

**Human Kinetics 469 (2007)**  
**EXERCISE PRESCRIPTION AND EXERCISE TESTING**

**COURSE OUTLINE**

Dr. Ted Rhodes - 822-4585  
ecrhodes@interchange.ubc.ca

**Course Description**

The emphasis of the course will be on exercise prescription and testing for both the healthy adult population and for special populations or persons with a disability. The laboratory work will focus primarily on the exercise testing aspect of the course. Pre-requisite: HKIN 463, 370

**Learning Outcomes:**

1. Student will develop basic knowledge necessary to administer exercise programs for healthy adults and special populations.
2. Students will acquire knowledge and the ability to test healthy adults and special populations in areas of aerobic and anaerobic protocols, flexibility, strength, and pulmonary function.
3. Students will be prepared to critically analyze presently available exercise programs as they apply to adult and special populations.
4. Students will understand ethical principles and practices as they apply to exercise programs and testing.
5. Students will be prepared to enroll in National Certification programs for exercise prescription and testing (Canadian Society of Exercise Physiology - Professional Fitness and Lifestyle Consultant).

**Required Text**

Nieman, D.C. Exercise Testing and Prescription, MacGraw-Hill Publishing, 6<sup>th</sup> edition, 2007.

**Recommended Reading**

ACSM's Guidelines for Exercise Testing and Prescription, seventh edition, Williams and Wilkins, 2005.

**Course Content**

**A) Health and Fitness Trends (Chapters 1 & 2 - Nieman)**

- 1) Exercise and Physical Fitness in North America (page 8)
- 2) Strategies for Increasing Physical Activity (page 19)
- 3) Comprehensive Approach to Physical Fitness (page 32)
- 4) Current Trends for Fitness (class notes)

**B) Exercise Physiology for Good health (Chapters 7, 8, Nieman)  
(Conditioning for Physical Fitness)**

- 1) Physiological Responses to Acute Exercise (page 201)
- 2) Chronic Adaptation to Regular Exercise (page 209)
- 3) Gender, Age and Heredity (page 216)
- 4) General Principles of Exercise Testing (page 47)
- 5) General Principles of Exercise Prescription (page 230)
- 6) Current Trends(class notes)
- 7) Flexibility and Stretching (class notes)
- 8) Anaerobic Training (strength and interval) (class notes)
- 9) Aerobic Training (intensity setting) (class notes)

**C) Nutrition and Performance (Chapter 9 - Nieman)**

- 1) Nutrition basics & guidelines (page 281-301)
- 2) Principles of Nutrition (page 302)
- 3) Ergogenics and Current Trends (page 335)

**D) Physical Activity and Disease (Chapters 10, 11, 12, 13, - Nieman)**

- 1) Heart Disease and Cardiac Rehabilitation (page 369; class notes)
- 2) Cancer (page 447; class notes)
- 3) Diabetes (page 481; class notes)
- 4) Obesity (page 512)

**E) Exercise and Special Cases (Chapters 14, 15 Nieman)**

- 1) Occupational Medicine Physical Abilities Tests (class notes)
- 2) Aging (page 613)
- 3) Psychological Health (Compliance and Adherence to Exercise) (class notes)
- 4) Exercise-induced Asthma (page 680)
- 5) Congenital Heart Disease (class notes)
- 6) High Performance Training and Strength and Conditioning (class notes)
- 7) Children and Conditioning (class notes)

**Evaluation of the Course**

**Midterm examination - 40% of the final grade (Feb 14<sup>th</sup>)**

**Final examination - 60% of the final grade**

The final examination will be held during the April University exam period. Students **must be available** to write during the scheduled exam period.

**Additional References**

1. MacAuley, D. Benefits and Hazards of Exercise. BMJ Books, 1999.
2. Recommendations for the Fitness Assessment, Programming, and Counselling of Persons with a Disability. Canadian Journal of Applied Physiology. Vol 23, number 2, 1998.
3. Heyward, V.H. Advanced Fitness Assessment and Exercise Prescription. 4<sup>th</sup> edition, Human Kinetics Publisher, 2002.