

Syllabus

KSS 5260 – Cardiopulmonary Exercise Physiology

Summer 2017

Instructor: Jake Emmett, Ph.D.

Email: D2L email (primary and during the day), jemmett@eiu.edu (for weekends and evenings)

Course Description:

This course is designed to provide an in depth study of cardiopulmonary system function and application to acute and chronic exercise.

Objectives:

1. Develop an understanding of how the cardiopulmonary functions particularly its role in delivering oxygen to the cells of the body at rest and during exercise.
2. Develop an understanding of the responses of the cardiopulmonary system during and immediately after acute aerobic exercise.
3. Identify the adaptations of the cardiopulmonary system to chronic aerobic exercise.
4. Develop an understanding of the responses of the cardiopulmonary system during and immediately after acute resistance type exercise.
5. Identify the adaptations of the cardiopulmonary system to chronic resistance exercise.
6. Evaluate and critique current research on cardiopulmonary responses from acute and chronic exercise.
7. Identify potential risks to the cardiopulmonary systems during acute and chronic exercise.

Course Content:

1. Module 1 - The Heart

- a. Pulmonary System
- b. Essentials of the Cardiovascular System
- c. The Heart as a Pump
- d. Cardiac Myocytes

2. Module 2 - The Circulation

- a. Hemodynamics and Peripheral Circulation
- b. Vascular Structure and Function
- c. Hemostasis: Coagulation and Fibrinolysis

3. Module 3 - Responses and Adaptations to Exercise

- a. Cardiopulmonary Responses to Acute Aerobic Exercise

- b. Cardiovascular Adaptations to Aerobic Training
- c. Cardiovascular Responses to Acute Resistance Exercise
- d. Cardiovascular Adaptations to Resistance Training

Text: *Advanced Cardiovascular Exercise Physiology*, by Smith and Fernhall (2011). Human Kinestics.

Assessments (tentative):

Exams (50 points each) – online every two weeks. Exam will only be available on the day indicated.

Assignments (5-10 points each). All chapter three assignments are due before 11:30 p.m. on the day indicated.

Quizzes (5-10 points each)

Grading:

- A 90-100% of total points
- B 80-89% of total points
- C 70-79% of total points
- D 60-69% of total points
- F < 60% of total points

Tentative Schedule

Sunday	Monday	Tuesday	Wednesday	Thursdady	Friday	Saturday
June 11	Pulmonary	Pulmonary assignment due	Chap 1. Essentials		Assignment 1 due	
18	Chap 2. The Heart	Assignment 2 due	Chap. 3 Myocytes	Assignment 3 due	Exam 1	
25	Chap 6. Hemodynamics	Assignment 6 due	Chap 7. Vascular		Assignment 7 due	
July 2	Chap 8. Hemostasis	Independence Day		Assignment 8 due	Exam 2	
9	Chap 9	Assignment 9 due	Chap 10.		Assignment 10 due	
16	Chap 11.	Assignment 11 due	Chap 12.	Assignment 12 due.	Exam 3	

Requirements and Expectations

1. All course content and class activities will be in D2L, <http://www.eiu.edu/d2l>. Self-help tutorials for D2L are available in the D2L Student Orientation course (login required.)
2. Students must have access to the Internet using a laptop or desktop computer.
3. Students are responsible for having a backup plan if the primary computer crashes and/or Internet service fails.
4. Mobile devices can be used but are not recommended for timed online exams or quizzes.
5. Students must know how to download files and have the ability to install software. Students must have Adobe Acrobat Reader (free download) installed on the computer. Microsoft Word is also required and is available free through Office 365 via EIU Panthermail. Tutorials for using Word and other software programs are available at <http://www.eiu.edu/lynda> (login required.)
6. Students must be able to
 1. download, edit and save Word documents and PDF files.
 2. email using attachments
 3. navigate D2L
7. Check D2L daily for changes, additions, and/or updates to content, assignments, etc.
8. When taking online exams: 1. use a relatively new computer with a fast internet connection; 2. restart the computer before you begin; and 3. do not wait until the last minutes to begin exams.
9. If you need assistance with D2L, call D2L Support toll free at 1-877-325-7778. Support is available 24 hours a day, seven days a week.
10. Email and Chat options are also available on the "My Home" page after logging in to D2L.
11. For technical questions regarding other software, hardware, network issues, EIU NetID/password, or Panthermail, contact the ITS Helpdesk at 217-581-4357 during regular business hours or submit a help ticket at <https://techsupport.eiu.edu/>.
12. If you have a question regarding course content, contact your instructor.

Online Course Etiquette

1. In an online course, most communication is done through written messages either in private posts or public discussions. It is important that students in online courses be especially sensitive to how messages and sentiment are communicated and received.
2. *Remember you are communicating with real people.*
3. Students and instructors in your course have feelings, lives, jobs, families and a myriad of other issues that you may know little about. Once you have finished writing something, and before you send it, re-read it looking at your words from someone else's perspective. How would they see it? Could it be misinterpreted? Could you rephrase to make it clearer or more on topic?
4. *Write clearly & professionally.*
5. In any course-related communication (emails, chats, discussions), use standard proper English with correct grammar. Using slang, errors in mechanics, and shortcuts maybe difficult for others to understand. Avoid ALL CAPS, bolding and underlining. It could be misinterpreted. Avoid offensive language. Also make sure to sign your name to any post.

General Class Information:

1. If you can't access a file directly through D2L, you'll need to download the file and open it up separately.

2. Remember that the instructor may not be available to respond to emails and other forms of communication 24 hours a day. If there is an emergency, email the instructor and the matter will be dealt with as soon as possible and in a fair manner and considerate manner.
3. Students are expected to maintain principles of academic integrity and conduct as defined in [EIU's Code of Conduct](#). Violations will be reported to the Office of Student Standards. Cheating, plagiarism, and other forms of academic misconduct will not be tolerated. As a student, you have a personal responsibility to maintain high standards of academic conduct to preserve academic integrity. Academic misconduct will result in zero points for the assignment and appropriate disciplinary action, according to university guidelines.
4. Cheating in this course includes, but is not limited to:
 - Sharing information during a test, quiz or other assessment
 - Using notes, answer keys or other materials without instructor permission
 - Taking a test, quiz or doing homework in place of another student, OR asking someone to take a test, quiz or do homework
 - Submitting the same paper for multiple classes without permission
 - Taking credit for work that was not your own
 - Not citing a source where material originated
 - Lying to protect yourself or another student who has cheated
5. Success in this class requires regular and consistent study and review of the material covered in the textbook and in class discussions. It is expected that students come to class prepared to contribute to the class discussion. No extra credit is offered in this class.
6. D2L is incorporated in this class in the following ways; access to Power Point presentations, online exams, online assignments, grade book, etc. If you have any questions regarding the use of D2L, please ask the instructor.
7. If you have a documented disability and wish to receive academic accommodations, please contact the Coordinator of the Office of Disability Services (581-6583) as soon as possible.
8. Students who are having difficulty achieving their academic goals are encouraged to contact the Student Success Center (www.eiu.edu/~success) for assistance with time management, test taking, note taking, avoiding procrastination, setting goals, and other skills to support academic achievement. The Student Success Center provides individualized consultations. To make an appointment, call [217-581-6696](tel:217-581-6696), or go to 9th Street Hall, Room 1302.