

**Course Syllabus**  
**2<sup>nd</sup> semester 2012/2013**

**Course Title:** Exercise Physiology  
**Course Number:** RHS 323  
**Credit Hours:** 1 Theory hours + 2 practice hours  
**Course date:** Sun. 8am – 9am theory and 9am – 1pm practice (2 groups)  
**Course Instructor:** Mrs.: Asma A. Alderaa  
**E-mail:** [aalderaa@ksu.edu.sa](mailto:aalderaa@ksu.edu.sa)  
**Web page:** <http://fac.ksu.edu.sa/aalderaa/home>  
**Office Hours:** Tuesday 9am-10am, Monday 10am-1pm, Thursday 8am – 10am

**Course Description:** This course will review the physiological principles of exercise including bioenergetics, energy expenditure, functions of the cardiovascular, pulmonary, neuromuscular and neuroendocrine systems, renal system, and the impact of training, environmental factors, ergogenic aids, nutrition, and body composition on exercise.

**Prerequisites:** RHS 322 + RHS 346

**Course Objectives:**

After completing this course students will:

Be able to identify and explain the physiological principles of exercise including bioenergetics, energy expenditure, functions of the cardiovascular, pulmonary, neuromuscular and neuroendocrine systems, muscle, renal function, the impact of training on these systems and the influence of environmental influences, ergogenic aids, nutrition, weight control, and body composition.

**Teaching Philosophy:** I will teach you fundamental exercise physiology; i.e., how the body response in function and structure to acute exercise stresses and chronic physical activity. I encourage my students to become self-directed learners in exercise physiology so that they can continue to expand their understanding of the human body throughout their professional careers.

**Teaching Methods:**

1. Theoretical lectures
2. Textbook and research literature readings
3. Class and group discussions
4. Literature Review Paper

## **COURSE POLICIES:**

### **- Instructional Methodology**

Lectures, student's presentation, small group exercise at a class site will be utilized. Additional instructional methods include exercise, assignments, and examination.

### **- Attendance**

Students are expected to attend each session AND be on time. Five percent of the overall course grade depends on Class Participation. Therefore, regular attendance is critical for doing well in this course. If you are absent in the class, make arrangements to obtain the notes from another students. Additionally, each student will be responsible for signing her name ONLY. If a student signs in for another, neither student will receive credit for that day.

### **- Conduct & Responsibilities**

It is the student's responsibility to maintain professional standards of behavior and attire while on campus. Students are expected to be prepared for instructional activities. They must bring required supplies/equipment and dress appropriately in accordance with instructor's directions. Failure to do so can result in the students being marked for absent for the class session. Any disruptive activity (e.g. use of cell phones, side conversations) in the classroom is prohibited. If the instructor required disruptive students to leave the classroom, the student remains responsible for all the information and will be marked absent for the class session. The dean will impose sanctions for unprofessional behavior. Any form of cheating, fraud, plagiarism, or unauthorized collaboration will result in failure of the course and referral to the dean for disciplinary sanctions.

### **- Bonus Marks**

(Only TWO marks) will be given at the end of course as needed.

## **Methods of evaluation:**

2 Midterm exams	2 X 20% = 40%
2 assignments	2 X 5% = 10%
Presentation	5%
Attends and continues evaluation	5%
1 Final exam	40%

## **References:**

The following are suggested references.

- 1- Essential for exercise physiology, W. D. McArdle, F. I. Katch and V. L. Katch, (Last edition)
- 2- Physiology of Sport and Exercise, Wilmore, Costill, and Kenney, 4th Edition 2008

- 3- Exercise Physiology Integrating Theory and Application, W. J. Kraemer, S. J. Fleck, M. R. Deschenes, 1st Edition 2012.
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### Course Outline

#### **Week 1 (September 1)**

Course overview

Course syllabus review

*Students write expectations from RHS 323 course.*

#### **Week 2 (September 8)**

Section (1): introduction to exercise physiology

#### **Week 3 (September 15)**

Section (2): Nutrition and energy transfer

#### **Week 4 (September 22)**

Section (2): Nutrition and energy transfer (cont.)

#### **Week 5 (September 29)**

Section (3): the physiological support system

- The pulmonary system and exercise

#### **Week 6 (October 6)**

**(1<sup>st</sup> Midterm exam)**

#### **Week 7 (October 13)**

**(Eid Hajj Vacation)**

#### **Week 8 (October 20)**

Section (3): the physiological support system (cont.):

The cardiovascular system and exercise

#### **Week 9 (October 27)**

**(Due date for assignment 1)**

Section (3): the physiological support system (cont.):

- The neuromuscular system and exercise

#### **Week 10 (November 3)**

Section (3): the physiological support system (cont.):

- Hormonal, exercise and training

**Week 11 (November 10)**

Section (4): exercise training and adaptations in functional capacity

**Week 12 (November 17)**

**(2<sup>nd</sup> Midterm exam)**

**Week 13 (November 24)**

Section (5): factors affecting physiological function, energy transfer, and exercise performance

- Environmental and exercise

**Week 14 (December 1)**

**(This lecture is presented by students)**

Section (5): factors affecting physiological function, energy transfer, and exercise performance (cont.):

- Ergogenic aids

**Week 15 (December 8)**

Section (6): optimizing body composition, aging, and health-related exercise benefits

**Week 16 (December 15)**

**( Due date for assignment 2)**

Revision

**Week 17 (December 22)**

Revision