

# ROWAN UNIVERSITY CURRICULUM PROPOSAL

(1)

**PROPOSAL TITLE:** Exercise for Special Populations

0835-412

**CHECK APPROPRIATE:**  UNDERGRADUATE     GRADUATE     SEMESTER HOURS

**SPONSOR(S):** Edward C. Chaloupka, Ph.D., P.T.  
Leslie Spencer, Ph.D.

**DEPARTMENT/TELEPHONE #** Health and Exercise Science / 4785

**CHECK ONE:**  COURSE     MINOR PROGRAM     CONCENTRATION     SPECIALIZATION  
 ACHIEVEMENT CERTIFICATE     CERTIFICATION PROGRAM     MAJOR PROGRAM

Step #1 (Department)	Step #2 (Receipt)	Step #3 (School)
<input checked="" type="checkbox"/> Approved (Date) 10/23/97 <input type="checkbox"/> Not Approved (Date)  <u>RF Spencer</u> Dept. Curriculum Chr.  10/23/97 Reviewed (Date)  <u>James Burs</u> Dept. Chr.	SCC# 97-98-156 10-24-97  _____ Date Received Senate  <u>Shannon</u> Senate Curriculum Chr	Reviewed Date: 11/3/97 <input checked="" type="checkbox"/> Recommend to Approved <input type="checkbox"/> Recommend NOT to Approve Forward for Open Hearing: <input type="checkbox"/> WITHOUT Reservations <input type="checkbox"/> WITH Reservations: Comments:  <u>J. Marcus</u> School Committee Chr.

**Step #4 (Academic Dean):**  Recommended     NOT Recommended     Conditionally Recommended (See Comments)

Comments:

Dean Signature/Date: [Signature] 3/1/98

**Step #5 (Senate Curriculum Committee):** Open Hearing Date: 3/23/98    Approved by Curriculum Committee Date: 3/23/98

Returned to Sponsor(s) for the following reason:

**Step #6 (Senate)** Date announced/voted on at Senate: 4/28/98    If voted on:  Approved     NOT Approved

Forwarded to Executive Vice President/Provost: \_\_\_\_\_

Senate Curriculum Committee chair Signature/Date: [Signature] 5/8/98

Step #7 (Executive Vice President/Provost): Date Received \_\_\_\_\_

\_\_\_ Approved

MAY 2 1998

\_\_\_ NOT Approved If no, reasons are as follows:

Student Credit Hours \_\_\_\_\_

Faculty Load Hours \_\_\_\_\_

Equalized Credit Hours \_\_\_\_\_

Official Copy & Approval Sheet Filed (Date) 5/26/98

Executive Vice President/Provost Signature C. A. Matthews

**Registrar**

Date Approved Course Description Received 5/27/98

Hegis Taxonomy and Course Number Assigned 0835-412

Date/Signature of Registrar Robert A. Kulat 5/28/98

**Notification Forward:**

\_\_\_ Senate Curriculum Committee Chairperson

\_\_\_ Department Chairpersons

\_\_\_ Academic Dean(s)

\_\_\_ Registrar

\_\_\_ Sponsor(s)

## COURSE PROPOSAL FORMAT

1. Details:

a. Course Title:

Exercise for Special Populations

b. Sponsors: Edward C. Chaloupka, Ph.D., P.T.

Leslie Spencer, Ph.D.

Department of Health and Exercise Science

c. 3 S.H.

d. Course Level: Undergraduate (Senior level)

e. Curricular Effect      Major Elective  
No increase in total semester hours for degree program.

f. Prerequisites:      Exercise Physiology (0835.345, 4 s.h.) and Exercise Prescription (0835.401)

g. Implementation:      Spring Semester 1999

h. Adequacies:      Present full-time staff is adequate. Facilities include a fully equipped Exercise Science Research Laboratory.

i. Library Resources:      It is recommended that the following textbooks be added to compliment current holdings.

Scott M. Hasson

Clinical Exercise Physiology

Mosby ISBN 0-8151-4210-2

James S. Skinner

Exercise Testing and Exercise Prescription for Special Cases

Williams and Wilkins ISBN 0-8121-1440-X

Barbara N. Campaigne & Richard M. Lampman

Exercise in the Clinical Management of Diabetes

Human Kinetics ISBN 0-87322-634-8

- i. **Library Resources:** Claude Bouchard et.al.  
Exercise, Fitness, and Health  
Human Kinetics ISBN 0-87322-237-7

Kay Van Norman  
Exercise Programming for Older Adults  
Human Kinetics ISBN 0-87322-657-7

2. **Rationale:** This course is intended to be a recommended elective in the Health Promotions and Fitness Management Specialization in the Department of Health and Exercise Science. Graduates from this specialization will be employed by corporations, non-profit health agencies, hospitals and commercial facilities to design and implement health related and exercise programs for clients. The sedentary life style prevalent today, for example, is associated with a number of health problems (e.g. hypertension, obesity, coronary heart disease). It is extremely important that exercise specialists have a sound foundation in exercise program development for these special problems and other special populations.

3. **Essence of the Course:**

- a. **Objectives:** By the completion of this course the student will be able to:
1. demonstrate an understanding of the physiological basis for movement dysfunction
  2. demonstrate knowledge of the impact of exercise on individuals with diseases and disorders
  3. demonstrate knowledge of the indications, contraindications, and precautions for exercise in special populations
  4. determine the efficacy of an exercise regimen relative to individuals with a special health problem
  5. demonstrate an understanding of the importance of factors such as age, gender, and environment as they relate to an exercise program
  6. demonstrate an understanding of the physiologic effects to be expected from exercise programs for individuals with special problems
  7. prescribe exercise programs for specific special populations

8. assess through fitness testing the physiologic effects of exercise for special cases

b. Topical Outline:

- I. General Principles of Exercise Training
  - A. Intensity of Training
  - B. Frequency and Duration of Training
  - C. Mode of Training
  - D. Aerobic and Anaerobic Metabolism
  - E. Effects of Training
  - F. Reversibility of Training
  - G. Maintenance of Training
- II. General Principles of Exercise Prescription
  - A. Need for Exercise Prescription
  - B. Individualization of Exercise Programs
- III. Differences Between Men and Women for Exercise Program Design
  - A. Physique and Body Composition
  - B. Responses to Acute and Chronic Exercise
  - C. Osteoporosis
  - D. Menstruation
- IV. Differences Between Children and Adults for Exercise Program Design
  - A. Aerobic and Anaerobic Characteristics
  - B. Cardiopulmonary Responses
  - C. Thermoregulatory Responses
  - D. Acclimatization
  - E. Trainability of Children
- V. Aging Considerations for Exercise Program Design
  - A. General Effects of Aging
  - B. Age, Deconditioning and Disease
  - C. Exercise Testing
  - D. Trainability of the Elderly
- VI. Selected Special Cases
  - A. Chronic Obstructive Pulmonary Disease (including Asthma)
  - B. Coronary Heart Disease
  - C. Diabetes (Insulin and Non-Insulin Dependent)
  - D. Hypertension
  - E. Valvular and Congenital Heart Disease
  - F. Pregnancy
  - G. Rheumatoid Arthritis

- H. Osteoarthritis
- I. Obesity
- J. Osteoporosis
- K. Children/Adolescents
- L. Elderly
- M. Spinal and Low Back Disorders

c. Evaluation and Grading Procedure

- 1. Empirical journal research review papers
- 2. Written quizzes
- 3. Written examinations
- 4. Student presentations

d. Course Evaluation

- 1. Student evaluations
- 2. Review by department coordinator for Health Promotions and Fitness Management Specialization
- 3. Review by department curriculum committee

e. Consultation

M. Scott Donnelly  
Dir. of Fitness Programming  
Jewish Community Center  
Voorhees, N.J.  
(see attached)

### Catalog Description

#### Exercise For Special Populations

(Prerequisites: 0835.345 and 0835.401)

This course provides a study of exercise considerations for special populations. It covers the basic concepts of the physiologic effects of exercise and the application of these concepts to special cases. Cases included are respiratory and cardiovascular diseases, hypertension, obesity, diabetes, arthritis, osteoporosis, pregnancy, children/adolescents, and the elderly.

Betty and Milton Raiz

JEWISH  
COMMUNITY  
CENTER



1301 Springdale Road, Cherry Hill, New Jersey 08003  
609-424-4444 telephone • 609-751-6804 facsimile

**President**

David Butler

**Vice Presidents**

Charles Cahn

Richard Goldstein, Esq.

K. C. Isdander

Amy Kaplan

Simon Levy

Dr. Lee Meadvin

Renee Steinberg

**Immediate Past President**

Neal A. Cupersmith

**Board of Managers**

Shelley Adler, Esq.

Meredith Berkowitz

Fred Berlinsky, Esq.

Jeffrey Bernstein, Esq.

Sandy Brown

Jerrold Colton, Esq.

Neal Cupersmith

Nancy Cutler

Jane Davis

Leon Dembo, Esq.

Mitchell Edelman

Darryl Farber

James Feigenbaum, Esq.

Martin Feigenbaum

Rabbi Steven Fineblum

Steven Freiberg

Glen Fuhrman, Esq.

Richard Gerstein

William Green

Daniel Isdander

Ilyse Janove

Shawna Kates

Louis Katz

Kathy Kellmer

Alan Klein

Dr. Leonard Krivy

William Landsburg

David Lerman, Esq.

Nancy Toll Perilstein

Edward Plasky

Lynn Ravitz, Esq.

Mark Rosen, Esq.

Dr. Mitchell Rosenberg

Kyle Roth

Phyllis Rothman

Dale Silver, Esq.

\*Dr. James B. Soffer

Dianne Solomon

James Thompson, Esq.

Barry Turman

Karin Elks Weinstein

*\*Past President*

**Executive Director**

Les Cohen

**Assistant Directors**

Elaine Belson

Mayda Clarke

Edward Chaloupka Ph.D., P.T.

Rowan University

Dept. of Health & Exercise Science

Glassboro NJ, 08028

As Director of Fitness for the Jewish Community of Southern New Jersey, I currently have a majority of clientele that would fall under the "Special Populations" category. On nearly a daily basis I have discussions about 1 or more conditions that will be addressed in the proposed Exercise for Special Populations course in Rowan University's Department of Health and Exercise Science. There is without a doubt an absolute necessity in educating students regarding the needs of clients they will be dealing with in their professional endeavors.

As it currently stands, over 50 million Americans have Hypertension; 16 million Americans have Diabetes Mellitus (half of whom have yet to be diagnosed), and approximately 80 % of the population will suffer from Low Back pain. These numbers alone equate to a relatively large portion of the population that will be either using a fitness facility or NEED to take part in a fitness program. It is therefore our responsibility as educators to address this need with the appropriate educational classes to prepare the Health & Exercise students with the knowledge necessary to make decisions as to proper exercise program development.

Sincerely,

M. Scott Donnelly CSCS

*A member: Agency of the  
Jewish Federation of Southern  
New Jersey, the Jewish  
Community Centers  
Association of North America  
and the United Way*