George Mason University
College of Education and Human Development
Exercise, Fitness and Health Promotion

EFHP 640 – DL1 Principles of Strength and Conditioning (3)
Fall 2016

Faculty

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Prerequisites/Corequisites

Graduate Standing or Permission of Instructor

University Catalog Course Description

Analyzes exercise techniques, training program designs, organization and administration, and testing and evaluation using scientific principles of strength and conditioning.

Course Overview

Emphasis will be placed upon assessment, description, and analyses of movement and designing training programs to enhance performance and prevent injury using research-based scientific principles of strength and conditioning. While this course will assist those who desire to challenge several certification examinations including, but not limited to: the American College of Sports Medicine (ACSM)'s – Certified Personal Trainer (CPT), the National Strength and Conditioning Association's (NSCA) Certified Strength and Conditioning Specialist (CSCS), or the American Council on Exercise (ACE)'s Personal Trainer Certification (PTC) examinations, it is NOT a preparation course for the any of these exams.

Course Delivery Method

This course will be delivered online (76% or more) using **Asynchronous format** via the Blackboard learning management system (LMS) housed in the MyMason portal. You will log in to the Blackboard course site using your Mason email name (everything before @masonlive.gmu.edu) and email password. The course site will be available on Friday August 26 12:01am. (Class will start on August 29th.)

Technical Requirements

To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with a standard up-to-date browser, either Internet Explorer or Mozilla Firefox is required (note: Opera and Safari are not compatible with Blackboard).
- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students will need a headset microphone for use with the Blackboard, Collaborate, and web Conferencing too.

- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.
- The following software plug-ins for PCs and Macs, respectively, are available for free download:
  - [Adobe Acrobat Reader: https://get.adobe.com/reader/]
  - [Windows Media Player: https://windows.microsoft.com/en-us/windows/downloads/windows-media-player/]
  - [Apple Quick Time Player: www.apple.com/quicktime/download/]
- Download Respondus Lockdown Browser (Make sure it is the latest Version)

Expectations

- Course Week:
- Because asynchronous courses do not have a "fixed" meeting day, our week will **start on Monday, and finish on Saturday** Our Class will **start on Monday august 29th at 12:01 EST and finish on Saturday December 10th at 11:59 EST** (Finals we be announced for the following week) All times listed will be EST.
- Log-in Frequency:
  Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials **at least 6 times per week**.
- Participation: Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence: Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- Technical Issues: Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues. If you are having trouble logging into Blackboard, contact ITU at 703-993-8870 or support@gmu.edu. For assistance within Blackboard, contact the Collaborative Learning Hub at or 703-993-3141 or club@gmu.edu. It is also important to take all exams with a hardwire connect to the Internet, there are issues sometimes using Wi-Fi and the respondus browser.
- Workload: Please be aware that this course is **not** self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- Instructor Support: Students may email or call to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.

- Netiquette: The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words.* Remember that you are not competing with classmates, but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- Accommodations: Online learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.
- E-mail Correspondence: Only messages that originate from a George Mason University address will be accepted. Please address the subject line for all email pertaining to this course as: EFHP 640: Last Name – purpose of email.

Learner Outcomes or Objectives

At the completion of this course, students will be able to:

1. Describe muscle, nerve anatomy, bone, and connective tissue anatomy and physiology and their adaptations to exercise training.
2. Explain the biomechanics of exercise training and how it applies to exercise prescription.
3. Analyze responses of several body systems and their responses to exercise.
4. Discuss the adaptations that occur during both aerobic and anaerobic exercise.
5. Discuss psychology of exercising individuals and their performance, taking into account nutrition, performance enhancing substances and the affect of age and sex related differences.
6. Evaluate exercise testing and administration techniques.
7. Interpret baseline scores and norms associated with exercise tests.
8. Assess aerobic exercise, anaerobic exercises, plyometrics, and speed and agility training techniques.
9. Design training programs that includes strength and conditioning principles including warm-ups and cool-down, periodization, exercise testing, conditioning, plyometrics, and flexibility.
10. Discuss strength and conditioning facility layouts and policies and procedures, as well as discuss risk management.

Required Texts

Haff, GG and Triplett, NT. (2016) Essentials of Strength Training and Conditioning 4th Ed National Strength and Conditioning Association ISBN: 978-1-4925-0162-6

RECOMMENDED READINGS:

Delavier F (2010) Strength Training Anatomy 3rd Edition Human Kinetics ISBN-13: 978-0736092265

Course Performance Evaluation

This course will be graded on a percentage system, with a total of 100 possible percentage. Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, hard copy).

Assignments and Examinations

Exams: The format of these examinations may be multiple choice, true/false, short answer, matching, and fill in the blank type questions. The examinations will be made available by Friday 5:00 am Eastern Standard Time (EST – Note: All times are EST) and will close on Saturday by 5:00 pm. The exams will cover all chapter materials and assigned readings.

Reflective Assignments: You will write critical reflective papers (Word document, Double-spaced, Times New Roman, 12 point font, 2-page limit) on specific topics of current interest in the area of Strength and Conditioning. The instructor will provide the topics of discussion by Monday 8:00 am. The assignments are due by Saturday 11:59 pm after which submissions postings will not count.

All assignments must be named as follows: If your name is Jane Doe, this document will be titled as follows: Doe_Jane_Reflective_Assignment_1.doc. Points will be deducted if assignments are not named correctly.

A template of the document will be provided in the assignments folder. It is recommended that you input your information into the template and upload the paper

Online Class Discussions: You are expected to actively participate in online class discussions in the discussion board. Participation in online discussions of course content is expected as topics are introduced and as applied to assigned readings.

Each discussion posted will be assigned a date by which the student must respond. If a student is unable to fulfill this requirement for any reason, he/she should notify the instructor prior to the class and make alternative arrangements. The aim is to encourage interaction, and not simply to present information.

Discussions will typically run from Monday 8:00 am until Saturday 11:59 pm after which discussion postings will not count.

Training Program Design Assignment: Design a training program for a specific sport team or individual that includes all training seasons (e.g. offseason, preseason) over an entire calendar year. The program should have examples of all appropriate exercise tests, and then based on these tests, exercises, number of repetitions, sets, and intensity for each training season for all program aspects including resistance training, plyometrics, speed workouts and cardiorespiratory training. Understand that this program should be detailed enough that a coach or trainer can implement it successfully with their client(s). More details about this assignment will be offered by September 23.

Course Performance Evaluation Weighting

Requirement	**Percentage%**
Exam #1	10%
Exam #2	10%
Exam #3	10%
Exam #4	10%
Final Exam	20%
Reflective Assignments	10%
Program Design Assignment	20%
Professionalism	10%
Total	**100%**

Grading Policies

The student's final letter grade will be earned based on the following scale:

Grade	Percentage	Quality Points	Grade	Percentage	Quality Points
A	93%	4.00	B-	80%	2.67*
A-	90%	3.67	C	73%	2.00
B+	87%	3.33	F	<73%	0.00
B	83%	3.00			

Note: * Although a B- is a satisfactory grade for a course, students must maintain a 3.00 average in their degree program and present a 3.00 GPA on the courses listed on the graduation application.
This course will be graded on a percentage system, with a total of 100 possible percentage. Once your FINAL GRADE, at the end of the semester is posted on mymasonportal/Blackboard, you will have 24 hours to inquire about it. After that period, your grade will be posted as final on Patriot Web.

Professionalism: 10% of Final Grade (Objectives 1-10)
EFHP students are expected to behave in a professional manner. Depending upon the setting professionalism may appear different, but typically consists of similar components. For graduate EFHP students in a classroom setting and the online learning professionalism generally comprises the following components:

Attendance and Participation Evaluation: Since this is an online class with no scheduled meeting times attendance will not count towards the professionalism grade (See below). Your are expected to participate in class discussions and activities (discussion boards, blogs, etc.). All homework and exams are scheduled to be completed by specific dates and times, no exceptions will be made. See syllabus for these dates and times. Excused absences include the following: illness (must bring a receipt or note from a doctor), family death, athletic/academic event, and others at the discretion of the instructor. For known upcoming absences, students must contact the instructor at least one week in advance to the missed class to make up work. In the case of illness or some other unforeseen absence, the student must contact the instructor via e-mail or telephone.

Communication: – When communicating with the instructor and classmates, either face-to-face or via email, students should address the other person appropriately, use appropriate language and maintain a pleasant demeanor.

Example email with instructor: Dr. Instructor Last Name,

I have a question regarding....

Regards, Student's Name

Phone or video interaction with instructor:
Student: Professor (instructor's last name) I have a question regarding....
Professor: (Student's name) I would be happy to help you. What is your question?
Student: My question is.....
Professor: The answer to that question is...
Student: Professor (instructor's last name) thank you for your time and availability to answer my questions.

Communication Evaluation: For every instance in which the student does not use proper communication points will be deducted. All incidents will be documented by the instructor. The

Professor reserves the right to not answer emails and questions in person, if the student does not appropriately address the Professor.

Responsibility/Accountability:– Professionals take responsibility for their actions and are accountable. This can occur at multiple levels but generally consists of completing assignments on time, submitting work that is of the appropriate quality, honoring commitments and owning up to mistakes.

Honesty/Integrity - Students are expected to be honest with the instructor, classmates and themselves. Professionals keep their word when committing to something and act in an ethical manner. See George Mason University policy for further guidance.

Responsibility/Accountability/ Honesty/Integrity Evaluation: For every instance in which the student is irresponsibility, not accountable for their actions, dishonest or fail to act in an ethical manner points will be deducted. All incidents will be documented by the instructor.

Self-Improvement/Self-awareness – One should be aware of their strengths/weaknesses and constantly seek to improve. Professionals regularly seek out opportunities to increase their knowledge and improve their current skill set.

Self-Improvement/Self-awareness Evaluation : For every instance in which the student does not take advantage of an opportunity to increase their knowledge in the subject area of the class and/or their personal skill set, deductions will be made. All incidents will be documented by the instructor.

Professional Dispositions
Students are expected to exhibit professional behaviors and dispositions at all times.

Core Value Commitment

The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles: http://cehd.gmu.edu/values/.

GMU Policies and Resources for Students

Policies

- Students must adhere to the guidelines of the Mason Honor Code (see http://oai.gmu.edu/the-mason-honor-code/).

- Students must follow the university policy for Responsible Use of Computing (see http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/).

- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.

- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see http://ods.gmu.edu/).

- Students must follow the university policy stating that all sound emitting devices shall be silenced during class unless otherwise authorized by the instructor.

Campus Resources

- Support for submission of assignments to Tk20 should be directed to tk20help@gmu.edu or https://cehd.gmu.edu/api/tk20. Questions or concerns regarding use of Blackboard should be directed to http://coursessupport.gmu.edu/.

- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing (see http://writingcenter.gmu.edu/).

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance (see http://caps.gmu.edu/).

- The George Mason University Office of Student Support staff helps students negotiate life situations by connecting them with appropriate campus and off-campus resources. Students in need of these services may contact the office by phone (703-993-5376). Concerned students, faculty and staff may also make a referral to express concern for the safety or well-being of a Mason student or the community by going to http://studentsupport.gmu.edu/, and the OSS staff will follow up with the student.
- **For additional information on the College of Education and Human Development, please visit our website https://cehd.gmu.edu/.**

Class Schedule

Week	Topic	Readings (Chapter #)	Assignment
Week 1	Introduction & Muscle Physiology	1	Quiz Due by Fri 5 pm September 2nd
Week 2	Neural adaptations, Cardio respiratory	1	
Week 3	Endocrine Responses to Resistance Training /Performance Enhancing Methods	4,11	Reflective Assignment 1
Week 4	Bioenergetics of Exercise and Training	3	Training Program Design Assignments
Week 5	Biomechanics of Resistance Training	2	**Exam 1 Due by Sat at 5pm October 1st**
Week 6	Adaptations to Anaerobic Training Programs	5	
Week 7	Adaptations to Aerobic Endurance Training Programs	6	
Week 8	Principles of Test Selection and Admin/ Administration, Scoring, and Interpretation of Testing	12,13	**Exam 2 Due by Sat at 5pm November 22nd**
Week 9	Age & Sex Related Differences & Their Implication for Resistance Training/FacilityDesign, Layout, and Organization/Facility Policies, Procedures and Legal Issues	7,23,24	
Week 10	Periodization	21	Reflective Assignment 2
Week 11	Exercise Technique for Free Weights and Machine Training	15	
Week 12	Program Design for Resistance Training	17	**Exam 3 Due by Sat at 5pm November 19th**
Week 13	Program Design and Technique for Aerobic Endurance Training	20	
Week 14	Warm Up and Flexibility Training/ Program Design & Technique for Speed and Agility Training	14,19	Online Class Discussion
Week 15	Program Design & Technique for Plyometric Training	18	**Exam 4 Due by Sat at 5pm December 10th** **Training Prog. Design Due**
Week 16/17	Review		**Final Exam TBA**

Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.