

Course Approval Document

Department: Health, Human Performance and Recreation **Course Number:** HL 550

Title of Course: HL 550 – Exercise Programming for
Special Populations

Date: April 16, 2015
New Course

- I. Catalog Description:** An exploration of exercise testing and exercise programming considerations for special populations. (3)
- II. Prerequisites:** HL 331 or consent of instructor; Graduate Standing
- III. Course Objectives:** Upon completion of the course the student will be able to:
 - A. Identify testing modifications for patients with musculoskeletal, cardiovascular, pulmonary, and metabolic disorders
 - B. Discuss anatomical, cardiovascular, and metabolic adaptations during pregnancy
 - C. Discuss the programming considerations for the following patient populations: those with rheumatic diseases (rheumatic arthritis, fibromyalgia), diabetics, pulmonary disorders (restrictive and obstructive, cystic fibrosis), neuromuscular disorders and immunological and hematological disorders
 - D. Discuss exercise programming for cardiovascular disease patients
 - E. Discuss adaptations of exercise programs for obese populations and in pregnancy
 - F. Discuss exercise adaptations for young exercisers
- IV. Student Learning Outcomes**
 - A. The student will identify testing adaptations for individuals with metabolic and cardiovascular diseases
 - B. The student will design an exercise program for a patient with a chronic disease
 - C. The student will identify safety considerations for patients with balance and coordination issues.
- V. Expectations of Students**
 - A. Each student will complete all examinations and assignments
 - B. Each student will complete all laboratory exercises
 - C. Each student will complete all out of class reading and research assignments
- VI. Course Content**
 - A. Scientific Foundations of Exercise 1
 1. Benefits of Exercise
 2. Benefits of Exercise for Special Populations

- B. Exercise During Pregnancy 4
 - 1. Anatomical and Physiological Adaptions
 - 2. Precautions
 - 3. Benefits of Exercise
 - 4. Exercise Testing and Programming Considerations

- C. Exercise for Youth 4
 - 1. Anatomical and Physiological Differences Between Adults and Youth
 - 2. Exercise Precautions
 - 3. Benefits of Exercise
 - 4. Exercise Testing and Programming Considerations

- D. Exercise for Senior Adults 5
 - 1. Anatomical and Physiological Changes With Age
 - 2. Exercise Precautions
 - 3. Benefits of Exercise
 - 4. Exercise Testing and Programming Considerations

- E. Exercise for Overweight and Obese Individuals 4
 - 1. Anatomical and Physiological Changes
 - 2. Exercise Precautions
 - 3. Benefits of Exercise
 - 4. Exercise Testing and Programming Considerations

- F. Exercise for Individuals with Cardiovascular Disease 6
 - 1. Anatomical and Physiological Changes
 - 2. Exercise Precautions
 - 3. Benefits of Exercise
 - 4. Exercise Testing and Programming Considerations

- G. Exercise for Those with Disorders of the Skeletal System 6
 - 1. Anatomical and Physiological Changes
 - 2. Exercise Precautions
 - 3. Benefits of Exercise
 - 4. Exercise Testing and Programming Considerations

- H. Exercise for Individuals with Diabetes 5
 - 1. Anatomical and Physiological Changes
 - 2. Exercise Precautions
 - 3. Benefits of Exercise
 - 4. Exercise Testing and Programming Consideration

I.	Exercise for Individuals with Pulmonary Disorders	5
1.	Anatomical and Physiological Changes	
2.	Exercise Precautions	
3.	Benefits of Exercise	
4.	Exercise Testing and Programming Consideration	
J.	Exercise for Individuals with Multiple Sclerosis	5
1.	Anatomical and Physiological Changes	
2.	Exercise Precautions	
3.	Benefits of Exercise	
4.	Exercise Testing and Programming Consideration	
	Total Hours	45

Chair

Date

Dean

Date

HL 550 – Exercise Programming for Special Populations

<Term>

Instructor Name:
Instructor Phone:
Instructor Office Hours:

Instructor Office:
Instructor E-mail:

Course Description: An exploration of exercise testing and exercise programming considerations for special populations. (3)

Questions, comments or requests regarding this course or program should be taken to the instructor. Unanswered questions or unresolved issues involving this class may be taken to <Department Chair> in <Department Office Location>.

Textbook:

Williamson, P. (2011) *Exercise for Special Populations*. Baltimore, MD: Lippincott Williams and Wilkins.

Basis for Student Evaluation:

Undergraduate:

Examinations(4 – 10 pt quizzes + 2 – 100 pt exams)	240 pts.
Research Assignments	60 pts.
Program Design Assignments	100 pts.

Graduate:

Examinations(4 – 10 pt quizzes + 2 – 100 pt exams)	240 pts.
Research Assignments	120 pts.
Program Design Assignments and Presentation	140 pts.

The weight of evaluative criteria may change at the discretion of the course instructor

Undergraduate:

A=90-100%	360-400 pts
B=80-89%	320-359 pts
C=70-79%	280-319 pts
D=60-69%	240-279 pts
F=0-59%	<240 pts

Graduate:

A=90-100%	450-500 pts
B=80-89%	400-449 pts
C=70-79%	350-399 pts
F=0-69%	<350 pts

Course Itinerary

Week 1-2	Review of Scientific Basis for Exercise; Pregnancy
Week 3	Pregnancy; Youth
Week 4	Youth
Week 5	Elderly; Obese and Overweight
Week 6	Obese and Overweight
Week 7	Cardiovascular Disease
Week 8	Cardiovascular Disease; Mid-Term Exam
Week 9	Cardiovascular Disease; Skeletal Diseases
Week 10	Skeletal Diseases

Week 11	Skeletal Diseases; Diabetes
Week 12	Diabetes
Week 13	Pulmonary Disorders
Week 14	Pulmonary Disorders; Multiple Sclerosis
Week 15	Multiple Sclerosis

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- B. Discuss anatomical, cardiovascular, and metabolic adaptations during pregnancy
- C. Discuss the programming considerations for the following patient populations: those with rheumatic diseases (rheumatic arthritis, fibromyalgia), diabetics, pulmonary disorders (restrictive and obstructive, cystic fibrosis), neuromuscular disorders (muscular dystrophy, epilepsy, multiple sclerosis, Parkinson's, cerebral palsy, and ALS) and immunological and hematological disorders
- D. Discuss exercise programming for cardiovascular disease patients
- E. Discuss adaptations of exercise programs for obese populations and in pregnancy
- F. Discuss exercise adaptations for young exercisers

Student Learning Outcomes

- A. The student will identify testing adaptations for individuals with metabolic and cardiovascular diseases
- B. The student will design and exercise program for a patient with a chronic disease
- C. The student will identify safety considerations for patients with balance and coordination issues.

Academic Policy Statement

Students will be expected to abide by the **University Policy for Academic Honesty** regarding plagiarism and academic honesty. Refer to <http://www6.semo.edu/judaffairs/code.html>.

Student with Disabilities Statement

If a student has a special need addressed by the **Americans with Disabilities Act (ADA)** and requires materials in an alternative format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs. Refer to <http://www.semo.edu/ds>.

Civility and Harassment

All students are entitled to an educational experience in a setting where there exists a shared sense of respect between the students and instructor. All students and the instructor should strive to create an atmosphere in which all are felt welcome and open and honest discussion can and will be tolerated.