Spring 2-1-2005

HHP 483.01: Exercise, Disease and Aging

Steven E. Gaskill
University of Montana - Missoula, steven.gaskill@umontana.edu

Let us know how access to this document benefits you.
Follow this and additional works at: https://scholarworks.umt.edu/syllabi

Recommended Citation
Gaskill, Steven E., "HHP 483.01: Exercise, Disease and Aging" (2005). Syllabi. 10054.
https://scholarworks.umt.edu/syllabi/10054

This Syllabus is brought to you for free and open access by the Course Syllabi at ScholarWorks at University of Montana. It has been accepted for inclusion in Syllabi by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.
HHP 483- Exercise, Disease and Aging  
Spring 2005, M,W,F, 11:10-12:00  

The University of Montana - Department of Health and Human Performance  
Dr. Steven Gaskill  
Office: McGill 104, Phone: 243-4268. Email: steven.gaskill@umontana.edu  
OFFICE HOURS – Spring 2005, - 2-3pm Monday, 8-9am Tuesday, 9-10am Friday or by appointment  
WEB SITE: http://eres.lib.umt.edu/ select HHP483 – Password = chd  

Course Description:  
This course is designed to offer students a general understanding of the procedures involved in exercise evaluation, testing and exercise prescription in individuals at risk of, or with known chronic disease including heart disease, diabetes, hypertension, arthritis, osteoporosis, and pulmonary disease focusing primarily on elderly individuals. By integrating this course (483) with the laboratory course (484), students will gain a level of competence that will better prepare them for further study or work in clinical exercise physiology, cardiac and chronic disease rehabilitation. In addition, students who also complete HHP 482 (ECG interpretation) and normal course work in exercise physiology or applied health sciences track will be prepared to take the American College of Sports Medicine ACSM Exercise Specialist® exam (details at: http://www.acsm.org/certification/getcertified.htm). The course puts an emphasis on CVD, but adequate time is given to related topics including the risk factors for CVD and other chronic diseases for which exercise is an effective intervention. In addition, a wide range of chronic diseases that may be positively affected by exercise are discussed. Students will learn how to perform graded exercise tests along with designing practical exercise programs for many chronic diseases.  

Course Objectives:  
To acquire,  
1. A brief understanding of the risks and benefits of exercise prescription and graded exercise testing.  
2. Competence in the area of clinical chronic disease exercise physiology and to be able to differentiate this from applied exercise physiology.  
3. An understanding of the effects of CVD and chronic disease on exercise performance and the necessary considerations for exercise prescription.  
4. An in-depth understanding of the reasons and guidelines for graded exercise testing in apparently healthy populations with CHD risk factors and other chronic diseases.  
5. An understanding of the cardiac cycle.  
6. An in-depth ability to provide appropriate exercise prescription for apparently healthy individuals, cardiac patients, and special populations and individuals with other chronic diseases.  
7. The necessary learning objectives required for the American College of Sports Medicine certification programs (Health and Fitness Instructor and Exercise Test Technologist - See objective list in course facpac).  

Instructional Format:  
Three 50 minute lectures/week consisting of lecturer instruction and practical application of academic material. Some class periods will be devoted to a guest lecturer that works in the clinical/corporate sector. Lectures will be a combination of basic material and practical applications. Students are expected to do all required readings before class so that the lecturers can fill in details and add additional material.
Grading:
The percentage grade will be calculated from the total points earned from three unit examinations for the UG students. In addition to these requirements, G students will present an oral report after visiting two cardiac rehabilitation sites here in western Montana (locations to be determined at a later date).

<table>
<thead>
<tr>
<th>Grading Component</th>
<th>Percentage of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Cumulative Exams</td>
<td>- 75% of grade (25% each)</td>
</tr>
<tr>
<td>Service</td>
<td>- 15% of grade (participation)</td>
</tr>
<tr>
<td>Quizzes (random)</td>
<td>- 10% of grade</td>
</tr>
<tr>
<td>Graduate Site Report</td>
<td>Graduate Students will have an additional project</td>
</tr>
</tbody>
</table>

Letter grades will be established as follows, based on the total points:

- A: 90 - 100%
- B: 80 - 90%
- C: 70 - 80%
- D: 60 - 70%
- F: below 60%

Plus/minus grades will be assigned as follows: x.0-x.2=grade minus, x.3-x.6=grade, x.7-x.9=grade plus

Exam questions will come from the lecture (60%), and from all reading material (40%) and will include both knowledge of information and integration of information.

Quizzes cover assigned reading material assigned since the last quiz or test and will be given only during the first 10 minutes of class. Quizzes cannot be made up without exceptional cause or advance notice.

Required Texts: It is imperative that you have the required text for this course. Class material will supplement the text, but students are expected to read all required material. Quizzes will cover required reading up to that date-including assigned scientific articles on reserve in Mansfield Library or posted on the eres site.

1. ACSM GUIDELINES for EXERCISE TESTING AND PRESCRIPTION; 5th Edition, Williams and Williams
2. FacPac - Notes for most lectures are included in this packet. Available at the bookstore. Updates to some lectures will be posted on the HHP 483 website.

Assigned Scientific Articles:
These will be posted on the HHP483 Website. There will be about one article per 5 classes. These are required reading and will be tested, both on quizzes and exams. There are additional suggested (not required readings) on the web site. The ACSM position stands can be found by going to acsm.org, click on publications, and then follow the directions to get to the position stands. The specific site is: http://www.acsm-msse.org/pt/re/msse/positionstandards.htm?sessionid=Ba2YnMUlvZ2XAJSoL4K3KVmpfJAmfF2YoFzK1skUq4ky1CCehQFN!730361133!-949856031!9001!-1

Service Project:
You will be participating in a service projects; 1) Spend 25 hours (about 2 hours a week) with Alzheimer’s patients at Edgewood Vista (Palmer Street between Target and Broadway) walking, talking, listening or leading exercise sessions or; 2) an equivalent amount of time working with elderly patients at another location to be agreed on with Dr. Gaskill.
For this service project you will be keeping a journal and have periodic assignments.
**Course Evaluation:**

Students will be advised to critically evaluate the course content, requirements, lecture format, and instructor to ensure future improvements. An official university student-evaluation form will be provided during the last full week of instruction before finals.

**Extra credit:**

No extra credit is available. Students who are on the bubble (within a point or two of a higher grade) will be looked upon favorable based on class participation, and involvement in community or research projects.

### 483-COURSE OUTLINE

**PLEASE READ ASSIGNED READING BEFORE CLASS - QUIZZES WILL COVER THE READING!**

**READING**

**Week 1 (Jan 24)**

1. Introduction/class syllabus overview and Discussion of Projects or Service
   - Surgeon’s General Report – Benefits of exercise. (Chapter 1, Fac Pac 1-4)
2. Prescription in healthy populations
   - ACSM Position Stand - The recommended Quantity and Quality of Exercise for developing and maintaining cardiorespiratory and muscular fitness and flexibility in healthy adults. *Article 1*
3. Prescription in healthy populations continued (use of VT vs. ACSM guidelines)

**Week 2 (Jan 31)**

1. Representative from Edgewood Vista will talk about working with Alzheimer’s patients
2. Atherosclerosis (Fac Pac 11-14)
3. Myocardial Ischemia (Fac Pac 16-18)

**Week 3 (Feb 7)**

1. Myocardial Infarction (hope to have guest lecturer)
2. Surgical Interventions: CABG and PTCA… etc
3. Film continued. Discussion of exercise after coronary artery bypass surgery (CABG)

**Week 4 (Feb 14)**

1. Risk Factor Assessment - Smoking and smoking cessation (Chapter 2, Fac Pac 19-22)
2. Risk Factors-Cholesterol and blood lipids (Chapter 3, Fac Pac 23-25)
3. Risk Factors-Blood Pressure (Chpt 10, pages 206-212, Fac Pac 27-31)
   - ACSM Position Stand - Exercise and Hypertension *Article 4*

**Week 5 (Feb 21)**

1. Obesity (new primary risk factor) (Chapter 10, pgs 214-216, Fac Pac 33-40)
   - ACSM Position Stand – Approp. Interven for Weight Loss *Article 5*
2. Obesity continued (See old exams in fac pac for samples of what questions might be like)
3. Exam #1

**Week 6 (Feb 28)**

1. Sedentary Lifestyle
2. Meet in Teaching Lab
3. Peripheral Vascular Disease (Chpt 10, pgs 208-212, Fac Pac 43-45)

**Week 7 (Mar 7)**

1. Basic Cardiorespiratory Fitness Assessments (Chapter 4, Fac Pac 47-50)
2. Exercise with disabilities – ½ class meet at New Directions (Pharmacy Bldg)
3. Exercise with disabilities – ½ class meet at New Directions (Pharmacy Bldg)
Week 8 (Mar 14)  Dr. Carla Cox will be presenting this week.

1  Risk Factors-Diabetes  pgs 212-214  Chapter 10 pgs 212-214
   \textit{ACSM Position - Exercise and Type 2 Diabetes} \textit{Article 10} Fac Pac 65-79
2  Working with diabetics – Practical implications and applications  Fac Pac 81-86
   Special lecturer – Carla Cox …
3  Meet 7-8am in teaching Lab. Come overnight FASTED to start Glucose tolerance test.
   Normal Class Medications for diabetics  Fac Pac 87-94

----------------------------------------SPRING BREAK----------------------------------------

Week 9 (Mar 28)

1  Testing in High Risk populations  Chapter 5  Fac Pac 50-56
   \textit{A basic approach to the interpretation of the exercise test} \textit{Article 7a}
2  Metabolic Calculations  Fac Pac 57-60
3  Metabolic Calculations  Appendix D  Fac Pac 57-60

Week 10 (Apr 4)

1  Metabolic Calculations continued  \textit{Practice questions}
2  Cardiac Rehabilitation Chpt 30  Fac Pac – new notes will be supplied
3  Cardiac Rehabilitation, continued  Fac Pac – new notes will be supplied

Week 11 (Apr 11)

1  Exercise Prescription - Cardiac Populations  Chapter 8  Discussion
   \textit{ACSM Position Stand-Exercise and PA for Older Adults-Article 13}
2  Exercise in the Elderly & Adherence to Exercise older adults  Chpt 11, Pages 223-230, Fac Pac 61-64
3  \textbf{Exam #2} (Cumulative-Conceptual for 1st 1/3rd and more detailed for 2nd third) Review will be done during the Wednesday HHP 482 class.

Week 12 (Apr 18)

1  Asthma, Exercise Induced Bronchiospasm , Pulmonary Disease  Chapter 9  Fac Pac 95-99
2  Arthritis  Fac Pac 101-109
3  Osteoporosis  Fac Pac 111-116

Week 13 (Apr 25)

1  Environmental Factors – PP Slides Due - Random drawing for presentations in 482 and 483
2  Review of Exercise Programming (Official and Practical)  Chapter 6  Discussion
3  Health Behavior Change and Exercise Adherence  Chapter 12  Fac Pac 119-124

Week 14 (May 2)

1  Medications and effect on exercise  Appendix A  Fac Pac 125-126
2  Emergency Procedures  Appendix B  Fac Pac 127-130
   Legal Issues  Chapter 13
   \textit{AHA/ACSM Position Stand – Recommendations for…} \textit{Article 15}
3  Review for final

FINAL EXAM (Exam 3) (Cumulative-Conceptual for 1st 2/3rds and more detailed for last third)
Final will be scheduled per the official exam schedule