

## ATH 913 – Plyometric 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

- Plyometrics refers to exercise that enables a muscle to reach maximal strength in as short a time as possible. Such exercises usually involve some form of jumping, but other modes of exercise exist. This course is designed to teach the high school or junior college coach or teacher how plyometrics work, why it is used, and how to integrate it into a complete training program. When sound training principles are used, plyometrics offers the mechanism by which an athlete can start quicker, change direction more rapidly, accelerate faster, and improve overall speed. Participants will discover how male and female athletes can improve quickness, speed, and jumping ability while gaining greater coordination, body control, and balance. This course includes numerous illustrated plyometric exercises and DVD video that includes foundation exercises such as squat jumps, double-leg speed hops, and medicine ball twists and passes; power-building exercises like tuck and scissors jumps, floor kips, arm swings, and sit-up throws; and high-intensity drills including depth jumps, vertical swings, drop pushes, and heavy bag strokes.
- 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.
- Note: Students are required to purchase the textbook and DVD video separately.

## Required Course Materials

- **Textbook:** Radcliffe, J.C., & Farentinos, R.C. (2005). High-Powered Plyometrics. Champaign, IL: Human Kinetics is the course textbook.
- **DVD Video:** Radcliffe, J.C. (2005). High-Powered Plyometrics DVD. Champaign, IL: Human Kinetics is the course video.
- **Note:** Students are responsible for purchasing their own textbook and DVD video, reading and watching them thoroughly, and applying what they learned to the course assignments. You can order the book and DVD video directly from the publisher, Human Kinetics, <http://www.humankinetics.com/products/all-products/High-Powered-Plyometrics-BookDVD-Package> 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, High-Powered Plyometrics to all assignments.
- Complete the Analysis and Application Papers based on the High-Powered Plyometrics textbook.
- Create a Plyometric Program for a student athlete based on the information in the High-Powered Plyometrics textbook, DVD video, and the course packet.
- Implement the Plyometric Program you designed above for four 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 plyometric training principles presented in this course.
- Create a classroom lesson plan or a workshop outline/script on Plyometrics using the textbook, DVD video and the references provided within the course packet. This assignment will be appropriate for the coach or teacher interested in presenting Plyometrics information as part of a unit on physical training programs to his/her colleagues during an in-service opportunity.
- 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 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. Understand the physiology of muscles and plyometrics.	2, 3, 4, 5	1, 2, 3, 4, 5
4. Understand the different categories of plyometric exercises and the relative demands they place on the athlete.	1, 2, 3	2, 3, 4, 6
5. Comprehend the most important considerations in implementing and administering a plyometric training program.	2, 3, 4, 5	1, 2, 3, 4, 5
6. Assess and test the vertical and linear jumping ability of your student athletes.	1, 2, 3	2, 4, 6
7. Apply the steps and principles to develop a sport-specific plyometric training program for a student athlete.	2, 3	1, 2, 4, 6
8. 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 the High-Powered Plyometrics text. 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 plyometrics program).

The Analysis and Application papers are the primary mechanism by which you will provide evidence of the following: a) Providing a written overview of each specific reading assignment, b) Demonstrating the ability to apply the information presented via a written application to each chapter, c) Integrating your experience with the course material, verifying that you have successfully completed the reading assignments.

- **Video Analysis and Program Design**

To develop a working understanding of the principles and applications for plyometric training. In addition, the participant will have the opportunity to develop an actual plyometric workout program that he/she can use with student athletes. The participant will also be encouraged to design the plyometric training program reflecting any unique demands required for a specific sport.

- **Coach's Interview**

Interview an active coach 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 plyometric training principles covered in this course into his/her own training program.

This assignment will help you gain a deeper understanding of the other coach's perspective on plyometric training programs by interviewing an active coach focusing on his/her current training program. You will develop a list of questions related to his/her current training program and interest in integrating some of the plyometric training principles covered in this course into his/her current training program. Not all coaches believe that plyometric training can improve athletic performance. Some (even well educated) coaches believe that time would be better spent on skill development. Research has found that an effective plyometric training program will significantly increase an athlete's performance (Refer to the Bibliography in your course packet).

- **Training Program Reflection**

Implement the Plyometric Training Program you designed above for at least four (4) weeks. After four (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 strength improvement program.

- **Plyometric Lesson Plan**

Using the textbook and the references provided, create a classroom lesson plan or a workshop outline/script on Plyometric Training. This assignment will be appropriate for the coach or teacher interested in presenting this information as part of a unit on physical training programs or to his/her colleagues during an in-service opportunity.

This assignment will help the participant develop a general teaching strategy for a lesson that can be part of a unit/workshop on plyometric training. A teaching strategy is a technique used by a teacher or coach to help a student or individual to understand a particular concept, and/or develop and practice a specific life skill. The participant will create a teaching strategy that contains: 1) clever title for the lesson or workshop, 2) grade level or target audience, 3) the desired outcomes of the lesson or workshop, 4) the materials needed for the lesson or workshop, and 5) teaching steps or workshop outline. If possible the participant should also include information on multicultural issues. All assignments will have an appendix that contains the teaching aids, overhead masters, handout master, etc. that are necessary for the teaching strategy. This assignment will allow the participant to use the information learned to design a meaningful lesson or workshop on physical training programs.

## 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 913 - 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 a plyometric training program.
- Student demonstrated insightful thinking by analyzing the strengths and weaknesses of their plyometric training program.
- Student demonstrated their understanding of appropriate hands-on methods of teaching through their lesson plan or workshop teaching experience.
- 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 80% or better for this option)**

- \_\_\_ Complete two (2) Analysis and Application Papers
- \_\_\_ Complete the Video Analysis and Program Design
- \_\_\_ Complete only one (1) of the following:
  - \_\_\_ Coach’s Interview
  - \_\_\_ Training Program Reflection
  - \_\_\_ Plyometrics Lesson Plan

### **A Letter Grade - (All coursework must receive 90% or better for this option)**

- \_\_\_ Complete three (3) Analysis and Application Papers
- \_\_\_ Complete the Video Analysis and Program Design
- \_\_\_ Complete only two (2) of the following:
  - \_\_\_ Coach’s Interview
  - \_\_\_ Training Program Reflection
  - \_\_\_ Plyometrics Lesson Plan

## **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. (3<sup>rd</sup> 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. (2<sup>nd</sup> 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 plyometric training.

### National Strength and Conditioning Association

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

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.

## Athletics' 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

<b>Student Learning Outcomes Oral Communication:</b> Students will <i>exhibit</i> clear, engaging, and confident oral communication – in both individual and group settings – and will critically <i>evaluate</i> content and delivery components.
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<b>Written Communication:</b> Students will <i>demonstrate</i> proficient written communication by <i>articulating</i> a clear focus, <i>synthesizing</i> arguments, and utilizing standard formats in order to <i>inform</i> and <i>persuade</i> others.
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<b>Content Knowledge:</b> Students will <i>demonstrate</i> comprehension of content-specific knowledge and the ability to apply it in theoretical, personal, professional, or societal contexts.
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<b>Reflection:</b> Students will <i>reflect</i> on their personal and professional growth and <i>provide evidence</i> of how such reflection is utilized to manage personal and vocational improvement.
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<b>Critical Thinking:</b> Students will <i>apply</i> critical thinking competencies by <i>generating</i> probing questions, <i>recognizing</i> underlying assumptions, <i>interpreting</i> and <i>evaluating</i> relevant information, and <i>applying</i> their understandings to new situations.
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<b>Moral Reasoning:</b> Students will <i>identify</i> and <i>apply</i> moral reasoning and ethical decision-making skills, and <i>articulate</i> the norms and principles underlying a Christian world-view.
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**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.