.
- describe the relationship between muscular fitness and health.
- describe the relationship between body composition and health.
- describe the relationship between flexibility and health.
- provide students with the knowledge and skills to design a safe, effective exercise program for all healthy individuals regardless of age or gender.
- demonstrate an understanding of principles of exercise prescription applied to special populations including cardiac patients, pulmonary patients, diabetics, children, the elderly and pregnant women.
- encourage independent and critical thinking.

## COURSE EVALUATION AND GRADING

The student's final grade will be determined as follows:

Exam #1	25%
Exam #2	25%
Assignments	25%
Final Exam	25%

## CLASS REQUIREMENTS/POLICIES

Class announcements will be posted on Blackboard or students will be notified by email when changes or additions are made to the syllabus or course on Blackboard.

Assignments should be turned in by the ***start of the class period*** on the due date unless stated otherwise on the individual assignment. Late assignments will only be accepted when a valid excuse is provided.

There is not an attendance policy for this class. However poor class attendance is likely to negatively impact your grade. Information from class discussions and lecture will be included on exams and assignments. Students are responsible for information covered in class during their absences. Prior notification for absences should be provided when possible (i.e., university travel, job interviews). Students are expected to follow College policies for extended absences.

Please set up an appointment to discuss accommodations as soon as possible if you are a student with a disability.

Students should be familiar with the College of William and Mary Honor Code System outlined in the student handbook. Any suspicion of academic dishonesty will be addressed according to the guidelines of the William and Mary Honor System.

<http://www.wm.edu/about/administration/deptsandoffices/deanofstudents/services/studentconduct/honorcode/index.php>

## Tentative Class Schedule

<u>Date</u>	<u>Topic</u>	<u>Reading</u>
8-24	Course Introduction, Health & Fitness	Chapater 1
8-26	<b>No Class</b>	Fjørtoft et al., Wu et al., and Healthy People 2020
8-29	Health & Fitness Defined	Chapter 1, Racette et al.
8-31	Health & Fitness Defined	Chapter 1
9-2	Screening & Testing	Chapter 2
9-5	Screening & Testing, <b>Assignment #1 Due</b>	Chapter 2
9-7	Contraindications to Exercise	Chapter 2
9-9	Introduction to Exercise Prescription	Chapter 6
9-12	Exercise Prescription	Chapter 6
9-14	Nutrition and Energy Pathways	Chapter 7
9-16	Nutrition and Energy Pathways	Chapter 7
9-19	Nutrition and Energy Pathways, <b>Assignment #2 Due</b>	Chapter 7
9-21	Review	
<b>9-23</b>	<b>Exam #1</b>	
9-26	Cardiorespiratory Fitness	Chapters 3 & 6
9-28	Cardiorespiratory Fitness	Chapters 3 & 6
9-30	Cardiorespiratory Fitness	Chapters 3 & 6
10-3	Cardiorespiratory Fitness	Chapters 3 & 6
10-5	Muscular Strength and Endurance	Chapters 5 & 6
10-7	Muscular Strength and Endurance	Chapters 5 & 6
<b>10-10</b>	<b>Fall Break – No Class</b>	
10-12	Muscular Strength and Endurance	Chapters 5 & 6
10-14	Detraining	p. 4
10-17	Flexibility	pp. 148-150, 193-195
10-19	Body Composition, <b>Assignment #3 Due</b>	Chapters 4 & 11, Mellor et al.
10-21	Body Composition	Chapters 4 & 11
10-24	Supplements & Ergogenic Aids	Chapter 7
10-26	Review	
<b>10-28</b>	<b>Exam #2</b>	
10-31	Cardiac Patients	Chapter 8
11-2	Cardiac Patients	Chapter 8
11-4	Cancer Patients	Chapter 9, van Weert et al.
11-7	Diabetic Patients	Chapter 10
11-9	Elderly Patients	Chapter 13, Mangione et al.
11-11	Elderly Patients	Chapter 13
11-14	Exercise Compliance	Conn et al.
11-16	Children and Pregnant Women	
11-18	Exercise Risks	Burfoot
11-21	Exercise Risks, <b>Assignment #4 Due</b>	
<b>11-23, 11-25</b>	<b>Thanksgiving Break – No Class</b>	
11-28	Psychological Health	Chapter 12
11-30		
12-2	Review	
<b>12-8</b>	<b>Final Exam 9:00 am to noon</b>	