Spring 2010

KINE 5400 &6400
Exercise Prescription for Normal & Special Populations

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Office Hours by Appointment

Kinesiology

"Everything that we do in teaching, research and public service is directed toward intervening in the lives of those with whom we interact to enhance health and fitness."

COLLEGE OF EDUCATION

CONCEPTUAL FRAMEWORK

Faculty, staff and students strive to prepare and be professionals who are:

Competent
equipped with the knowledge, skills and technological expertise to help all individuals learn and develop

Committed
dedicated to the ethical practices and collaboration that serve as the foundation of a diverse and intellectually vibrant society

Reflective
devoted to analyzing their own past practices in ways that fuel ongoing learning and improve future practices

A Keystone in Building a Better Future for All

AUBURN UNIVERSITY

KINE 5400 & 6400
EXERCISE PRESCRIPTION FOR NORMAL & SPECIAL CASES

COURSE DESCRIPTION

This course is designed to examine and apply the principles of exercise prescription for normal and special cases. The current recommendations from the American College of Sports Medicine, the American Heart Association, the U.S. Surgeon General and the Centers for Disease Control and Prevention will be reviewed for developing and maintaining health and physical fitness in the general population. Particular emphasis will be placed on developing specific exercise strategies for obese, diabetic, hypertensive, and dyslipidemic clients. In addition, exercise considerations for those with cardiovascular or pulmonary disease, neurological disorders, arthritis and osteoporosis will be explored. Lastly, exercise prescription for women during pregnancy and the postpartum period will be studied.

COURSE OBJECTIVES

After this course, you will be able to:

1. Utilize scientific evidence to support the basis for physical activity and exercise in the prevention and treatment of hypokinetic diseases

2. Describe and discuss the current physical activity recommendations for overall health and physical fitness in the general population

3. Select appropriate pre-test screening measures for determining the appropriateness of exercise, exercise testing, cardiovascular disease risk stratification and determination of specific exercise prescription goals

4. Identify special exercise considerations for specific health and fitness related outcomes

5. Manipulate the principles and components of exercise prescription in order to address the specific needs and objectives of clients

6. Demonstrate the ability to appropriately adjust exercise prescriptions based on the physiological and behavioral progression of the client

COURSE REQUIREMENTS

General Expectations: You are expected to access the course website on WebCT on a regular basis in order to access assigned readings and listed websites. You are expected to read the assigned chapters, posted articles and visit the websites. In addition, you are expected to keep up with the posted assignments and their due-dates on WebCT and your assignment grades.

Attendance: Your attendance in this class is mandatory. I will not provide you with information covered in class if you are absent during the class session. You must be present in order to take exams and participate in classroom discussions.

Accommodations: Students who need accommodations are asked to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternative time can be arranged. To set up this meeting, please contact me by e-mail. Bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have an Accommodation Memo but need accommodations, make an appointment with the Program for Students with Disabilities at 1244 Haley Center, 844-2096.

Honesty Code: The University Academic Honesty Code and the Tiger Cub Rules and regulations pertaining to cheating will apply to this class.

Professionalism: As faculty, staff, and students interact in professional settings, they are expected to demonstrate professional behaviors as defined in the College's conceptual framework. These professional commitments or dispositions are listed below:

1. Engage in responsible and ethical professional practices
2. Contribute to collaborative learning communities
3. Demonstrate a commitment to diversity
4. Model and nurture intellectual vitality

CORE CONCEPTS FOR OPTIMAL LEARNING

These concepts are adopted from Thomas H. Benton's article in the June 9, 2006 *Chronicle of Higher Education*. I adopted these concepts because it is my responsibility to help you become an educated, disciplined graduate willing to work hard and become a productive citizen. This is basically a list of concepts that will help structure our teacher-student relationship.

Students and professors have obligations to each other.

Here is what I expect from students: You will treat everyone in class, including the professor, with respect due to all human beings. You will attend every class, give your full attention to the material, and conduct yourself in a manner appropriate for a learning environment. You will agree to do the work outlined in the syllabus on time. You will acknowledge that previous academic preparation (e.g., writing, scientific, and mathematical skills) will affect your performance in this course. You will acknowledge that your perception of effort, by itself, is not enough to justify a distinguished grade. You will not plagiarize or otherwise steal the work of others. You will not make excuses for your failure to do what you should do in order to succeed. You will accept the rewards or consequences of your actions.

Here is what students can expect from me: I will treat you with the respect due all human beings. I will know your name and treat you as an individual. I will not discriminate against you on the basis of your identity or well-informed viewpoints. I will be honest with you. I will manage the class in a professional manner. I will prepare carefully for every class. I will begin and end class on time. I will teach you in areas of my professional expertise. If I do not know something, I will say so. I will conduct scholarly research and publication with the aim of making myself a more informed teacher. I will return your assignments with feedback. I will pursue the maximum punishment for plagiarism, cheating, and other violations of academic integrity. I will maintain careful records of your attendance, performance, and progress. I will investigate every excuse for non-attendance of classes and non-completion of assignments. I will make myself accessible to you for course-related advising. I will maintain confidentiality concerning your performance. Your grade will reflect the quality of your work and nothing else. At the end of the semester, I will be interested in your feedback about the class, but I will be most interested in what you learn rather than how you feel.

It is my goal to provide you with a fantastic learning experience that will prepare you to compete favorably in the marketplace of health and fitness professionals. It is my hope that your experience in this class and in this major will impact you such that you will want to maintain contact with myself and other faculty members in the Department of Kinesiology.

EVALUATION

You may earn up to 1000 total points in this course. Your individual evaluation will simply be based on the total points earned throughout the course. For example, an "A" = 900 total points earned or 90%, a "B" = 800 - 899 points earned or 80 - 89%, a "C" = 700 - 799 points earned or 70 - 79%. Descriptions for these grade percentages are provided below.

Grade Descriptions

A (90.0-100%): Excellent: A full "A" grade reflects superior knowledge and understanding of the material covered in this course. This grade means you have demonstrated excellence in all of the skills and abilities outlined and covered in course assignments. In order to receive an "A" you must go beyond simply repeating material covered in lecture, laboratory work or your assigned reading. There is usually a distinct difference between "repetition" and "understanding." To get an "A" answer you must go beyond this, showing that you understand and can integrate all of the material by adding further content, linkages to additional concepts, and similar material not directly covered in the lecture, classroom discussion, and assigned readings. It must be noted that grades of 100 percent are very rare, and reflect perfection - that is, such an answer could not be improved in any way, there are no factual errors in the answer, nothing important has been left out, and you have done an incredible job of demonstrating an understanding of the material and its relationship to other important concepts or theories. A grade of 90 percent reflects work that has achieved all of the assigned goals, without any notable omissions or factual errors and has demonstrated a level of understanding beyond that required of the assignment. A grade of 90 percent is considered a full "A" and reflects superior understanding - above and beyond the repetition of lecture notes and assigned readings - and the ability to demonstrate excellence in all of the skills and abilities included in classroom discussions and course assignments.

B Range (80.0-89.9%): Good – Above Average: A "B" grade reflects work that is good and above average, but that is not good enough to reach the "A" range. Typical reasons include important omissions in the answer (leaving out concepts or ideas that really need to be there) or factual errors, perhaps from following the "shotgun approach" (write down everything you think you know about the subject, in the hope that the instructor will find what he/she is looking for), and/or demonstrating skills and abilities that are very good but not perfected. Remember, even if your answer includes the correct material the instructor is looking for, also including incorrect or inappropriate material indicates that you do not understand the material at the "A" level. A grade of 80 to 89.9 percent reflects work that has achieved all of the assigned goals, but has not adequately demonstrated a level of understanding or performance beyond that required of the assignment.

C Range (70.0-79.9%): Average: A "C" grade reflects work that is average at best. Such a grade typically indicates work that reflects a basic understanding of many of the concepts involved in the assignment, but does not address or integrate these concepts in a very satisfactory manner. "C" assignments are generally not very well organized or written, often contain important errors of fact, important omissions from an answer, and/or demonstrated skills and abilities that may pass review but; otherwise, will not distinguish you as an exceptional health practitioner.

D Range (60.0-69.9%): Below Average: A "D" grade reflects work that is below average. In general, such a grade reflects performance that is not worthy of credit toward graduation with a Kinesiology degree. A "D" indicates that that you do not possess a basic understanding of the assigned material, and often reflects a very poorly organized and written argument or repeated lack of professional skills and abilities. In addition to common errors of fact and frequent omissions of relevant material, and poor performance of skills and abilities, assignments rarely exhibit much independent thought beyond simply trying to repeat – and often incorrectly - material from the lecture, assigned readings, and laboratory work.

F (below 60.0%): Unacceptable: An "F" grade reflects work that is completely unacceptable. Such work usually shows little resemblance to the assignment, whether because you left out large parts of the assignment, didn't bother to complete the assignment, acquired information from some other source that was written for a different assignment, and/or you fail to demonstrate the professional skills and abilities required for basic competency.

There are 3 categories in which you may earn 1000 course points; 1) course notebook, 2) topic exams, and; 3) a cumulative final written exam. Each of these categories is described in detail below.

Notebook (100 Notebook Points)

You are expected to keep an organized notebook of your class work. The notebook evaluation will be worth 100 pts and will be graded while you are taking the final written exam at the end of the semester. All notebooks should be in three-ring binders with all pages bound (no loose pages). The order of the notebook should be as follows:

I. Syllabus & Course Schedule
II. Lecture Notes and Handouts (divided into topical sections with a tabbed divider and in chronological order) Topic Sections: SEE COURSE OUTLINE and COURSE SCHEDULE
III. Topic Exams (in chronological order with your handwritten corrections on a separate sheet of paper and stapled to the back of the original exam)

Topic Exams (700 Exam Points)

There will be a total of 5 topic exams throughout the semester. Each exam is worth 140 pts. Topic exams are designed to test your knowledge in areas covered in assigned text readings, lectures, and classroom discussions. Make-up exams will only be given for students with documented excused absences. *Students with excused absences must be prepared to take the exam on the day they return to class.* Excused absences are defined in the TIGER CUB STUDENT HANDBOOK.

Final Exam (200 Final Exam Points)

A comprehensive final exam worth 200 pts will be administered during the scheduled exam time at the end of the semester. SEE COURSE SCHEDULE FOR EXAM TIME

GENERAL COURSE OUTLINE:

This outline has been created to help you study. A list of assigned readings is provided along with a primer list of URLs. All of these resources are intended to assist you with course work and to help you explore these topics on a much broader scale.

1. PHYSICAL ACTIVITY IN DEVELOPING AND MAINTAINING HEALTH

Readings:

Clinical Exercise Physiology
Chapter 1: Review of Exercise Physiology
Chapter 2: Epidemiology
(NOTE: Chapters 1 and 2 are intended for review. Your knowledge of this information will be tested as it applies to the topics that follow throughout this class.)

ACSM's Guidelines (8th Edition)
Chapter 1: Risks and Benefits Associated with Physical Activity

ACSM's Resource Manual (6th Edition)
Chapter 5: Lifespan Effects of Aging and Deconditioning
Chapter 11: Physical Activity Status & Chronic Diseases
Chapter12: Assessment of Physical Activity

Article 1: Haskell, W.L. et al. Special Communications: Physical Activity and Public Health: Updated Recommendation for Adults from the American College of Sports Medicine and the American Heart Association. ***MSSE*** 39 (8): 1423 – 1434, 2007.

Article 2: Nelson, M.E., et al. Physical Activity and Public Health in Older Adults: Recommendation from the American College of Sports Medicine and the American Heart Association. ***MSSE*** 39 (8): 1435 – 1445, 2007.

Article 3: Corbin, C. Helping Clients to Understand National Physical Activity Guidelines. ***ACSM's Health & Fitness Journal*** 13 (5): 17 – 22, 2009.

Article 4: Ball, S. and R. Gammon. My Activity Pyramid for Adults. ***ACSM's Health & Fitness Journal*** 13 (6): 24 - 27, 2009.

Article 5: Phillips, E. and B. Roy. Exercise is Medicine™: Partnering with Physicians. ***ACSM's Health & Fitness Journal*** 13 (6): 28 - 30, 2009.

URLs:

American Heart Association:
http://www.americanheart.org/presenter.jhtml?identifier=4563
http://circ.ahajournals.org/cgi/content/full/96/1/355

National Institutes of Health:
http://www.nhlbi.nih.gov/health/dci/Diseases/phys/phys_what.html
http://www.nia.nih.gov/HealthInformation/Publications/ExerciseGuide/
http://www.nlm.nih.gov/medlineplus/exerciseandphysicalfitness.html

U.S. Surgeon General's Report on Physical Fitness:
http://www.cdc.gov/nccdphp/sgr/sgr.htm

Centers for Disease Control: Physical Activity is for Everyone
http://www.cdc.gov/physicalactivity/everyone/guidelines/adults.html

U.S. Department of Health & Human Services
http://www.health.gov/PAGuidelines/
http://www.health.gov/PAGuidelines/factsheetprof.aspx

2. EXERCISE AS PHYSICAL ACTIVITY

Readings:

ACSM's Guidelines (8th Edition)
Chapter 7: General Principles of Exercise Prescription

ACSM's Resource Manual (6th Edition)
Chapter 28: Cardiorespiratory Exercise Prescription
Chapter 29: Musculoskeletal Exercise Prescription
Chapter 30: Cardiopulmonary Adaptations to Exercise
Chapter 31: Adaptations to Resistance Training

Chapter 46: Exercise Program Professionals
Chapter 50: Exercise Program Safety and Emergency Procedures
Chapter 51: Legal Considerations for Exercise Programming
(NOTE: Chapters 46, 50 and 51 are intended for review. Your knowledge of this information will be tested as it applies to the topics that follow throughout this class.)

URLs:

ExRx.net:
http://www.exrx.net/

3. EXERCISE BEHAVIOR

Readings:

ACSM's Resource Manual (6th Edition)
Chapter 42: Behavioral Strategies to Enhance Physical Activity Participation
Chapter 43: Principles of Health Behavior Change

Article 6: Mears, J. and M. Kilpatrick. Motivation for Exercise: Applying Theory to Make a Difference in Adoption and Adherence. ***ACSM's Health & Fitness Journal*** 12 (1): 20 - 26, 2008.

Article 7: Edmunds, J. et al. Helping Your Clients and Patients Take ownership Over Their Exercise: Fostering Exercise Adoption, Adherence, and Associated Well-Being. ***ACSM's Health & Fitness Journal*** 13 (3): 20 - 25, 2009.

4. EXERCISE FOR GENERAL HEALTH & FITNESS

Readings:

Clinical Exercise Physiology
Chapter 34: Aging

ACSM's Guidelines (8th Edition)
Chapter 8: Exercise Testing & Prescription for Healthy Populations and Special Considerations (Older Adult)
pp. 190 - 194

ACSM's Resource Manual (6th Edition)
Chapter 18: Pre-Exercise Testing Evaluation
Chapter 19: Cardiorespiratory and Health-Related Physical Fitness Assessments
Chapter 34: Exercise Prescription and Medical Considerations
Chapter 48: Health & Fitness Program Development and Operation

Article 8: Thompson, P.D. et al. Special Communications: Exercise and Acute Cardiovascular Events: Placing the Risks into Perspective. ***Circulation*** 115: 2358 – 2368, 2007

Article 9: Pollock, M.L. et al. American College of Sports Medicine Position Stand: The Recommended Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory Fitness and Muscular Fitness and Flexibility in Healthy Adults. ***MSSE*** 30 (6): 975 - 991, 1998.

Article 10: Chodzko-Zajko, W.J. et al. American College of Sports Medicine Position Stand: Exercise and Physical Activity for Older Adults. ***MSSE*** 41 (7): 1510 – 1530, 2009.

Article 11: Ratamess, N.A. et al. American College of Sports Medicine Position Stand: Progression Models in Resistance Training for Healthy Adults. ***MSSE*** 41 (3): 687 – 708, 2009.

5. EXERCISE PRESCRIPTION FOR WEIGHT LOSS AND WEIGHT CONTROL

Readings:

Clinical Exercise Physiology
Chapter 20: Obesity
Chapter 24: Pediatric Obesity

ACSM's Guidelines (8th Edition)
Chapter 10: Exercise Prescription for Other Clinical Populations (Overweight and Obesity) pp. 253 - 255

ACSM's Resource Manual (6th Edition)
Chapter 33: Weight Management
Chapter 38: Exercise Prescription for Patients with Comorbidities and Other Chronic Diseases

Article 12: Poirier, P. et al. AHA Scientific Statement: Obesity and Cardiovascular Disease: Pathophysiology, Evaluation and Effect of Weight Loss. ***Circulation*** 113: 898 – 913, 2006.

Article 13: Donnelly, J.E. et al. ACSM Position Stand: Appropriate Physical Activity Intervention Strategies for Weight Loss and Prevention of Weight Regain for Adults. ***MSSE*** 41 (2): 459 – 471, 2009.

Article 14: Melby, C. and Hickey M. Energy Balance and Body Weight Regulation. ***Gatorade Sports Science Institute Sports Science Exchange*** 18 (4): 1 - 6, 2005.

Other Resources:

Metabolic Calculations Resource Guide (Blackboard/Course Content/Course Library/Topic 5 Folder)

URLs:

U.S. Surgeon General:
http://www.surgeongeneral.gov/topics/obesity/

CDC:
http://www.cdc.gov/genomics/resources/diseases/obesity/index.htm
http://www.cdc.gov/nccdphp/dnpa/obesity/index.htm
http://www.cdc.gov/nccdphp/dnpa/bmi/

IOTF:
http://www.iotf.org/

NIH: Medline
http://www.nlm.nih.gov/medlineplus/obesity.html

NIH: NHLBI
http://www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm
http://www.nhlbi.nih.gov/health/public/heart/obesity/lose_wt/

NIH: NIDDK
http://www.niddk.nih.gov/health/nutrit/pubs/physact.htm
http://www.niddk.nih.gov/health/nutrit/nutrit.htm

6. EXERCISE PRESCRIPTION FOR DIABETES

Readings:

Clinical Exercise Physiology
Chapter 21: Diabetes

ACSM's Guidelines (8th Edition)
Chapter 10: Exercise Prescription for Other Clinical Populations (Diabetes Mellitus) pp. 232 – 236
Chapter 10: Exercise Prescription for Other Clinical Populations (Metabolic Syndrome) pp. 250 – 253

ACSM's Resource Manual (6th Edition)
Chapter 8: Pathophysiology and Treatment of Metabolic Disease
Chapter 24: Diagnostic Procedures in Patients with Metabolic Disease
Chapter 37: Exercise Prescription in Patients with Diabetes
Chapter 38: Exercise Prescription for Patients with Comorbidities and Other Chronic Diseases

Article 15: Grundy, S.M. et al. Definition of Metabolic Syndrome: Report of the National Heart, Blood and Lung Institute/ American Heart Association Conference on Scientific Issues Related to Definition. ***Circulation*** 109: 433 – 438, 2004.

Article 16: Churilla, J. The Metabolic Syndrome: The Crucial Role of Exercise Prescription and Diet. ***ACSM's Health & Fitness Journal*** 13 (1): 20 - 25, 2009.

Article 17: Buse, J.B. et al. AHA/ADA Scientific Statement: Primary Prevention of Cardiovascular Diseases in People with Diabetes Mellitus. ***Circulation*** 115: 114 – 126, 2007.

URLs:

ADA
http://www.diabetes.org/

NIH:NIDDK
http://www.niddk.nih.gov/
http://ndep.nih.gov/

WebMD
http://diabetes.webmd.com/default.htm
http://diabetes.webmd.com/diabetes-diet-healthy-diet-basics

CDC:
http://www.cdc.gov/diabetes/

Joslin Diabetes Center:
http://www.joslin.org/index.asp

Diabetes.com:
http://diabetes.about.com/

Diabetes Mall:
http://www.diabetesnet.com/

7. EXERCISE PRESCRIPTION FOR HYPERTENSION

Readings:

ACSM's Guidelines (8th Edition)
Chapter 10: Exercise Prescription for Other Clinical Populations (Hypertension) pp. 248 - 250

ACSM's Resource Manual (6th Edition)
Chapter 38: Exercise Prescription for Patients with Comorbidities and Other Chronic Diseases

Article 18: Pescatello, L.S. et al. American College of Sports Medicine Special Communications: Exercise and Hypertension. ***MSSE*** 36 (3): 533 – 553, 2004.

Article 19: Rosendorff, C. et al. AHA Scientific Statement: Treatment of Hypertension in the Prevention and Management of Ischemic Heart Disease. ***Circulation*** 115: 2761 – 2788, 2007.

URLs:

NIH:NHLBI
http://www.nhlbi.nih.gov/hbp/

NIH: Medline
http://www.nlm.nih.gov/medlineplus/highbloodpressure.html

AHA
http://www.americanheart.org/presenter.jhtml?identifier=2114

Life Clinic Health Management Systems
http://www.lifeclinic.com/focus/blood/default.asp

About-Hypertension.com
http://www.about-hypertension.com/

8. EXERCISE PRESCRIPTION FOR DYSLIPIDEMIAS

Readings:

Clinical Exercise Physiology
Chapter 5: Lipid & Lipoprotein Disorders

ACSM's Guidelines (8th Edition)
Chapter 10: Exercise Prescription for Other Clinical Populations (Dyslipidemia) pp. 244 - 246

ACSM's Resource Manual (6th Edition)
Chapter 38: Exercise Prescription for Patients with Comorbidities and Other Chronic Diseases

URLs:

NIH: NHLBI: NCEP Third report of the ATP
http://www.nhlbi.nih.gov/guidelines/cholesterol/
http://www.nhlbi.nih.gov/chd/

NIH: Medline
http://www.nlm.nih.gov/medlineplus/cholesterol.html

AHA
http://www.americanheart.org/presenter.jhtml?identifier=4488

Lipids Online
http://www.lipidsonline.org/index.cfm

Committee on Cardiovascular and Metabolic Diseases
http://www.ccmdweb.org/mission.aspx

9. EXERCISE PRESCRIPTION FOR ARTHRITIS

Readings:

Clinical Exercise Physiology
Chapter 32: Osteoarthritis and Rheumatoid Arthritis

ACSM's Guidelines (8th Edition)
Chapter 10: Exercise Prescription for Other Clinical Populations (Arthritis) pp. 225 - 228

ACSM's Resource Manual (6th Edition)
Chapter 40: Exercise Prescription for People with Arthritis

Article 20: Katz, P. et al. Exercise Prescription for Older Adults with Osteoarthritis Pain: Consensus Practice Recommendations from The American Geriatrics Society Panel on Exercise and Osteoarthritis. ***JAGS*** 49: 808 - 823, 2001.

Article 21: Nieman, D. Exercise Soothes Arthritis Joint Effects. ***ACSM's Health & Fitness Journal*** 4 (3): 20 - 27, 2000.

URLs:

Arthritis Foundation
http://www.arthritis.org/index.php

NIH: Medline
http://www.nlm.nih.gov/medlineplus/arthritis.html

NIH:NIAMS
http://www.niams.nih.gov/Health_Info/Arthritis/default.asp

10. EXERCISE PRESCRIPTION FOR NEUROLOGICAL DISORDERS

Readings:

Clinical Exercise Physiology
Chapter 16: Multiple Sclerosis
Chapter 17: Parkinson Disease
Chapter 18: Polio

ACSM's Resource Manual (6th Edition)
Chapter 20: Musculoskeletal Fitness and Assessment

URLs:

NIH: Medline
http://www.nlm.nih.gov/medlineplus/neurologicdiseases.html

NIH: NINDS
http://www.ninds.nih.gov/disorders/disorder_index.htm

National Multiple Sclerosis Society
http://www.nationalmssociety.org/index.aspx

Parkinson's Disease Foundation
http://www.pdf.org/

Mayo Clinic: Polio
http://www.mayoclinic.com/health/polio/DS00572

11. EXERCISE PRESCRIPTION FOR OSTEOPOROSIS

Readings:

Clinical Exercise Physiology
Chapter 31: Osteoporosis

ACSM's Guidelines (8th Edition)
Chapter 10: Exercise Prescription for Other Clinical Populations (Osteoporosis) pp. 256 - 258

ACSM's Resource Manual (6th Edition)
Chapter 39: Exercise Prescription for People with Osteoporosis

Article 22: Kohrt, W.M. et al. American College of Sports Medicine Position Stand: Physical Activity and Bone Health. ***MSSE*** 36 (11): 1985 – 1996, 2004.

URLs:

National Osteoporosis Foundation
http://www.nof.org/

Osteoporosis Society of Canada
http://www.osteoporosis.ca/english/home/default.asp?s=1

NIH: NIAMS
http://www.osteo.org/

Endocrine web.com
http://www.endocrineweb.com/osteoporosis/

Osteoporosis Tutorial
http://courses.washington.edu/bonephys/

12. EXERCISE PRESCRIPTION FOR LOW BACK PAIN

Readings:

Clinical Exercise Physiology
Chapter 33: Back Pain

ACSM's Resource Manual (6th Edition)
Chapter 20: Musculoskeletal Fitness and Assessment

URLs:

NIH: NINDS
http://www.ninds.nih.gov/disorders/backpain/detail_backpain.htm

NIH: Medline
http://www.nlm.nih.gov/medlineplus/backpain.html

WebMD
http://www.webmd.com/back-pain/tc/low-back-pain-cause

MedicineNet.com
http://www.medicinenet.com/low_back_pain/article.htm

13. EXERCISE PRESCRIPTION FOR CARDIOVASCULAR DISEASE

Readings:

Clinical Exercise Physiology
Chapter 3: Ischemic Heart Disease
Chapter 4: Chronic Heart Failure
Chapter 6: Cardiomyopathies
Chapter 8: Pacemakers

ACSM's Guidelines (8th Edition)
Chapter 9: Exercise Prescription for Patients with Cardiac Disease
Chapter 10: Exercise Prescription for Other Clinical Populations (Peripheral Artery Disease) pp. 258 - 260

ACSM's Resource Manual (6th Edition)
Chapter 6: Pathophysiology and Treatment of Cardiovascular Disease
Chapter 21: Clinical Exercise Testing Procedures
Chapter 22: Diagnostic Procedures for Cardiovascular Disease
Chapter 35: Exercise Prescription for Patients with Cardiovascular Disease

Article 23: LaFontaine, T. and J. Roitman. Contemporary Cardiovascular Rehabilitation in the New Millenium. ***ACSM's Health & Fitness Journal*** 12 (5): 21 - 27, 2008.

Article 24: Sorace, P. et al. Resistance Training for Cardiac Patients: Maximizing Rehabilitation. ***ACSM's Health & Fitness Journal*** 12 (6): 22 – 28, 2008.

URLs:

AACVPR
http://www.aacvpr.org/

ACSM: CEPA
http://www.acsm-cepa.org/i4a/pages/index.cfm?pageid=1

AHA
http://www.americanheart.org/presenter.jhtml?identifier=4490
(also select Rehabilitation and Exercise Standards at the bottom of this web page)

14. EXERCISE PRESCRIPTION FOR PULMONARY DISEASE

Readings:

Clinical Exercise Physiology
Chapter 11: COPD
Chapter 12: Cystic Fibrosis
Chapter 13: Asthma & EIA

ACSM's Guidelines (8th Edition)
Chapter 10: Exercise Prescription for Other Clinical Populations (Pulmonary Diseases) pp. 260 - 264

ACSM's Resource Manual (6th Edition)
Chapter 7: Pathophysiology and Treatment of Pulmonary Disease
Chapter 23: Diagnostic Procedures in Patients with Pulmonary Disease
Chapter 36: Exercise Prescription in Patients with Pulmonary Disease

Article 25: Cerny, J. et al. Control of Exercise-Induced Asthma: Triggers, Medications, Warm-Ups. ***ACSM's Health & Fitness Journal*** 4 (1): 17 - 24, 2000.

URLs:

NIH: Medline
http://www.nlm.nih.gov/medlineplus/lungdiseases.html
http://www.nlm.nih.gov/medlineplus/lungsandbreathing.html
http://www.nlm.nih.gov/medlineplus/breathingproblems.html
http://www.nlm.nih.gov/medlineplus/asthma.html
http://www.nlm.nih.gov/medlineplus/copdchronicobstructivepulmonarydisease.html

NIH:NHLBI
http://www.nhlbi.nih.gov/health/dci/Browse/Lung.html

15. EXERCISE PRESCRIPTION DURING PREGANANCY & THE POSTPARTUM PERIOD

Readings:

ACSM's Guidelines (8th Edition)
Chapter 8: Exercise for Healthy Populations and Special Considerations (Pregnancy) pp. 183 - 187

ACSM's Resource Manual (6th Edition)
Chapter 41: Exercise Prescription in Special Populations: Women, Pregnancy, Children and the Elderly (Pregnancy) pp. 665 – 668
Chapter 32: Group Exercise Programming

Article26: Pivarnik, J. and L. Mudd. Oh Baby! Exercise During Pregnancy and the Postpartum Period. ***ACSM Health & Fitness Journal*** 13 (3): 8 – 13, 2009.

Article 27: Pilolla, K. and Manore, M. Gestational Diabetes Mellitus: The Other Diabetes on the Rise. ***ACSM's Health & Fitness Journal*** 12 (5): 8 - 13, 2008.

URLs:

American Academy of Family Physicians
http://familydoctor.org/online/famdocen/home/women/pregnancy/basics/305.html

NIH:Medline
http://www.nlm.nih.gov/medlineplus/pregnancy.html

Paradise Valley Community College
http://www.pvc.maricopa.edu/fitness/pregfitness.html

TEXTBOOKS

Clinical Exercise Physiology: Applications and Physiological Principles.

Eds. Linda LeMura & Serge von Duvillard.
Lippincott, Williams & Wilkins, 2003.
ISBN 0-7817-2680-8

ACSM. ACSM's Guidelines for Exercise Testing and Prescription.

Lippincott, Williams & Wilkins, 8th Edition, 2009.
ISBN 978-0-7817-6903-7

ACSM. ACSM's Resource Manual for Guidelines for Exercise Testing & Prescription.

Lippincott, Williams & Wilkins, 6th Edition 2009.
ISBN 978-0-7817-6906-8

Exercise Prescription Daily Course Schedule — Spring 2010

January

Week 1	**11**	**1.** Physical Activity in Developing and Maintaining Health	
	15	Physical Activity in Developing and Maintaining Health	
Week 2	**18**	***Dr. Martin Luther King Memorial Holiday***	
	20	**2.** Exercise as Physical Activity	
Week 3	**25**	**3.** Exercise Behavior	
	27	Exercise Behavior	

February

Week 4	**1**	**4.** Exercise for General Health & Fitness	
	3	Exercise for General Health & Fitness	
Week 5	**8**	**5.** Exercise Prescription for Obesity	**Exam 1**
	10	Exercise Prescription for Obesity	
Week 6	**15**	Exercise Prescription for Obesity	
	17	**6.** Exercise Prescription for Diabetes	
Week 7	**22**	Exercise Prescription for Diabetes	
	24	Exercise Prescription for Diabetes	

March

Week 8	**1**	**7.** Exercise Prescription for Hypertension	**Exam 2**
	3	Exercise Prescription for Hypertension	
Week 9	**8**	**8.** Exercise Prescription for Dyslipidemias	
	10	**9.** Exercise Prescription for Arthritis	
Week 10	**15**	***Spring Break***	
	17	***Spring Break***	
Week 11	**22**	Exercise Prescription for Arthritis	
	24	**10.** Exercise Prescription for Neurological Disorders	**Exam 3**
Week 12	**29**	Exercise Prescription for Neurological Disorders	
	31	**11.** Exercise Prescription for Osteoporosis	

April

Week 13	**5**	Exercise Prescription for Osteoporosis	
	7	**12.** Exercise Prescription for Low Back Pain	
Week 14	**12**	**13.** Exercise Prescription for Cardiovascular Disease	**Exam 4**
	14	Exercise Prescription for Cardiovascular Disease	
Week 15	**19**	Exercise Prescription for Cardiovascular Disease	
	21	**14.** Exercise Prescription for Pulmonary Disease	
Week 16	**26**	Exercise Prescription for Pulmonary Disease	
	28	**15.** Exercise Prescription for Pregnancy & Postpartum	**Exam 5**

May

	3	Exercise Prescription for Pregnancy & Postpartum
	6	**Final Exam** (8:00 – 10:30 AM)