

Approval  
12/4

Glassboro State College Senate Curriculum Committee

0835-345

\* Approval Form

Proposal Title: Credit Hour change for 0835-<sup>3</sup>444 Exercise Physiology w/lab-3cr.

Sponsor(s) Dr. Brenda Bolay Dept.: HPE Ext. 6222

Dr. Edward Chaloupka

Check one:  Course  Specialization  Concentration  Minor  Achievement Certificate  
 Certification Program  Major Program  Minor Change From 3 S.H. to 4 S.H. (Lab)  
3 S.H. (Non-Lab)  
(please name deletion or credit/title/catalog change)

\* new course w/lab EXERCISE PHYSIOLOGY-LAB 4 cr. 0835-345

Undergraduate  Graduate \_\_\_\_\_ Credit Hours

<p><b>Step 1 (Department)</b></p> <p><input checked="" type="checkbox"/> Approved <u>11/1/93</u> Date</p> <p><input type="checkbox"/> Not Approved</p> <p><u>Edward Chaloupka</u> Dept. CC Chairperson</p> <p><input checked="" type="checkbox"/> Reviewed <u>10/6/93</u> Date</p> <p><u>Edward Chaloupka</u> Dept. Chairperson</p>	<p><b>Step 2 (Receipt)</b></p> <p><input checked="" type="checkbox"/> SCC# <u>93-94-06</u></p> <p>Proposal Received _____ Date</p> <p><u>OCT 18 1993</u></p> <p><u>Edward Chaloupka</u> Dept. Chairperson</p>	<p><b>Step 3 (School CC)</b></p> <p>Reviewed <u>1/6/93</u></p> <p><input checked="" type="checkbox"/> Approved <input type="checkbox"/> Not Approved</p> <p><b>Comments:</b></p> <p><u>Cindi Hasty</u> School Curr Comm Chairperson</p>
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**Step 4 (Academic Dean) Comments:**

Recommend  
 Not Recommend  
 Conditionally Recommend (see comments)

Reviewed 12/21/93 Date

Edward Chaloupka  
Signature, Dean of School

**Step 5 (SCC)**

Open Hearing 1/31/94 Date  Approved by Senate Curriculum Committee 1/31/94 Date

Returned to sponsor(s) for the following reasons: Requester wants to create an additional major number for 4 credit course

**Step 6 (Senate)**

Presented to Senate 2/4/94 Date  Approved  Not Approved

Notification to Executive Vice-President/Provost 2/7/94 Date

Edward Chaloupka  
Signature, SCC Chairperson

**Step 7 (Executive V.P./Provost)**

Received 2/2/94  
Date

Approved  Yes  No

If no, reasons are as follows:

Student credit hours 4 hr. lab; 3 hr non-lab

Faculty load hours 5 sh. lab; 4 sh. non-lab

Equalized credit hours \_\_\_\_\_

Official copy and approval sheet filed 3/1/94  
Date

Donald Cepheid  
Signature, Executive Vice President/Provost

**Registrar**

Approved course description received 18 MAR 94  
Date

Hegis Taxonomy and Course Number assigned C835-345 4 cr. w/lab

B.K. King  
Signature, Registrar

18 MAR 94  
Date

**Notification forwarded:**

- Senate Curriculum Committee Chairperson
- Department Chairperson(s)
- Academic Dean(s)
- Registrar
- Sponsor(s)

C. Minor Curricular Change - Course Exercise Physiology  
0835.344

1. Details

- a. Change requested - from 3 S.H. to 4 S.H. (Lab)  
from 3 S.H. to 3 S.H. (non-lab)

→ 0835.345  
→ 0835.344

2. Rationale

a. Statement of Need - The request to change the semester hours from 3 S.H. to 4 S.H. is to add a laboratory section to this course. The proper study of the physiological response to physical activity should involve practical, laboratory type experiences in addition to didactic information. Over the last several years the Department of Health and Physical Education has acquired equipment which make the addition of a laboratory section for Physiology of Exercise both logical and extremely feasible. An example of such equipment is the Z-Plex I Cardio-Pulmonary Exercise System, a state of the art computerized respiratory and metabolic instrument. Courses in exercise physiology in undergraduate health and physical education curricula at other institutions routinely include a laboratory section (i.e. Physiology of Physical Activity at Temple University and Exercise Physiology at West Chester University).

Facilities - A New Exercise Science Laboratory was opened during the Spring 1992 semester in Esbjornson Gymnasium. This new laboratory comprises approximately double the square footage of the previous laboratory, thus more reasonably accommodating students.

A copy of the existing course description and a proposed laboratory schedule are attached.

- b. Curricular effect is the addition of one (1) S.H. to the undergraduate major in health and physical education for those students in the Exercise Science Specialization. Students in the Teacher Certification Specialization will continue with a 3 S.H. non-laboratory course. One section of this course will be taught during each Spring semester. There is sufficient faculty to staff this course.

## Proposed Laboratory Schedule - Exercise Physiology

### Laboratory

1. Orientation
  - Laboratory procedures/Protocols and equipment
  - Measurement Terminology
2. Energy Determination Using indirect Calorimetry (Open Circuit Spirometry)
  - metabolic Equivalentents (METS)
  - Kilocalorie Expenditure
3. Aerobic Power
  - Maximal Oxygen Consumption Test ( $VO_2MAX$ )
4. Anaerobic Power
  - Margaria - kalamen Power Test
  - Wingate Bike Test
  - PWC 170 Test
5. Estimation of  $VO_2MAX$  from Submaximal Heart Rate
  - Cycle Ergometry (Astrand Bicycle Test)
  - Treadmill Protocol
  - Step Test
6. Lung Volume Tests
  - Tidal Volume
  - Inspiratory Reserve Volume
  - Expiratory Reserve Volume
  - Total Lung Volume
  - Forced Vital Capacity
7. Exercise Respiratory Tests
  - Minute Ventilation
  - Rspiratory Rate
  - Tidal Volume
  - Respiratory Equivalent
  - Respiratory Exchange Ratio
8. EXAMINATION
9. Measurement of Anaerobic Threshold (A.T.)
10. Resting and Exercise Blood Pressure
11. Resting and Exercise Electrocardiography

12. Strength Tests
  - Grip Dynamometry
  - Leg-Back Dynamometry
  - Isokinetic Tests
    - Kinetic Communicator (KIN-COM)
13. Interval Versus Continuous Exercise Bouts
  - Treadmill
  - Cycle Ergometry
14. Body Composition
  - Futrex 5000 Infra-Red Analyzer
  - Skinfold Momograms
15. EXAMINATION