Note:

Course content may be changed, term to term, without notice. The information below is provided as a guide for course selection and is not binding in any form, and should not be used to purchase course materials.

LIBERTY UNIVERSITY

COURSE SYLLABUS

EXSC 510

ADVANCED EXERCISE PHYSIOLOGY

COURSE DESCRIPTION

Advanced study of physiological adaptations to acute and chronic exercise.

RATIONALE

The purpose of this course is to allow the student the opportunity to further understand the responses and adaptations of the cardiovascular and pulmonary systems as well as skeletal muscles to exercise and training. Furthermore, the student will be exposed to the primary physiological factors that determine anaerobic and endurance performance in athletes. This will provide the student with the necessary background information for the majority of his/her cognate classes in the human performance, clinical, nutrition, and community physical activity cognate areas. This critical core course emphasizes both acute and chronic physiological adaptations associated with human physical activity and their influence upon performance.

I. PREREQUISITE

For information regarding prerequisites for this course, please refer to the Academic Course Catalog.

II. REQUIRED RESOURCE PURCHASE

Click on the following link to view the required resource(s) for the term in which you are registered: http://bookstore.mbsdirect.net/liberty.htm

III. ADDITIONAL MATERIALS FOR LEARNING

A. Computer with basic audio/video output equipment

B. Internet access (broadband recommended)

C. Microsoft Office

IV. MEASURABLE LEARNING OUTCOMES

Upon successful completion of this course, the student will be able to:

A. Describe the responses that occur during exercise in the body's various physiological systems.

B. Describe physiological changes that occur as a result of aging and explain how these changes affect performance.

C. Explain how gender differences affect performance.

D. Describe how the environment (heat, cold, and altitude) affects the exercise response.

E. Demonstrate the ability to critically review current research and connect findings to topics presented in Discussion Board Forums and written assignments.

V. COURSE REQUIREMENTS AND ASSIGNMENTS

A. Textbook readings and lecture presentations

B. Course Requirements Checklist

After reading the Course Syllabus and Student Expectations, the student will complete the related checklist found in Module/Week 1.

C. Discussion Board Forums (2)

Discussion boards are collaborative learning experiences. Therefore, the student is required to create a thread in response to the provided prompt for each of the 2 assigned forums. Each thread must be 350 words and demonstrate course-related knowledge and include 1 citation in current APA format. In addition to the thread, the student is required to reply to 2 other classmates' threads. Each reply must be 200 words and include 1 citation in current APA format.

D. Case Study Essay Questions (5)

Each student will be responsible for the completion of 5 Case Study Essay Questions. The response for each Case Study Essay Question must be at least 2 pages. Also, the response to each question can be no more than 4 pages.

E. Journal Article Review

The student will complete an article review based on a search of several journal articles with a strong association to the field of exercise physiology. The article must be no less than 3 and no more than 5 pages, discuss the study's background (e.g., reasons for study, subjects utilized, brief methods, etc.), summarize the significance of the student's findings, and write 1–2 paragraphs detailing how this article is related to exercise physiology.

VI. COURSE GRADING AND POLICIES

A. Points

Course Requirements Checklist		10
Discussion Board Forums (2 at 50 pts ea)		100
Case Study Essay Questions (5 at 160 pts ea)		800
Journal Article Review		100
	Total	1010

B. Scale

A = 940–1010 A- = 920–939 B+ = 900–919 B = 860–899 B- = 840–859

C+ = 820–839 C = 780–819 C- = 760–779 D+ = 740–759 D = 700–739
D- = 680–699 F = 0–679

C. Disability Assistance

Students with a documented disability may contact Liberty University Online's Office of Disability Academic Support (ODAS) at LUOODAS@liberty.edu to make arrangements for academic accommodations. Further information can be found at www.liberty.edu/disabilitysupport.

COURSE SCHEDULE

EXSC 510

Textbook: Powers & Howley, *Exercise Physiology* (2015).

MODULE/ WEEK	READING & STUDY	ASSIGNMENTS	PTS
1	Powers & Howley: chs. 1, 3–4 2 presentations	Course Requirements Checklist Class Introductions DB Forum 1	10 0 50
2	Powers & Howley: chs. 4, 9–10, 13 4 presentations	Case Study Essay Question 1	160
3	Powers & Howley: chs. 9, 12–13, 24 2 presentations	Case Study Essay Question 2	160
4	Powers & Howley: chs. 8, 13 3 presentations	Case Study Essay Question 3	160
5	Powers & Howley: chs. 1, 8–9, 13, 19–21 4 presentations	DB Forum 2	50
6	Powers & Howley: chs. 7–8 2 presentations	Case Study Essay Question 4	160
7	Powers & Howley: chs. 21–22 2 presentations	Journal Article Review	100
8	Powers & Howley: chs. 17, 22 2 presentations	Case Study Essay Question 5	160
		TOTAL	**1010**

DB = Discussion Board

NOTE: Each course module/week begins on Monday morning at 12:00 a.m. (ET) and ends on Sunday night at 11:59 p.m. (ET). The final module/week ends at 11:59 p.m. (ET) on **Friday**.