

MEMORANDUM

TO: University Senate Council
FROM: Rosetta Sandidge
Associate Dean for Academic and Student Services
Deborah Slaton
Associate Dean for Research and Graduate Studies
TOPICS: Request for New Course
DATE: November 23, 2009

The faculty of the College of Education approves and is requesting Undergraduate and Graduate Councils consideration of the following:

Request for New Course: KHP 550 Principles of Resistance Training

Attachments

REQUEST FOR NEW COURSE

1. General Information.				
a.	Submitted by the College of: Education	Today's Date:	10/28/2009	
b.	Department/Division: Kinesiology & Health Promotion			
c.	Contact person name: Mark Abel	Email: mark.abel@uky.edu	Phone:	257-5687
d.	Requested Effective Date:	<input checked="" type="checkbox"/> Semester following approval	OR	<input type="checkbox"/> Specific Term/Year ¹ : _____
2. Designation and Description of Proposed Course.				
a.	Prefix and Number: KHP 550			
b.	Full Title: Principles of Reistance Training			
c.	Transcript Title (if full title is more than 40 characters):	Principles of Resistance Training		
d.	To be Cross-Listed ² with (Prefix and Number):	_____		
e.	Courses must be described by <u>at least one</u> of the meeting patterns below. Include number of actual contact hours ³ for each meeting pattern type.			
	3 Lecture	_____ Laboratory ¹	_____ Recitation	_____ Discussion
	_____ Clinical	_____ Colloquium	_____ Practicum	_____ Research
	_____ Seminar	_____ Studio	_____ Other – Please explain: _____	
f.	Identify a grading system:	<input checked="" type="checkbox"/> Letter (A, B, C, etc.)	<input type="checkbox"/> Pass/Fail	
g.	Number of credits:	3		
h.	Is this course repeatable for additional credit?			YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	If YES:	Maximum number of credit hours:	_____	
	If YES:	Will this course allow multiple registrations during the same semester?	YES <input type="checkbox"/> NO <input type="checkbox"/>	
i.	Course Description for Bulletin:	This course will provide students with the knowledge to design strength and conditioning programs for athletes. In addition, students will learn how to teach strength training, flexibility, and plyometric exercises. This class prepares		

¹ Courses are typically made effective for the semester following approval. No course will be made effective until all approvals are received.

² The chair of the cross-listing department must sign off on the Signature Routing Log.

³ In general, undergraduate courses are developed on the principle that one semester hour of credit represents one hour of classroom meeting per week for a semester, exclusive of any laboratory meeting. Laboratory meeting, generally, represents at least two hours per week for a semester for one credit hour. (from SR 5.2.1)

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	students for the National Strength and Conditioning Association's certifications.
j.	Prerequisites, if any: KHP 120, ANA 209, PGY 206,
k.	Will this course also be offered through Distance Learning? YES ⁴ <input type="checkbox"/> NO <input checked="" type="checkbox"/>
l.	Supplementary teaching component, if any: <input type="checkbox"/> Community-Based Experience <input type="checkbox"/> Service Learning <input type="checkbox"/> Both
3.	Will this course be taught off campus? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
4.	Frequency of Course Offering.
a.	Course will be offered (check all that apply): <input checked="" type="checkbox"/> Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Summer
b.	Will the course be offered every year? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	If NO, explain: _____
5.	Are facilities and personnel necessary for the proposed new course available? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
	If NO, explain: _____
6.	What enrollment (per section per semester) may reasonably be expected? 30 students
7.	Anticipated Student Demand.
a.	Will this course serve students primarily within the degree program? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
b.	Will it be of interest to a significant number of students outside the degree pgm? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	If YES, explain: _____
8.	Check the category most applicable to this course:
	<input type="checkbox"/> Traditional – Offered in Corresponding Departments at Universities Elsewhere
	<input checked="" type="checkbox"/> Relatively New – Now Being Widely Established
	<input type="checkbox"/> Not Yet Found in Many (or Any) Other Universities
9.	Course Relationship to Program(s).
a.	Is this course part of a proposed new program? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	If YES, name the proposed new program: _____
b.	Will this course be a new requirement ⁵ for ANY program? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	If YES ⁵ , list affected programs: _____
10.	Information to be Placed on Syllabus.
a.	Is the course 400G or 500? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
	If YES, the <i>differentiation for undergraduate and graduate students must be included</i> in the information required in 10.b. You must include: (i) identification of additional assignments by the graduate students; and/or (ii) establishment of different grading criteria in the course for graduate students. (See SR 3.1.4.)
b.	<input checked="" type="checkbox"/> The syllabus, including course description, student learning outcomes, and grading policies (and 400G-/500-

⁴ You must *also* submit the Distance Learning Form in order for the proposed course to be considered for DL delivery.

⁵ In order to change a program, a program change form must also be submitted.

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level grading differentiation if applicable, from 10.a above) are attached.
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Signature Routing Log

General Information:

Course Prefix and Number: **KHP 550**

Proposal Contact Person Name: **Mark Abel**

Phone: **257-5687** Email: **mark.abel@duky.edu**

INSTRUCTIONS:

Identify the groups or individuals reviewing the proposal; note the date of approval; offer a contact person for each entry; and obtain signature of person authorized to report approval.

Internal College Approvals and Course Cross-listing Approvals:

Reviewing Group	Date Approved	Contact Person (name/phone/email)	Signature
Dept Chair KHP & KHP Faculty	10/29/09	Melody Noland 7-5826 melody.noland@duky.edu	Melody Noland
Courses & Curricula	11/2/09	Jeff Reese 7-4909 jeff.reese@duky.edu	Jeff Reese
College of Education	11/10/09	Rosetta Sandidge 7-8847 rosetta.sandidge@duky.edu	Rosetta Sandidge
		Deborah Slaton 7-9795 deborah.slaton@duky.edu	Deborah Slaton
		/ /	

External-to-College Approvals:

Council	Date Approved	Signature	Approval of Revision ⁶
Undergraduate Council	4/13/2010		
Graduate Council			
Health Care Colleges Council			
Senate Council Approval		University Senate Approval	

Comments:

⁶ Councils use this space to indicate approval of revisions made subsequent to that council's approval, if deemed necessary by the revising council.

University of Kentucky
KHP 550 – Principles of Resistance Training

Instructor:	Mark Abel, Ph.D., CSCS Office: 211 Seaton Center E-mail: mark.abel@uky.edu Phone: 257-5687
Office Hours:	Tuesday & Thursday 11:00am-12:30pm (or by appointment)
Term:	Fall 2009: Tuesday & Thursday, 5:30-6:45pm Classroom: NURS 115
Required Materials:	<i>Essentials of Strength Training and Conditioning</i> (2008). (3 rd Ed.) In T. Baechle & R. Earle (Eds.). Champaign, IL: Human Kinetics.
Prerequisites	KHP 120, ANA 209, PGY 206

Course Description:

This course is designed to cover the physiological basis of strength and cardiovascular conditioning along with the fundamentals of designing comprehensive training programs for improving human performance. Students will learn how to evaluate and apply kinesiology-based concepts to exercise technique. Furthermore, students will gain a greater understanding of the theories and parameters underlying resistance training, cardiovascular training, plyometric training, flexibility training, and sport specific training for injury prevention. Techniques for gathering performance measurements, generating computerized statistical analyses of performance, and strategies for establishing programs are skills emphasized throughout the course. The learning objectives of this course are designed to prepare students for certifications (i.e., Certified Strength and Conditioning Specialist [CSCS] and Certified Personal Trainer [CPT]) offered by the National Strength and Conditioning Association (NSCA).

This course also serves to reinforce the College of Education's Conceptual Framework of "research and reflection for learning and leading". *Research* provides the scientific foundation for which the strength and conditioning principals presented in this course are based on. *Reflection* is emphasized in this course to support the student's intellectual curiosity and foster higher levels of learning. *Learning* is a dynamic process that students must be engaged in to stay abreast of the scientific literature supporting strength and conditioning principles for various populations. *Leading* is an expectation of all strength and conditioning professionals as athletes and other clients will look to you for advice and guidance on improving performance in a safe and effective manner.

Course Objectives:

1. The student will be able to demonstrate a basic understanding of the physiological and biomechanical aspects of resistance training.
2. The student will be able to perform a variety of strength training and plyometric exercises, power lifts, and spotting techniques.
3. The student will be able to utilize a spreadsheet to enter a client's data, conduct statistical analyses, and display data in graphical figures.
4. The student will be expected to perform a needs analysis and create the appropriate resistance training and conditioning program that meets the goals of his/her client.

The *National Association for Sport and Physical Educators'* (NASPE) Standards met through this course include the following:

- Standard 1: Content knowledge
- Standard 2: Growth and development
- Standard 3: Diverse students
- Standard 4: Management and motivation
- Standard 5: Communication
- Standard 6: Planning and instruction
- Standard 8: Reflection
- Standard 9: Technology
- Standard 10: Collaboration

Additionally, this course addresses the following EPSB New Teachers Standards (NTS):

- NTS VI: Collaborates with colleagues, parents, and others
- NTS VII: Engages in professional development
- NTS VIII: Knowledge of content
- NTS IV: Demonstrates Implementation of technology

Undergraduate Student - Course Requirements

Evaluation:	Item	Course Points
	Exam I	19
	Exam II	19
	Exam III (Comprehensive)	22
	Labs 1-8 (\approx 3.1 pts each)	25
	Strength & Conditioning Myths	5
	Resistance Train. Observation	10
	Total Points	100

Grading Scale

- A: 90-100%
- B: 80-89%
- C: 70-79%
- D: 60-69%
- E: 50-59%

*Final course grade values are rounded to the nearest whole number (i.e., 89.4 = 89%; 89.5 = 90%)

Labs & Assignments

<u>Labs & Assignments</u>	<u>Due Date</u>
Assignment: Strength and Conditioning Myths	Tues., 9/1
Lab 1: R.T. Technique	Thurs., 9/17
Assignment: Resistance Train. Observation	Tues., 9/29
Lab 2: 1RM and Multiple RM Testing	Tues., 10/6
Lab 3: Olympic Lifts	Tues., 10/20
Lab 4: Statistics in Sports	Thurs., 11/10
Lab 5: Flexibility Training	Tues., 12/1
Lab 6: Stability Training	Thurs., 12/3
Lab 7: Plyometrics, Agility, & Sprint Conditioning (No assign.)	Tues., 12/3
Lab 8: Performance Assessment and Evaluation (No assign.)	Thurs., 12/10

Graduate Student - Course Requirements

Graduate students taking KHP 550 for graduate credit will be responsible for completing the above assignments, labs, and exams in addition to the following:

- 1) A brief literature review will be written on one of the following topics below (see "literature review" for details)
- 2) A presentation (on a topic to be determined) will be made in class
- 3) Reading the additional articles listed below (info. may be used on exams)
- 4) Graduate students may take modified exams
- 5) Graduate students will be expected to assist in setting up Labs on assigned days

Additional Readings: American College of Sports Medicine (2009). Progression model in Resistance Training for Healthy Adults. *Medicine and Science in Sports and Exercise*, 41(3), 687-708. (Read during Week 2)

Folland, J. P. & Williams, A. G. (2007). The adaptations to strength training: Morphological and neurological contributions to increased strength. *Sports Medicine*, 37(2), 145-168. (Read during Week 5)

Literature Review (Due:) (10 pts)

Type (double-spaced) an 8-10 page APA formatted literature review on one of the following topics or consult with the professor if you would prefer an alternative topic:

- 1) Describe the resistance training guidelines and the physiological adaptations that occur as a result of resistance training in a minimum of three special populations. Special populations may include: youth, overweight youth or adults, diabetics, post-menopausal or pregnant women, cardiac rehab. or arthritic patients, etc. Be sure to describe the resistance training technique used (i.e., free-weights, machines, etc.) and the program parameters (i.e., reps, sets, intensity, etc.) that were utilized in each of the referenced studies.
- 2) Provide a review of select banned or legal ergogenic substances. Discuss the potential performance enhancing and physiological benefits these substances provide. Discuss the mechanism(s) by which they are thought to work. Provide scientific evidence supporting your review.
- 3) Discuss the advantages and disadvantages of performing one vs. multiple sets and machines vs. free weights. In your response, consider which type of training program: is more efficient, is more appropriate for untrained vs. trained persons, produces superior improvements in strength, body composition, and other physiological outcome variables.

Cite at least *ten* references in the text and include a bibliography using APA format.

Presentation (10 pts)

A power point presentation will be made to the class on _____. The topic of the presentation will be based on either 1) training special populations, 2) a review of select ergogenic substances, or a topic of your choice that is approved by the instructor (see above guidelines of literature review for further information regarding the context of the presentation). The length of the presentation should be 15-20 min. You must provide the professor with a rough draft of the slides by _____ for review.

Grading Scale A: 90-100%
 B: 80-89%
 C: 70-79%
 E: ≤ 69%

Graduate Student Grading Evaluation:

Item	Course Points
Exam I	17
Exam II	17
Exam III (Comprehensive)	20
Strength & Conditioning Myths (Due: 9/1)	5
Resistance Train. Observation (Due: 9/29)	5
Labs (1-8)	16
Paper (Due: ____)	10
Presentation (Slides due: _____; presentation on: _____)	10
Total Points	100

Tentative Course Outline

Week 1

Thurs. 8/27: Introduction

Week 2

Tues. 9/1: Periodization (Ch 19) & Resistance Training Ex. Prescription (Ch 15)

Thurs. 9/3: Periodization (Ch 19) & Resistance Training Ex. Prescription (Ch 15)

Week 3

Tues. 9/8: Biomechanics (Ch 4)

Thurs. 9/10: Biomechanics (Ch 4)

Week 4

Tues. 9/15: **Lab 1: Resistance Training Technique (Ch 14) (Seaton Weight Room)**

Thurs. 9/17: Muscular System (Ch 1, pp. 4-13)

Week 5

Tues. 9/22: Muscular System (Ch 1, pp. 4-13)

Thurs. 9/24: Muscular System / Neuromuscular System (pp. 4-13, 94-99)

Week 6

Tues. 9/29: Neuromuscular System (pp. 4-13, 94-99)

Thurs. 10/1: **Lab 2: 1RM & Multiple RM Testing (Shively Training Facility)**
(End of Exam 1 Material)

Week 7

Tues. 10/6: Bioenergetics (Ch 2)

Thurs. 10/8: **Exam 1**

Week 8

Tues. 10/13: Review Exam 1 / Bioenergetics (Ch 2) & Metabolic Adaptations to Training

Thurs. 10/15: **Lab 3: Olympic Lifts (pp. 370-375) (Shively Training Facility)**

Midterm (Oct. 19th)

Week 9

Tues. 10/20: Endocrine Responses to Resistance Exercise (Ch 3)

Thurs. 10/22: Tissue Adaptations (Ch 5, 103-108)

Week 10

Tues. 10/27: Tissue Adaptations (Ch 5, 103-108)

Thurs. 10/29: Pulmonary & Cardiovascular Physiology (pp.13-19, 110-111)

Week 11

Tues. 11/3: **Lab 4: Statistics in Sports Performance (Ch 15: pp. 305-308)**

Thurs. 11/5: Aerobic Training & Adaptations (Ch 6 & 18) **(CN 602J)**
(End of Exam 2 Material)

Week 12

Tues. 11/10: **Exam 2**

Thurs. 11/12: Review Exam II results / Stretching & Warm-Up (Ch 13)

Week 13

Tues. 11/17: Video – “Human Body: Pushing the Limits”

Thurs. 11/19: No Class

Week 14

Tues. 11/24: **Lab 5: Flexibility Training (Seaton Gym)**

Thurs. 11/26: Thanksgiving Holiday (No class)

Week 15

Tues. 12/1: **Lab 6: Stability Training (Seaton Gym)**

Thurs. 12/3: **Lab 7: Plyometrics, Agility, Sprint conditioning (Ch's 16 & 17) (Seaton Gym)**

Week 16

Tues. 12/8: Performance Enhancing Substances (Ch 9) / Training with Special Populations / Graduate student presentations on select topics

Thurs. 12/10: **Lab 8: Performance Assessment & Evaluation (Ch's 11 & 12) (*No lab assignment given for this lab) (Seaton Gym)**

Final Exam: The final exam (#3) is comprehensive and is scheduled for Tuesday, December 15th at 5:30 p.m. in **NURS 511**.

Notes:

1. Lecture Notes: Lecture notes and laboratory materials will be posted on Blackboard. Please download and print these materials prior to class.
2. Assignments: The assignments (including labs) are due at the beginning of class on the assigned dates. Assignments not handed in at the start of class will be considered late. Students will lose 50% of the assignment's value if handed in late. Late assignments will only be accepted if handed in within one week of the due date. Material presented in Labs will also be used on the exams.
3. Absences: Class attendance is essential. You may have up to two (2) *unexcused* absences without affecting your grade. Each additional *unexcused* absence will result in a 2% deduction from your final course grade. Any absences in which you wish to be excused need to be accompanied by a doctor's note (dated the day of class that you missed) or another valid excuse (e.g., athletic participation, field trip, religious holiday, death in the family, etc.). Three (3) tardies (arriving after class has started) will count as one (1) unexcused absence from class. If you are absent from class on Laboratory days, *no* points will be received for that laboratory assignment. If the professor determines that the absence is "excused" on a laboratory day, a make-up assignment will be issued in lieu of the laboratory assignment and a due date will be agreed upon. If the number of excused absences is greater than 1/5 of the total number of classes, University Senate Rule 5.2.4.2 may be invoked.

From the Rules of the University Senate, Part II, 5.2.4.2 Excused Absences:

If attendance is required or serves as a criterion for a grade in a course, and if a student has excused absences in excess of one-fifth of the class contact hours for that course, a student shall have the right to petition for a "W," and the faculty member may require the student to petition for a "W" or take an "I" in the course. (US: 2/9/87; RC: 11/20/87)

4. Extra-credit will not be offered for this course.
5. Physical participation is required for this course. Thus, on scheduled laboratory days, dress in appropriate attire that will allow you to be active (jeans do not count)! Failure to do so will result in a zero for that laboratory assignment.
6. Cell phones and other electronic devices may not be used during class (except a calculator when allowed). Please turn them off prior to class.
7. Plagiarism, cheating, or other violations are serious offenses and may be punished by failure on the assignment, project, exam, course and/or expulsion from the University. For further information, review sections 6.3 and 6.4 of the University Senate rules (available online at: <http://ukcc.uky.edu/%7Esenate/servi.script>). Any student with a disability who needs an accommodation or other assistance in this course should make an appointment to speak with the instructor as soon as possible.

NASPE, EPSB & COE Technology Standards; COE Skills & Dispositions; EPSB Themes; & KERA Initiatives	Addressed in Course
National Association for Sport and Physical Educators' Standards for Entry Level Physical Educators	
Standard 1: Content Knowledge.	X
Standard 2: Growth and Development.	X
Standard 3: Diverse Students.	X
Standard 4: Management and Motivation.	X
Standard 5: Communication.	X
Standard 6: Planning and Instruction.	X
Standard 7: Student Assessment.	
Standard 8: Reflection.	X
Standard 9: Technology.	X
Standard 10: Collaboration.	X
Education Professional Standards Board (EPSB) New Teacher Standards	
Standard 1: Standard Designs and Plans Instruction	
Standard 2: Creates and Maintains Learning Climates	
Standard 3: Implements and Manages Instruction	
Standard 4: Assesses and Communicates Learning Results	
Standard 5: Reflects and Evaluates Teaching and Learning	
Standard 6: Collaborates with Colleagues, Parents, and Others	X
Standard 7: Engages in Professional Development	X
Standard 8: Knowledge of Content	X
Standard 9: Demonstrates Implementation of Technology	X
UK Educator Preparation Unit Technology Standards	
Standard 1: Candidates integrate media and technology into instruction	
Standard 2: Candidates utilize multiple technology applications to support student learning.	X
Standard 3: Candidates select appropriate technology to enhance instruction.	
Standard 4: Candidates integrate student use of technology into instruction.	
Standard 5: Candidates address special learning needs through technology.	
Standard 6: Candidates promote ethical and legal use of technology disciplines.	X
Functional Skills and Disposition (FSD) of UK Educator Preparation Unit	
FSD 1: Candidates communicate appropriately and effectively.	X
FSD 2: Candidates demonstrate constructive attitudes	X
FSD 3: Candidates demonstrate ability to conceptualize key subject matter ideas and relationships	X
FSD 4: Candidates interact appropriately and effectively with diverse groups of colleagues, administrators, students, and parents in educational settings.	
FSD 5: Candidates demonstrate a commitment to professional ethics and behavior.	X
Educational Professional Standards Board (EPSB) Themes	
Diversity	X
Assessment	
Literacy Education	
Closing the Achievement Gap	

Kentucky Education Reform Act (KERA) Initiatives			
KERA Goals and Academic Expectations			
Program of Studies			
Primary	Personal Wellness (2.31)	Psychomotor (2.34)	Lifetime Activity (2.35)
	PE-P-1 through PE-P-5	PE-P-6 through PE-P-35	PE-P-36 through PE-P-42
Grade 4	Personal Wellness (2.31)	Psychomotor (2.34)	Lifetime Activity (2.35)
	PE – 4-1 through PS-4-6	PE-4-7 through PE4-11	PE 4-12 through PE-4-14
Grade 5	Personal Wellness (2.31)	Psychomotor (2.34)	Lifetime Activity (2.35)
	PE-5-1 through PE 5-4	PE-5-5 through PE-5-8	P-E5-9 through PE- 5-11
Grade 6	Personal Wellness (2.31)	Psychomotor (2.34)	Lifetime Activity (2.35)
	PE-6-1 through PE-6-4	PE-6-5 through PE-6-9	PE-6-10 through PE-6-12
Grade 7	Personal Wellness (2.31)	Psychomotor (2.34)	Lifetime Activity (2.35)
	PE-7-1 through PE-7-5	PE-7-6 through PE-7-9	PE-7-10 through PE-7-12
Grade 8	Personal Wellness (2.31)	Psychomotor (2.34)	Lifetime Activity (2.35)
	PE-8-1 through PE-8-6	PE-8-7 through PE-8-13	PE-8-14 through PE-8-16
High School	Personal Wellness (2.31)	Psychomotor (2.34)	Lifetime Activity (2.35)
	PE-H-1 through PE-H-5	PE-H-6 through PE-H-11	PE-H-12 through PE-H-15
Core Content for Assessment			
2.34 Psychomotor Skills			
Elementary (5th Grade)		Middle Level (8th Grade)	High School (10th Grade)
PL-E-2.1.1		PL-M-2.1.1	PL-H-2.1.1
PL-E-2.1.2		PL-M-2.1.2	PL-H-2.1.2
PL-E-2.1.3		PL-M-2.2.2	PL-H-2.2.2
PL-E-2.2.2		PL-M-2.2.3	PL-H-2.2.3
PL-E-2.2.3		PL-M-2.3.1	PL-H-2.3.1
PL-E-2.3.1		PL-M-2.3.2	PL-H-2.3.2
PL-E-2.3.2			
2.35 Lifetime Physical Activities			
Elementary (5th Grade)		Middle School (8th Grade)	High School (10th Grade)
PL-E-2.2.1		PL-M-2.2.1	PL-H-2.2.1
2.3.1 Personal Wellness			
Elementary (5th Grade)		Middle (8th Grade)	High (10th Grade)
PL-E-1.3.1		PL-M-1.1.1	PL-H-1.3.1
PL-E-1.3.2		PL-M-1.3.2	PL-H-1.3.2
PL-E-1.3.3		PL-M-1.3.3	PL-H-1.3.3