

THREE RIVERS COMMUNITY COLLEGE

574 New London Turnpike

Norwich, CT 06360

Fall Semester, 2010

HPE-K 130

Weight Training/Fitness

Monday, Wednesday 4:30-5:45 p.m.

August 26th – Dec. 20th

Instructor:

Jeffrey R. Brown

Physical Education Teacher

Norwich Free Academy

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OFFICE HOURS- By appointment only

****Special Notice****

If you have a visible or hidden disability which may require lab and/ or test taking modifications, please see me as soon as possible. If you have not registered with Chris Scarborough, the learning specialist, or a counselor in the Student Services Development Center, you must do so early in the semester.

Course: Weight Training/ Fitness

Credits: 3

Text: NONE

I. Description of the Course:

A) Catalog Descriptions

Instruction and practice in fitness activities with emphasis on strength development. Primarily, the student will gain a better understanding of weight training routines, cardiovascular training, flexibility, nutrition, body composition, and target heart rate. Applications of these principles will be utilized to design a safe, effective strength and conditioning program through weight training.

B) General Course Rationale:

To aid the student in developing:

- 1) A better understanding of weight training routines, cardiovascular training, flexibility, nutrition, body composition, and target heart rate.
- 2) Appropriate weight training exercises that will promote muscle tone and muscle development in the following areas of the body: arms, shoulders, chest (pectorals), back, abdomen, thighs, lower legs.

II. Class Attendance Policy:

Attendance of all class activities in lecture and laboratory is required. Absences are counted from the first meeting of class. More than four consecutive or more than six accumulative absences could result in a student receiving an "F" grade in this course. An explanation of the cause of all absences should be given to your instructor.

III. Academic and Classroom Misconduct:

The instructor has primary responsibility for control over classroom and/or laboratory behavior and maintenance of academic integrity, and can request the temporary removal or exclusion from the classroom or laboratory of any student engaged in conduct that violates the general rules and regulations of the institution or any student engaged in conduct deemed hazardous in the laboratory. Extended or permanent exclusion from lecture or laboratory activities, or further disciplinary action, can only be effected through appropriate procedures of the institution.

Plagiarism, cheating on quizzes or tests, or any form of academic dishonesty is strictly prohibited. Students guilty of academic dishonesty directly or indirectly will receive a zero for the exercise or quiz/test and may receive an "F" grade for the course in addition to other possible disciplinary sanctions which may be imposed through the regular institutional procedures. Any student that believes that he or she has been erroneously accused may appeal the case through the appropriate institutional procedures if their grade was affected.

IV. Procedure for Dropping the Course:

College's Withdrawal Policy

Any student who finds it necessary to discontinue this course **MUST** complete a withdrawal form in the Registrar's Office at the time of the withdrawal. If you can not withdraw in person you may call the Registrar's Office and provide them with the appropriate information. Students may withdraw from the course anytime during the first *14 weeks of class **without** written authorization from the instructor or their academic advisor. (*Deadline dates will be announced.)

V. Tests:

There will be eleven scheduled quizzes (the lowest of which will be dropped); all quizzes are given during the first ten minutes of class. (No make-ups for quizzes will be given.) A midterm exam and a comprehensive final exam will also be given. Quizzes and exams are scheduled in advance. Information for exams will be reviewed before the exam is given. You will also be required to develop an individual training routine in the lab and keep a personal record of your daily workout.

VI. Grade Determination:

The final course grade will be based on a percentage of 500 points:

2 exams: 100 points each = 200 points
10 quizzes: 10 points each = 100 points
1 individual routine
and personal record: 200 points total = 200 points
500 points total

The grading scale will approximate the Three Rivers standard.

VII. Grade Scale:

There will be NO grading on the normal distribution curve.

100.00 – 93.50 = A
93.49 – 90.00 = A-
89.99 – 87.50 = B+
87.49 – 84.50 = B
84.49 – 79.50 = B-
79.49 – 77.50 = C+
77.49 – 73.50 = C
72.49 – 69.50 = C-
69.49 – 63.50 = D+
63.49 – 59.50 = D
59.49 – 00.00 = F

VIII. Methods of Presentation:

Primary presentation methods for topics in Weight Training/Fitness will include classroom lectures and demonstrations in the weight room.

IX. Revisions to the Syllabus:

Students are responsible for learning all of the objectives and all of the items in the course outline whether they are discussed in lecture and/or laboratory or not. The instructor reserves the right to revise the objectives, topical outline or academic schedule contained in this syllabus without notice. However, if the revisions effect scheduled unit tests a 48-hour notice will be given for the new test date.

X. Cellular Phones and/or Beepers:

It is campus policy that cellular phones and beepers are only allowed in class or lab if they are turned off or in silent mode. Under no circumstances are phones to be answered in class. When there are extenuating circumstances that require that a student be available by phone or beeper, that student must speak to the instructor prior to class so that, together, they can arrive at an agreement.

Dress Code for HPE-130

Due to possible changes in schedule, it is required that you either wear workout clothes and sneakers to class each day or bring workout clothes and sneakers with you. Lockers are available if you wish to store clothes at the school throughout the semester, but you must provide your own lock. Locks and all locker contents must be removed at the end of the semester or they will be discarded.

XI. Course Objectives: HPE-130 Weight Training/Fitness

1. The student will learn and be able to demonstrate knowledge of human muscle anatomy and physiology.
2. The student will learn and be able to demonstrate proper warm-up and stretching techniques before lifting weights.
3. The student will learn and demonstrate knowledge of the muscular-skeletal system.
4. The student will learn and demonstrate knowledge of biomechanics of resistance exercise.
5. The student will learn and demonstrate knowledge of the cardiovascular system and target heart rate in response to weight training.
6. The student will learn and demonstrate knowledge of respiratory rate in response to weight training.
7. The student will learn and demonstrate knowledge of lymphatic and interstitial fluid that is associated with muscles.
8. The student will learn and demonstrate knowledge the bioenergetics of the muscle cell.
9. The student will learn and demonstrate knowledge of joint movement and dense connective tissue attachment to the bone.
10. The student will demonstrate proper lifting and breathing techniques.
11. The student will identify age and gender differences relating to weight training.
12. The student will set up a program with the proper sets and repetitions.
13. The student will learn and demonstrate knowledge of nutrition and its implications on weight training.
14. The student will demonstrate safety in the use of all equipment.
15. The student will demonstrate different types of stretching and the use of free weights and universal machines.
16. The student will gain a better status of fitness through a better understanding of weight training routines.
17. This student will develop strength, muscular endurance, coordination and flexibility.
18. The student will develop an individual training routine and keep personal records.
19. The student will gain a better status of fitness through a better understanding of weight training routines, cardiovascular training, flexibility, nutrition, body composition and target heart rate.
20. The student will learn and demonstrate the appropriate weight training exercises that will promote muscle tone and muscle development in the following areas of the body: arms, shoulders, chest (pectorals), back, abdomen, thighs and lower legs.

XII. Topical Outline: HPE-130 Weight Training/Fitness

1. Describe the support and locomotion mechanisms of the human body by describing the skeletal and muscular system:
 - A. Describe functions of overall bone structure.
 - B. Identify the bones of the human skeleton.
 - C. Classify joints and joint movement.
 - D. Describe functions of and overall structure of a muscle.
 - E. Describe the basic mechanics of muscle contraction.
 - F. Be able to identify the major muscles of the muscular system.

2. Muscle Physiology
 - A. Identify origin and insertion of muscles
 - B. Describe myofilaments and sarcomere anatomy
 - C. Discuss the sliding Filament theory
 - D. Identify antagonistic pairing of muscles

3. Neuromuscular Anatomy and Adaptations to Conditioning
 - A. Identify motor end plates of muscles
 - B. Describe synaptic neurotransmitters

4. Neuromuscular Anatomy and Adaptations to Conditioning
 - A. Describe isokinetic training
 - B. Discuss kinesiology
 - C. Apply muscle physiology to resistance training

5. Bone, Muscle and Connective Tissue Adaptations to Physical Activity
 - A. Discuss the roles of dense connective tissue
 - B. Identify major tendons and their role in weight training
 - C. Discuss proprioceptive fluid and lymphatic flow over muscles

6. Bioenergetics of Exercise and Training
 - A. Discuss metabolism and aerobic respiration
 - B. Identify mitochondrial importance in muscles

7. Cardiovascular and Respiratory Anatomy and Physiology: Responses to Exercise
 - A. Differentiate between systemic, pulmonary and coronary circuits through the human body
 - B. Identify target heart rate in response exercise
 - C. Identify target respiratory rate in response exercise

8. Age and Gender Related Differences and Their Implications for Resistance Exercise
 - A. Discuss gender differences in weight training
 - B. Identify age differences in weight training

9. Nutritional Factors in Health and Performance
 - A. Identify the bio-organic molecules needed to fuel muscles
 - B. Describe the importance of essential vitamins
 - C. Discuss various cofactors and secondary metabolites

10. Special Topics

Academic Schedule

HPE-130 Weight Training/Fitness

Week	Date	Location	Topic
1	8/30	F-111	Class Intro
	9/1		Workout Facility Intro
2	9/6		No Class
	9/8		Skeletal System
3	9/13		Quiz/Lab
	9/15		Types of muscles, Ligaments and Tendons
4	9/20		Quiz/Lab
	9/22		Lab
5	9/27		Muscles of the Upper Body
	9/29		Quiz/Lab
6	10/4		Muscles of the Lower Body
	10/6		Quiz/Lab
7	10/11		<i>Lab</i>
	10/13		<i>Lab</i>
8	10/18		Sliding Filament Theory
	10/20		Quiz/Lab
9	10/25		Midterm Review
	10/27		**MIDTERM**
10	11/1		Target Heart Rate
	11/3		Quiz/Lab
11	11/8		Various Training Methods
	11/10		Quiz/Lab
12	11/15		Energy Systems
	11/17		Quiz/Lab
13	11/22		Body Composition and Coronary Risk Factors
	11/24		Quiz/Lab
14	11/29		Lower Body Exercises
	12/1		Quiz/Lab
15	12/6		Upper Body Exercises
	12/8		Quiz/Lab
16	12/13		Lecture/Final Exam Review
	12/15		Lab
17	12/20		**FINAL EXAM

***Workout attire, including sneakers, must be worn on lab days or it will count as an absence.**

****The instructor reserves the right to change or modify the topics on this calendar without notice.**