# American Public University System

The Ultimate Advantage is an Educated Mind

Department of Sports and Health Sciences SPHS 509 Optimal Sports Performance 3 Credit Hours 8 weeks Prerequisite(s): None

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# Instructor Information

Instructor: Email: Office Hours:

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**Course Description (Catalog)** 

**SPHE 509 Optimal Sports Performance (3 hours)** 

This course provides a thorough introduction to integrated training principles and theories and focus on the practical application of program design for sport-specific clients. Students will learn how to choose and perform appropriate sports performance testing. Students will also learn how to assess and perform flexibility, cardiorespiratory, core, balance, plyometric, speed, agility, quickness, integrated resistance and Olympic lifting training for Performance enhancement. This course will cover the science of periodization and program design, specifically program design for sports performance training. Students will learn about injury prevention techniques, sports nutrition, performance aids and sports psychology. There is a need for this course to help students identify gym and strength and conditioning myths from scientific assessment and prescription of sports performance programs.

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# Course Scope

This course in Optimal Sports Performance will have the student develop strength and conditioning plans using scientific methodology.

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## **Course Objectives**

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

Each student will:

- 1. Use anatomic terminology to describe the structure and function of the human body and related systems.
- 2. Describe neurophysiologic principles related to human movement and performance including reciprocal inhibition, synergistic dominance, length-tension relationships, force-couple relationships, relative flexibility, and pattern overload.
- 3. Describe, demonstrate, and record movement and dynamic postural assessments including overhead squat, single-leg squat, pushing, and pulling.
- 4. Calculate, implement, and modify cardiorespiratory training including Zone 1, Zone 2, and Zone 3.
- 5. Describe and demonstrate exercise progressions and regressions using the neurologic continuum including modality selection, extremity symmetry, and plane dominance.
- 6. Discuss the principles of specificity, overload, and variation and its impact on human movement.
- 7. Describe the role and function of acute training variables including sets, repetitions, duration, frequency, tempo, intensity, and rest interval as they relate to metabolic specificity of exercise.
- 8. Identify the acute training variable ranges that elicit various physiologic responses including stabilization, stabilization endurance, strength endurance, hypertrophy, maximal strength, power, and maximal power.

- 9. Describe and differentiate models of resistance training including single-set, multiple-set, superset, pyramid set, compound training, and complex training.
- 10. Develop an individualized training program based upon assessment results including flexibility, core, balance, reactive, and resistance training.
- 11. Identify, describe, demonstrate, implement, and teach exercises categorized to develop the physiologic adaptation of power including flexibility, core, balance, reactive, and resistance training.
- 12. Identify, describe, demonstrate, implement, and teach exercises categorized to develop the physiologic adaptation of maximal power including flexibility, core, balance, reactive, and resistance training.
- 13. Identify, describe, demonstrate, implement, and teach exercises categorized to develop the physiologic adaptation of strength including flexibility, core, balance, reactive, and resistance training.
- 14. Identify, describe, demonstrate, implement, and teach exercises categorized to develop the physiologic adaptation of maximal strength including flexibility, core, balance, reactive, and resistance training.
- 15. Identify, describe, demonstrate and implement exercises categorized to develop speed, agility, and quickness.
- 16. Describe, demonstrate, and record performance assessments including speed, agility, quickness, stability, strength, and power.
- 17. Manipulate and modify training program to align with unique movement and metabolic requirements of three sports/activities.
- 18. Describe and demonstrate techniques of Olympic-style exercise including starting position, arc of motion, ending position, and safety spotting maneuvers.
- 19. Identify the appropriate acute training variables (e.g. sets, repetitions, intensity, tempo, rest interval, frequency, duration) as they relate to specific physiologic adaptations including stabilization, stabilization endurance, strength endurance, hypertrophy, maximal strength, power, and maximal power.
- 20. Develop a nine-month sport-specific training program utilizing the OPT model based on current available evidence.
- 21. Identify human movement impairments and describe specific predictors of each including muscles that are overactive and those that are underactive.
- 22. Describe, demonstrate, and teach proper and safe usage of exercise equipment and training modalities.

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## **Course Delivery Method**

This course, SPHE509 Optimal Performance Training , 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. The initial post for each forum assignment is required to be submitted by Thursday at midnight. The responses to others are to be submitted by midnight on Sunday. Late forum posts are not accepted. Assigned faculty will support the students throughout this eight-week course.

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#### **Course Materials**

## **Required Course Textbooks:**

Book Number	Authors	Book Title	Publication Info	ISBN
SPHS3509-0	Clark, M & Lucett, S.	NASM Essentials of Sports Performance Training	Lippincott, Williams & Wilkins	0-7817- 6803-9

## **Textbook in APA format:**

Clark & Lucett <u>NASM Essentials of Sports Performance Training</u>. Lippincott, Williams and Wilkins 2010. ISBN: 0-7817-6803-9

## **Required Readings:**

See Course Outline

## 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	

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# **Evaluation Procedures**

Graded Assignment	Percent of Final Grade
Week 1 – Forum 1	1
- Forum 2	1
- Quiz 1	6
Week 2 - Forum 3	1
- Forum 4	1
- Quiz 2	6
- Athlete testing assignment	2
Week 3 - Forum 5	1
- Forum 6	1
- Quiz 3	6
Week 4 – Quiz 4	6
- Test Results	5
-Forum 7	1
-Forum 8	1
Week 5 - Forum 9	1
- Forum 10	1
- Quiz 5	6
Week 6 – Forum 11	1
- Forum 12	1
- Quiz 6	4
Week 7 – Forum 13	1
- Forum 14	1
- Quiz 7	6
Week 8 – Forum 15	1
- Athlete workout	30
- Quiz 8	6
Total	100

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## 8 – Week Course Outline

Week	<u>Topic(s)</u>	Learning Objective(s)	Reading(s)	<u>Assignment(s)</u>
1	Essentials of Integrated Training Introduction to Human Movement Science	<u>1, 2</u>	Chapters 1 &2 in Clark	1) Forum 1 & 2 2) Quiz 1
2	Sports Performance Testing Flexibility Training for Performance Enhancement	<u>3, 10, 11, 12, 13,</u> <u>14</u>	Chapters 3 & 4 in Clark	<ol> <li>Forum 3 &amp; 4</li> <li>Quiz 2</li> <li>Athlete testing</li> </ol>
3	Cardio Respiratory Training for Performance Enhancement Core Training Concepts for Performance Enhancements	<u>4, 7, 8, 10, 11,</u> <u>12, 13, 14</u>	Chapters 5 & 6 in Clark	1) Forum 5 & 6 2) Quiz 3
4	Balance Training Concepts for Performance EnhancementPlyometric Training Concepts for Performance Enhancements	<u>8, 10, 11, 12, 13,</u> <u>14, 21</u>	Chapter 7 & 8 in Clark	<ol> <li>Test Results</li> <li>Quiz 4</li> <li>Forum 7 &amp; 8</li> </ol>
5	Speed, Agility, and Quickness Training for Performance Enhancement Integrated Resistance Training for Performance Enhancement	<u>8, 10, 11, 12, 13,</u> <u>14, 15, 16</u>	Chapters 9 & 10 in Clark	1) Forum 9 & 10 2) Quiz 5
6	Olympic Lifting for Performance Enhancement	<u>5, 6, 7, 8, 9, 10,</u> <u>11, 12, 13, 14,</u>	Chapter 11 & 12 in Clark	<ol> <li>Forum 11 &amp; 12</li> <li>Quiz 6</li> </ol>

	The Science of Periodization and The Optimum Performance Training Model	<u>18, 19</u>		
7	Current Concepts in Injury Prevention Performance Psychology: Integrating Physical and Mental Training	<u>17, 21</u>	Chapters 13 & 16 in Clark	1) Forum 13 & 14 2) Quiz 7
8	Performance Nutrition Ergogenic Aids	<u>10, 20, 22</u>	Chapter 14 & 15 in Clark	<ol> <li>Forum 15</li> <li>Course Paper</li> <li>Quiz 8</li> </ol>

Please see the <u>Student Handbook</u> to reference the University's grading scale

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# Policies

Please see the <u>Student Handbook</u> 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 or Times New Roman 11 or 12-point font.
- 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

<u>Attention Please:</u> Students will follow the <u>APA Style Manual</u>, 6<sup>th</sup> 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 <u>APA Style</u> <u>Manual</u>, 6<sup>th</sup> Edition.

# LATE ASSIGNMENTS

Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. As adults, students, and working professionals I understand you must manage competing demands on your time. Should you need additional time to complete an assignment please contact me before the due date so we can discuss the situation and determine an acceptable resolution. Routine submission of late assignments is unacceptable and will result in points being deducted from your grade. Point deductions equal approximately ½ a full letter grade per day the assignment is late. A full letter grade is A, B, C, etc. For a 10 point assignment, each day would result in a .5 point deduction. Late Forum assignment posts are not accepted.

# 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.

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# 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 <u>librarian@apus.edu</u>.

- **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**: <u>Turnitin.com</u> 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.
- *Tutor.*com: AMU and APU Civilian & Coast Guard students are eligible for 10 free hours of tutoring provided by APUS. <u>Tutor.com</u> connects you with a professional tutor online 24/7 to provide help with assignments, studying, test prep, resume writing, and more. Tutor.com is tutoring the way it was meant to be. You get expert tutoring whenever you need help, and you work one-to-one with your tutor in your online classroom on your specific problem until it is done.

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# 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