

## ATH 915 – Advanced Strength Training for Sports

### *Independent Study Course Syllabus*

**Number of Units:** 3 Graduate Semester Units  
**Target Grade Level:** 7<sup>th</sup> through 14<sup>th</sup> grade

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### Course Description

- This course is designed to provide the high school coach or teacher with the tools to maximize the muscular strength and power of their student athletes by applying the latest breakthroughs in scientific research to his/her advanced training program. Participants will be exposed to both proven methods for developing advanced workouts and dozens of different exercises that result in the greatest stimulation in the muscles. It provides detailed guidelines for program design, including an explanation of how to calculate training volume, intensity, rest intervals, number of exercises, and loading patterns. Participants will learn how to create workouts to peak at the optimal time by manipulating six different training phases during their year-round program.
- Course assignments encourage participants to integrate specific national standards for physical education. Objectives for each lesson are modeled around standards-based learning as identified by SHAPE America. Evidence of learning is tied directly to stated objectives and is assessed via analysis and application papers, training programs, testing programs, reflective evaluations and peer learning. The course is designed for teachers and coaches of 7<sup>th</sup> through 14<sup>th</sup> grade students.
- Note: Students are required to purchase the textbook separately.

### Required Course Materials

- **Textbook:** Brown, L (2007). Strength Training. Champaign, IL: Human Kinetics is the course textbook. Students are expected to thoroughly read this book and will be asked to analyze the content and apply the suggested techniques to a sport and physical education situation.

- **Note:** Students are responsible for purchasing their own textbook, reading it thoroughly, and applying what they learned to the course assignments. You can order the book directly from the publisher, Human Kinetics, <http://www.humankinetics.com/products/all-products/strength-training> or from one of several discount aggregators (for example):
  - [www.isbns.net](http://www.isbns.net)
  - [www.amazon.com](http://www.amazon.com)
  - [www.google.com/products](http://www.google.com/products)
- **Course Packet:** The packet is divided into the following five sections: Section 1: General Information, Section 2: Course Information, Section 3: Course Assignments, Section 4: Course Bibliography, and Section 5: Instructor Biography and Course Evaluation.
- **Grade Request** – After you have completed all your coursework, you will need to request your grade via the instructions in the Course Packet.

## Course Dates

- This course is self-paced; students may enroll at any time and take up to one year to complete assignments.
- You have up to one year from the date of registration, and no less than three weeks (one week per credit), to complete the course.

## Course Requirements

### Students will be expected to:

- Read and apply the text, Strength Training to all assignments.
- Complete the Analysis and Application Papers based on the Strength Training textbook.
- Create an Advanced Strength Training Program for a student athlete based on the information in the Strength Training textbook and the course packet.
- Implement the Advanced Strength Training Program designed for at least 4 weeks, and write a brief reflection on the positive and negative aspects of the program.
- Interview an athletic coach about his/her current training program and ways he/she could enhance it with advanced strength training principles.
- Test the muscular strength (RM) and muscular endurance (LME) of 1 student athlete by following the procedures discussed in the course packet
- Complete all assignments within the allocated timeframe – 1 year from enrollment date.
- Submit all typed coursework in the organized format described within the Schedule of Topics and Assignments section.
- Keep a copy of their coursework in the event something gets lost or destroyed in the mail.
- Complete the designated assignments for either the B grade / Credit or A grade option.

## Student Learning Objectives (SLOs)

<b>Student Learning Outcomes in this Course</b> Student will be able to:	<b>SHAPE America National Standards Addressed*</b>	<b>Continuing Education Program Student Learning Outcomes Addressed**</b>
1. Identify and integrate standards into many aspects of their teaching and coaching as demonstrated through their coursework.	2, 3, 4	1, 2, 3, 4, 5
2. Describe their role in shaping their student athletes to become “physically educated students”.	1, 2, 3, 4, 5	1, 2, 5
3. Design an advanced strength training program by properly rotating the number of sets and reps for the core exercises.	2, 3	1, 2, 3, 4, 6
4. Apply the principles covered in this course to create an advanced strength training program for their student athlete(s).	2, 3	1, 2, 4, 6
5. Understand how to accelerate muscle recovery and avoid muscle fatigue, overtraining, and injury.	2, 3, 5	2, 3, 5, 6
6. Understand the role nutrition plays in maximizing the effects of exercise.	2, 3, 5	2, 3, 5, 6
7. Appreciate the human body and its ability to perform physical activity.	1, 2, 3, 4, 5	2, 3, 4, 5

\* Please refer to the section on **National Standards Addressed in This Course**

\*\* Please refer to the section on **Continuing Education Program Student Learning Outcomes**

## National Standards Addressed in This Course

**“Standards are an enduring commitment, not a passing fancy.”**

-California State Board of Education

### National Board for Professional Teaching Standards (NBPTS) ([www.nbpts.org](http://www.nbpts.org))

NBPTS was created in 1987 after the Carnegie Forum on Education and the Economy’s Task Force on Teaching as a Profession released A Nation Prepared: Teachers for the 21<sup>st</sup> Century.

The five core propositions form the foundation and frame the rich amalgam of knowledge, skills, dispositions and beliefs that characterize National Board Certified Teachers (NBCTs).

Course assignments have been designed so students can demonstrate excellence against these professional teaching standards whenever possible.

- Teachers are committed to students and their learning
- Teachers know the subject they teach and how to teach those subjects to students
- Teachers are responsible for managing and monitoring student learning
- Teachers think systematically about their practice and learn from experience
- Teachers are members of learning communities

### **National Physical Education Standards by SHAPE America** ([www.shapeamerica.org/standards/pe/index.cfm](http://www.shapeamerica.org/standards/pe/index.cfm))

The following content standards defined by SHAPE America specify what students should know and be able to do as result of a quality physical education program. States and local school districts across the country use the National Standards to develop or revise existing standards, frameworks and curricula. Participants are asked to apply these standards in their teaching practices and demonstrate them within their coursework.

SHAPE 1 - The physically literate individual demonstrates competency in a variety of motor skills and movement patterns.

SHAPE 2 - The physically literate individual applies knowledge of concepts, principles, strategies and tactics related to movement and performance.

SHAPE 3 - The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.

SHAPE 4 - The physically literate individual exhibits responsible personal and social behavior that respects self and others.

SHAPE 5 - The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

### **Common Core State Standards** ([www.corestandards.org](http://www.corestandards.org))

The Common Core State Standards provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy.

### **College and Career Readiness Anchor Standards for Reading**

The grades 6–12 standards on the following pages define what students should understand and be able to do by the end of each grade span. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

### **Key Ideas and Details**

- Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
- Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

### **Craft and Structure**

- Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
- Assess how point of view or purpose shapes the content and style of a text.

### **Integration of Knowledge and Ideas**

- Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.
- Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
- Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.
- Read and comprehend complex literary and informational texts independently and proficiently.

## **Continuing Education Program Student Learning Outcomes**

- CE 1 - Demonstrate proficient written communication by articulating a clear focus, synthesizing arguments, and utilizing standard formats in order to inform and persuade others, and present information applicable to targeted use.
- CE 2 - Demonstrate comprehension of content-specific knowledge and the ability to apply it in theoretical, personal, professional, or societal contexts.
- CE 3 - Reflect on their personal and professional growth and provide evidence of how such reflection is utilized to manage personal and professional improvement.
- CE 4 - Apply critical thinking competencies by generating probing questions, recognizing underlying assumptions, interpreting and evaluating relevant information, and applying their understandings to the professional setting.
- CE 5 - Reflect on values that inspire high standards of professional and ethical behavior as they pursue excellence in applying new learning to their chosen field.

CE 6 - Identify information needed in order to fully understand a topic or task, organize that information, identify the best sources of information for a given enquiry, locate and critically evaluate sources, and accurately and effectively share that information.

## **Schedule of Topics, Assignments, and Activities**

This section of the syllabus describes exactly what material the participant must cover and in what sequence. Assignments and activities are integrated with the topics to show the relationship between learning and practice within a standards-based learning environment.

- **Analysis and Application Papers**

The “Analysis and Application” papers address the various chapters and issues covered in your Strength Training textbook. Each paper will be 3 to 4 pages and include two sections: Analysis (discussing the major points presented in the chapter) and Application (applying the major points to a strength training program).

The Analysis and Application papers are the primary mechanism by which you will provide evidence of the following: a) You have read and understood the major points of each chapter, b) You are able to apply what you have learned in a practical way to implement an advanced strength training program, c) You are able to integrate the course material with your own personal experiences involving advanced strength training programs.

- **Advanced Strength Training Program**

The Advanced Strength Training Program will serve as a tool for you to put the principles presented in your textbook into practice. This exercise is extremely valuable for any coach who truly desires to motivate their athletes to value muscular fitness and to improve their strength for health, fitness, and performance. After reading the text, you will have the basic knowledge to design a safe and effective muscular strength program.

- **Coach’s Interview**

This assignment will help you gain a deeper understanding of another coach’s perspective on advanced strength training programs by interviewing an active coach and focusing on his/her current training program. You will develop a list of questions that will address his/her current training program and his/her interest in integrating some of the advanced strength training principles covered in this course into his/her program. Research has found that an effective advanced strength training program will significantly increase an athlete’s performance (Refer to the Bibliography in your course packet).

- **Training Program Reflection**

Implement the training program you designed above for at least 4 weeks. After 4 weeks, write a brief reflection addressing positive and negative aspects of the program.

This exercise is useful for evaluating your training program and gathering ideas that will make future programs successful. By taking a little time to reflect, you should objectively see principles that worked well and those that need modifications. In either case you will develop greater appreciation for your advanced strength training program.

- **Testing Program**

To completely benefit from an advanced strength training program, you should have a comprehensive, accurate assessment to help you design and evaluate a program for your student athletes. This assignment will give you experience implementing and evaluating a battery of tests described in your course packet. You will assess the muscular strength (RM) and local muscular endurance (LME) of one (1) student athlete using the procedures outlined within the Testing Program section of your course packet.

## **Technology Requirements**

### **Email Communication**

I encourage email communication, but require that the subject line of all emails contain the course number/name and your name. For example: "ATH 910 - Andy Herrick". For security purposes, emails sent without any subject in the subject line will not be opened.

## **Plagiarism and Academic Honesty**

All people participating in the educational process at Fresno Pacific University are expected to pursue honesty and integrity in all aspects of their academic work. Academic dishonesty, including plagiarism, will be handled according to the procedures set forth in the Fresno Pacific University Catalogue. URL <http://www.fresno.edu>

## **Evidence of Learning**

### **Evidence that the student achieved the course objective includes:**

- Course instructor observed evidence of understanding of course objectives as demonstrated through student's analysis and reflective writing assignments.
- Course instructor observed evidence of understanding of course objectives as demonstrated through student's presentation of an advanced strength training program.
- Student demonstrated insightful thinking by analyzing the strengths and weaknesses of their advanced strength training program.
- Student demonstrated their understanding of assessing their student athlete's strength.
- Student demonstrated a deeper understanding of strength training programs by interviewing another coach and developing a reflective response.
- Student included the use of higher level thinking skills to make connections to professional coaching and teaching standards from SHAPE America.
- Student demonstrated how they might use professional coaching and teaching standards from SHAPE America in their future strategies, techniques, and course content.

## Grading Policies and Rubrics for Assignments

Course participants have the option of requesting a letter grade (A-grade or B-grade) or a Credit / No Credit when submitting the online grade form. Students will submit their grade request when all coursework has been completed.

The participant's grade will be determined by the quality and number of assignments they choose to complete. Each assignment outlined in the course packet includes a rubric which clearly describes the expectations for the course assignment. The discernment between an A or a B grade is at the discretion of the instructor based on the quality of work submitted. Any assignment falling below the "B-grade" or "Credit-grade" quality (below 80%) threshold will be returned to the participant with further instructions.

Outlined below are the assignment requirements for each type of grade option.

- Four assignments - All coursework must receive "B-grade" or better for participants who are working for the "B letter grade" or "Credit" option.
- Six assignments - All coursework must receive "A-grade" or better for participants who are working for the "A letter grade" option.

### **B letter grade / Credit - (All coursework must receive B-grade or better for this option)**

- \_\_\_ Complete two (2) Analysis and Application Paper
- \_\_\_ Complete the Advanced Strength Training Program
- \_\_\_ Complete only one (1) of the following:
  - \_\_\_ Coach's Interview
  - \_\_\_ Training Program Reflection
  - \_\_\_ Testing Program

### **A Letter Grade - (All coursework must receive A-grade or better for this option)**

- \_\_\_ Complete three (3) Analysis and Application Papers
- \_\_\_ Complete the Advanced Strength Training Program
- \_\_\_ Complete only two (2) of the following:
  - \_\_\_ Coach's Interview
  - \_\_\_ Training Program Reflection
  - \_\_\_ Testing Program

## Final Grading and Transcripts

- Upon completion of all course assignments and activities, students will need to submit an online request for final course grade by logging into <http://ce.fresno.edu/cpd>.
- Transcripts may be ordered online after you receive your blue official computer-generated Grade Report. Refer to the current Independent Study Policy Statement provided to you by your instructor, or on the CPD website (<http://ce.fresno.edu/cpd>) for further information.

## References - Books/Articles

- Brown, L.E. & Ferrigno, V.A. (2005). Training for Speed, Agility, and Quickness. (2<sup>nd</sup> ed.). Champaign, IL: Human Kinetics.
- Delavier, F. (2010). Strength Training Anatomy. (3rd ed.). Champaign, IL: Human Kinetics.
- Dintiman, G., & Ward, B. (2003). Sports Speed. (3<sup>rd</sup> ed.). Champaign, IL: Human Kinetics.
- Gambetta, V. (2007). Athletic Development. Champaign, IL: Human Kinetics.
- Jeukendrup, A. & Gleeson, M. (2010). Sport Nutrition - An Introduction to Energy Production and Performance. (2nd ed.). Champaign, IL: Human Kinetics.
- Lancaster, S. (2008). Athletic Fitness for Kids. Champaign, IL: Human Kinetics.
- National Strength and Conditioning Association. (2008). Essentials of Strength Training and Conditioning. (3<sup>rd</sup> ed.). Champaign, IL: Human Kinetics.
- National Strength and Conditioning Association. (2008). Exercise Technique Manual for Resistance Training. (2<sup>nd</sup> ed.). Champaign, IL: Human Kinetics.
- Newton, H. (2006). Explosive Lifting for Sports – Enhanced Edition. Champaign, IL: Human Kinetics.
- Pire, N. (2006). Plyometrics for Athletes at All Levels: A Training Guide for Explosive Speed and Power. Berkeley, CA: Ulysses.
- Radcliffe, J.C. (2007). Functional Training for Athletes at All Levels: Workouts for Agility, Speed and Power. Berkeley, CA: Ulysses
- Wrisberg, C.A. (2007). Sport Skill Instruction for Coaches. Champaign, IL: Human Kinetics.

## References - Websites

The Internet contains a wealth of information. By accessing the Internet you can gain a new perspective on many topics. The following web sites will help you explore the world of strength training.

## **National Strength and Conditioning Association**

[www.nsc.org](http://www.nsc.org)

As the worldwide authority on strength and conditioning, we support and disseminate research-based knowledge and its practical application to improve athletic performance and fitness.

## **SHAPE America**

[www.shapeamerica.org](http://www.shapeamerica.org)

The vision of SHAPE America is "Healthy People – Physically Educated and Physically Active!" SHAPE America is the largest organization of professionals involved in school-based health, physical education and physical activity, who are dedicated to teaching and promoting active, healthy lifestyles. Founded in 1885, SHAPE America provides a comprehensive array of resources, leadership in the development of standards and guidelines, professional development and advocacy for its members as well as the general public. SHAPE America's mission is to advance professional practice and promote research related to health and physical education, physical activity, dance, and sport.

## **Sports Fitness Advisor**

[www.sport-fitness-advisor.com](http://www.sport-fitness-advisor.com)

Sport Fitness Advisor's endeavor is to deliver, usable sports training tips, programs and workouts for enthusiastic athletes. On this website you'll find a section on each of the major components of fitness: strength training, power training, speed training, plyometrics, body composition, endurance training, and flexibility training.

## **Athletes' Acceleration**

[www.completespeedtraining.com](http://www.completespeedtraining.com)

Athletes' Acceleration is a performance enhancement company whose mission is to improve the knowledge base of motivated coaches and athletes in order to improve athletic performance. Through articles, DVDs, manuals, interviews with top specialists in the sports performance industry, this website provides coaches with the most up-to-date training principles required to successfully develop and maximize the overall athletic ability of each athlete.

## **Human Kinetics**

[www.humankinetics.com](http://www.humankinetics.com)

Human Kinetics is an information leader in delivering innovative books, DVDs, and programs for coaching and fitness professionals. Human Kinetics is committed to providing quality informational and educational products in the physical activity and health fields that meet the needs of their diverse customers. We are committed to not only providing information, but whenever possible to providing solutions that help our customers practice their professions better and live healthier, more enjoyable lives.

## FRESNO PACIFIC UNIVERSITY STUDENT LEARNING OUTCOMES

**Student Learning Outcomes Oral Communication:** Students will *exhibit* clear, engaging, and confident oral communication – in both individual and group settings – and will critically *evaluate* content and delivery components.

**Written Communication:** Students will *demonstrate* proficient written communication by *articulating* a clear focus, *synthesizing* arguments, and utilizing standard formats in order to *inform* and *persuade* others.

**Content Knowledge:** Students will *demonstrate* comprehension of content-specific knowledge and the ability to apply it in theoretical, personal, professional, or societal contexts.

**Reflection:** Students will *reflect* on their personal and professional growth and *provide evidence* of how such reflection is utilized to manage personal and vocational improvement.

**Critical Thinking:** Students will *apply* critical thinking competencies by *generating* probing questions, *recognizing* underlying assumptions, *interpreting* and *evaluating* relevant information, and *applying* their understandings to new situations.

**Moral Reasoning:** Students will *identify* and *apply* moral reasoning and ethical decision-making skills, and *articulate* the norms and principles underlying a Christian world-view.

**Service:** Students will *demonstrate* service and reconciliation as a way of leadership.

**Cultural and Global Perspective:** Students will *identify* personal, cultural, and global perspectives and will employ these perspectives to *evaluate* complex systems.

**Quantitative Reasoning:** Students will accurately *compute* calculations and symbolic operations and *explain* their use in a field of study.

**Information Literacy:** Students will *identify* information needed in order to fully understand a topic or task, *explain* how that information is organized, *identify* the best sources of information for a given enquiry, *locate* and critically *evaluate* sources, and accurately and effectively *share* that information.