American Public University System

The Ultimate Advantage is an Educated Mind

Department of Sports and Health Sciences
SPHE 314
Exercise Physiology
3 Credit Hours
8 weeks
Prerequisite(s): None

Table of Contents

Instructor Information

(Biography)

Instructor:
Email:
Phone:
Office Hours:

Course Description (Catalog)

This course is designed to provide students with the knowledge of the inner workings and physiological changes that occur in the body during exercise, after exercise, and during a training period. Topics include efficiency, needs and limitations of body systems and their interrelationships, gender roles in exercise, and developing a personalized exercise routine to meet your needs.

Course Scope

This course is designed to provide students with a solid knowledge of Exercise Physiology as it relates to fitness, performance and health. Topics include the history of exercise physiology, neuromuscular, metabolic, cardiovascular, pulmonary, and endocrine responses to exercise, the methods for improving exercise performance and special considerations that are specific to the science of exercise physiology. It serves to enlighten students on the human adaptive response to exercise, addressing the questions: How *exactly* does the body respond to intense exercise? How do the muscles work? What role do the heart, lungs and central nervous system (CNS) play in the exercise process? How exercise performance measured? What are the metabolic and physiological demands of resistance training exercises? What are the physiological differences between men and women as it relates to training? And how can exercise either prevent or exacerbate the disease process? Through a series of reading assignments, essay projects, and knowledge assessments, the student will be able to answer these questions.

Course Objectives

After successfully completing this course, students will fulfill the following **Learning Objectives** (L.O.):

1. Analyze the field of exercise physiology related to fitness, performance & health
2. Apply knowledge of exercise physiology with e- learning classmates
3. Compare & contrast functions of the human body related to exercise physiology
4. Explore how the body adapts to physical activity during sports & exercise
5. Evaluate the physiological responses to exercise in hot and cold environments
6. Assess the impact of exercise at different altitudes and identify health risks
7. Assess body composition and examine the role of diet in athletic effectiveness
8. Identify the various drugs in sports and explore and discuss hormonal agents.
9. Demonstrate comprehension skills through written assignments
10. Apply newly acquired knowledge through assessment

Course Delivery Method

This SPHE 314 **Exercise Physiology** course delivered via distance learning will enable students to complete academic work in a flexible manner, completely online. Course materials and access to an online learning management system will be made available to each student. **Online assignments are due by Sunday evening** of the week as noted and include Discussion Board questions (accomplished in groups through a threaded discussion board), quizzes, and individual assignments submitted for review by the Faculty Member). Assigned faculty will support the students throughout this eight-week course.

Course Materials

Required Course Textbook:

Book Number	Authors	Book Title	Publication Info	ISBN
SPHE 314-0	Wilmore, J., Costill, D., Kenney, W:	*Physiology of Sport & Exercise (5th ed.)*	Champaign, IL: Human Kinetics	978-0-73609409-2

Textbook in APA format:

Wilmore, J. Costill, D. Kenney, W. (2008). *Physiology of Sport & Exercise (5th ed.)* Champaign, IL: Human Kinetics

Required Readings:

See Course Outline

Additional Resources:

In the Course Materials folder there are additional course articles, and up to date APA handouts.

Websites

In addition to the required course texts the following public domain Websites are useful. Please abide by the university's academic honesty policy when using Internet sources as well. Note web site addresses are subject to change.

Site Name	Website URL/Address
The OWL at Purdue	http://owl.english.purdue.edu/
APA Style Homepage	http://www.apastyle.org/index.aspx
American Society of Exercise Physiologists	http://www.asep.org/node/60
North American Society of Sports Management	http://www.nassm.org/
National Health & Exercise Association	http://www.nhesa.org/

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

Evaluation Procedures

Graded Assignment	Total Points
Week 1 – Forum 1: Introductions	1
- Forum 1: Exploration of Exercise Physiology	1
- Quiz #1 (Materials Quiz)	2
Week 2 - Forum 2: Exercise Fatigue	3
- Quiz #2	8
Week 3 - Forum 3: Concepts from Exercise Phys	3
- Writing Assignment #1	10
Week 4 - Forum 4: Strength Gains	3
- Midterm Quiz	12
Week 5 - Forum 5: Overtraining Syndrome	3
- Writing Assignment #2	5
- Quiz #3	5
Week 6 - Forum 6: Ergogenic Aids	3
Quiz #4	5
Week 7 – Forum 7: Exercise vs. Physical Activity	3
- Final Project Writing Assignment	10
Week 8 – Forum 8: Course Wrap Up	3
- Final Quiz	20

Total	**100**

8 – Week Course Outline

Week	Topic(s)	Learning Objective(s)	Reading(s)	Assignment(s)
1	**Introduction to Exercise & Sport Physiology**	**1, 2, 4**	Intro: Wilmore Chapter 1, Wilmore Chapter 2, Wilmore Course Packet: • Introduction • Week 1 Lesson	1) Discussion Board: Introduction & Bio 2) Discussion Board: Exploration of Exercise Physiology 3) Quiz #1: Course Materials Quiz
2	**Nervous System** **Energy Fatigue**	**1,2,10**	Chapter 3, Wilmore Chapter 4, Wilmore Chapter 5: Wilmore Course Packet: • Week 2 Lesson	1) Discussion Board: Sports & Fuel Utilization 2) Quiz #2: Covers Ch.1-5
3	**Respiratory System Cardio-Respiratory** **Response to Acute Exercise** **Principles Training**	**2,5,9**	Chapter 6, Wilmore Chapter 7, Wilmore Chapter 8, Wilmore Course Packet: • Week 3 Lesson	1) Discussion Board: Needs Analysis 2) Writing Assignment #1
4	**Adaptations to Resistance Training** **Adaptations to Aerobic & Aerobic Training** **Exercise in Hot and Cold**	**1.2.4.10**	Chapter 9: Wilmore Chapter 10: Wilmore Chapter 11: Wilmore Course Packet: • Week 4 Lesson Packet	1) Discussion Board: Strength Gains 2) Midterm Quiz

	Environments			
5	**Exercise & Altitudes** **Training for Sport** **Body Composition**	**2, 4, 9, 10**	Chapter 12: Wilmore Chapter 13: Wilmore Chapter 14: Wilmore • Week 5 Lesson Packet	1) Discussion Board: Sports Drinks 2) Quiz #3: Covers Chapters 12-14
6	**Ergogenic Aids** **Age and Exercise**	**1.5.10**	Chapter 15: Wilmore Chapter 16: Wilmore Chapter 17: Wilmore • Week 6 Lesson Packet	1) Discussion Board: Exercise & Disease Prevention 2) Quiz #4: Covers Chapters 15 -17
7	**Gender Differences** **Benefits of Physical Activity** **Cardiovascular Disease Prevention**	**1,2,4,5,10**	Chapter 18: Wilmore Chapter 19: Wilmore Chapter 20: Wilmore • Week 7 Lesson Packet	1) Discussion Board: Eating Disorders 2) Final Research Project (Steroids Essay)
8	**Obesity, Diabetes and Physical Activity**	**1.2. 4.5,10**	Chapter 21: Wilmore Chapter 22: Wilmore • Week 8 Lesson Packet	1) Discussion Board: Course Wrap up 2) Final Quiz

Please see the Student Handbook to reference the University's grading scale

Policies

Please see the Student Handbook to reference all University policies. Quick links to frequently asked question about policies are listed below.

> Drop/Withdrawal Policy
> Plagiarism Policy
> Extension Process and Policy
> Disability Accommodations

WRITING EXPECTATIONS

All written submissions should be submitted in a font and page set-up that is readable and neat. It is recommended that students try to adhere to a consistent format, which is described below.

- Typewritten in double-spaced format with a readable style and font and submitted inside the electronic classroom (unless classroom access is not possible and other arrangements have been approved by the professor).
- Arial 11 or 12-point font or Times New Roman styles.
- Page margins Top, Bottom, Left Side and Right Side = 1 inch, with reasonable accommodation made for special situations and online submission variances.

CITATION AND REFERENCE STYLE

Attention Please: Students will follow the APA Style Manual, 6th Edition as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation used in the APA Style Manual, 6th Edition.

LATE ASSIGNMENTS (Writing Assignments)

My policy regarding late assignments is fairly clear. You are expected to have your assignments turned in on-time by the required due date. If you are late with an assignment, expect a **10%** deduction to occur for each day that paper is late. If your paper is greater than 2 days late, it will not be accepted.

Please note that technology issues **are not** an acceptable excuse for submitting your writing assignments late. I encourage all of my students to "Have a plan B" meaning that if the computer you use is not available to you or your Internet connection goes down, you have a "Plan B" to submit your work. Examples include a friend or neighbor's computer, a library and so forth.

Please be advised that exceptions to the Late Assignments Policy will be made on a case by case basis for emergency situations and if they are verifiable.

DISCUSSION BOARDS

Specifics on requirements for discussion board assignments can be found in your course packet in the RESOURCES are of the classroom. Generally speaking, for most weeks you will be required to post an initial response to the discussion question (DQ) being asked on or before Day 4 (Thursday) of the course week. Your initial post must be a minimum of 300 words. You are then required to respond to at least two other students by Day 7 of the course week (Sunday), with a word minimum of 200 words (for each

of the two required responses). Points will be deducted at a rate of **10% a day** for each day you are late with your initial post – up to a minimum of two days. **NO DISCUSSION BOARD POSTS** will be accepted for grading purposes after that week has concluded.

The only exception to what is above will be previous permission from your course instructor OR a verifiable, documentable emergency.

NETIQUETTE

Online universities promote the advance of knowledge through positive and constructive debate--both inside and outside the classroom. Discussions on the Internet, however, can occasionally degenerate into needless insults and "flaming." Such activity and the loss of good manners are not acceptable in a university setting--basic academic rules of good behavior and proper "Netiquette" must persist. Remember that you are in a place for the fun and excitement of learning that does not include descent to personal attacks, or student attempts to stifle the discussion of others.

- **Technology Limitations:** While you should feel free to explore the full-range of creative composition in your formal papers, keep e-mail layouts simple. The Educator classroom may not fully support MIME or HTML encoded messages, which means that bold face, italics, underlining, and a variety of color-coding or other visual effects will not translate in your e-mail messages.
- **Humor Note:** Despite the best of intentions, jokes and--especially--satire can easily get lost or taken seriously. If you feel the need for humor, you may wish to add "emoticons" to help alert your readers: ;-), :), ☺

DISCLAIMER STATEMENT

Course content may vary from the outline to meet the needs of this particular group.

Table of Contents

Academic Services

The Online Library is available to enrolled students and faculty from inside the electronic campus. This is your starting point for access to online books, subscription periodicals, and Web resources that are designed to support your classes and generally not available through search engines on the open Web. In addition, the Online Library provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to **librarian@apus.edu**.

- *Charles Town Library and Inter Library Loan:* The University maintains a special library with a limited number of supporting volumes, collection of our professors' publication, and services to search and borrow research books and articles from other libraries.
- *Electronic Books:* You can use the online library to uncover and download over 50,000 titles, which have been scanned and made available in electronic format.
- *Electronic Journals:* The University provides access to over 12,000 journals, which are available in electronic form and only through limited subscription services.

- *Turnitin.com:* **Turnitin.com** is a tool to improve student research skills that also detect plagiarism. Turnitin.com provides resources on developing topics and assignments that encourage and guide students in producing papers that are intellectually honest, original in thought, and clear in expression. This tool helps ensure a culture of adherence to the University's standards for intellectual honesty. Turnitin.com also reviews students' papers for matches with Internet materials and with thousands of student papers in its database, and returns an Originality Report to instructors and/or students.
- *Smarthinking:* Students have access to 10 free hours of tutoring service per year through Smarthinking. Tutoring is available in the following subjects: math (basic math through advanced calculus), science (biology, chemistry, and physics), accounting, statistics, economics, Spanish, writing, grammar, and more. Additional information is located in the Online Research Center. From the ORC home page, click on either the "Writing Center" or "Tutoring Center" and then click "Smarthinking." All login information is available.

Table of Contents

Request a Library Guide for your course (http://apus.libguides.com/index.php)
The AMU/APU Library Guides provide access to collections of trusted sites on the Open Web and licensed resources on the Deep Web. These are specially tailored for academic research at APUS:

- Program Portals contain topical and methodological resources to help launch general research in the degree program. To locate, search by department name or navigate by school.
- Course Lib-Guides narrow the focus to relevant resources for the corresponding course. To locate, search by class code (e.g., SOCI111) or class name.

If a guide you need isn't available yet, let us know by emailing the APUS Library: librarian@apus.edu