

Eastern Illinois University
NEW/REVISED COURSE PROPOSAL FORMAT
(Approved by CAA on 4/13/06 and CGS on 4/18/06)

This format is to be used for all courses submitted to the Council on Academic Affairs and/or the Council on Graduate Studies. (See <http://www.eiu.edu/~eiucaa/Directions.pdf> for directions on completing this form.)

Please check one: ☒ New course ☐ Revised course

PART I: CATALOG DESCRIPTION

1. **Course prefix and number:** KSS 5260
2. **Title (may not exceed 30 characters, including spaces):** Cardiopulm Exercise Physiology
3. **Long title, if any (may not exceed 100 characters, including spaces):** Cardiopulmonary Exercise Physiology
4. **Class hours per week, lab hours per week, and credit [e.g., (3-0-3)]:** 3-0-3
5. **Term(s) to be offered:** ☒ Fall ☐ Spring ☐ Summer ☐ On demand
6. **Initial term of offering:** ☒ Fall ☐ Spring ☐ Summer **Year:** 2010
7. **Course description (not to exceed four lines):** This course examines the response of the cardiopulmonary system to acute and chronic exercise in healthy individuals and those with various types of cardiopulmonary dysfunction.
8. **Registration restrictions:**
 - a. **Identify any equivalent courses:** None
 - b. **Prerequisite(s):** BIO 2001, Human Physiology and KSS 4340, Exercise Physiology
 - c. **Who can waive the prerequisite(s)?**
☐ No one ☒ Chair ☐ Instructor ☐ Advisor ☐ Other (Please specify)
 - d. **Co-requisites** (course(s) which MUST be taken concurrently with this one): none
 - e. **Repeat status:** ☒ Course may not be repeated.
☐ Course may be repeated to a maximum of _____ hours or _____ times.
 - f. **Degree, college, major(s), level, or class** to which registration in the course is restricted, if any: none
 - g. **Degree, college, major(s), level, or class** to be excluded from the course, if any: none
9. **Special course attributes** [cultural diversity, general education (indicate component), honors, remedial, writing centered or writing intensive] none
10. **Grading methods** (check all that apply): ☒ Standard letter ☐ C/NC ☐ Audit ☐ ABC/NC ("Standard letter"—i.e., ABCDF—is assumed to be the default grading method unless the course description indicates otherwise.)
11. **Instructional delivery method:** ☒ lecture ☐ lab ☐ lecture/lab combined ☐ independent study/research
☐ internship ☐ performance ☐ practicum or clinical ☐ study abroad ☐ other

PART II: ASSURANCE OF STUDENT LEARNING

1. List the student learning objectives of this course:

- a. Develop an understanding of cardiovascular and pulmonary function during acute exercise with an emphasis on the regulation of hemodynamics, pulmonary ventilation and gas exchange. (Goal: depth of content knowledge)
- b. Develop an understanding of the factors that control systemic blood pressure and tissue perfusion. (Goal: depth of content knowledge)
- c. Identify the cardiopulmonary adaptations that result from chronic aerobic and anaerobic exercise. (Goal: effective critical thinking and problem solving)
- d. Develop an understanding of how cardiorespiratory endurance training principles vary for women, older adults, and other populations. (Goal: depth of content knowledge)
- e. Understand the role of the cardiopulmonary system in thermoregulation and fluid balance during environmental stress. (Goal: effective critical thinking and problem solving)
- f. Develop an understanding of cardiovascular and pulmonary system pathology, how these pathological conditions can affect exercise tolerance and how these diseases and disorders can be modified or influenced through chronic physical activity. (Goal: effective critical thinking and problem solving)
- g. Develop a research project that monitors the affects of exercise duration and intensity on variables such as heart rate, blood pressure, ventilation, etc. (Goal: effective critical thinking and problem solving)

2. Assignments/Activities:

Objective	Exam	Summary Paper	Applied Activities	Research Project
Cardiopulmonary Function	x		x	
Blood Pressure & Perfusion	x		x	
Cardiopulmonary Adaptations to Training	x		x	
Special Populations	x	x		
Environmental Stress	x	x		
Pathophysiology	x			x

3. Explain how the instructor will determine students' grades for the course:

Exams (3)	36%
Applied Activities (3)	12%
Summary Paper (2)	20%
Research Project	12%
Final Exam	20%

4. Not technology delivered.

5. For graduate credit only.
6. This course has no writing designation.

PART III: OUTLINE OF THE COURSE

Week 1. Design & control of the cardiovascular system
Week 2. Continued...
Week 3. Cardiovascular function and adjustments to acute exercise
Week 4. Cont....
Week 5. Control of circulation and tissue perfusion with exercise
Week 6. Regulation of systemic blood pressure during exercise
Week 7. Design & control of the pulmonary system and minute ventilation
Week 8. Pulmonary function and adjustments to acute exercise
Week 9. Gas transport during exercise, Cardiopulmonary support for metabolism
Week 10. Cardiopulmonary adaptations to chronic exercise
Week 11. Thermoregulation & Fluid balance
Week 12. Cardiopulmonary Pathophysiology
Week 13. Cont....
Week 14-15. Effects of training on function in cardiopulmonary disease

PART IV: PURPOSE AND NEED

1. **Explain the department's rationale for developing and proposing the course.**
Currently, our graduate program offers one class in general exercise physiology which is insufficient to prepare our students for professional certification and to meet future accreditation standards. It is common among graduate programs for the topic of exercise physiology to be delivered through multiple courses allowing for greater depth and the broader coverage more typical of a graduate level course.
2. **Justify the level of the course and any course prerequisites, co-requisites, or registration restrictions.**
We propose that this course be graduate level with a prerequisite of KSS 4340, Exercise Physiology, due to the depth and breadth of the information beyond what is covered in KSS 4340.
3. **If the course is similar to an existing course or courses, justify its development and offering.**
This course is not similar to any existing course.
4. **Impact on Program(s):**
This course will be required as part of both the Clinical and Fitness options within the Graduate Exercise Science concentration.

PART V: IMPLEMENTATION

1. **Faculty member(s) to whom the course may be assigned:** Dr. Croisant, Dr. Emmett, Dr. Pritschet
2. **Additional costs to students:** None.
3. **Text and supplementary materials to be used (Include publication dates):** *Exercise Physiology: Energy, Nutrition & Human Performance* (6th ed.). McArdle, Katch & Katch (2007). Lippincott, Williams & Wilkins

PART VI: COMMUNITY COLLEGE TRANSFER

N/A

PART VII: APPROVALS

Date approved by the department or school: October 23, 2008

Date approved by the college curriculum committee: October 26, 2009

Date approved by the Honors Council (*if this is an honors course*):

Date approved by CAA: CGS: