

HPE*k105 Introduction to Exercise Science

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Office Hours: M/W 1:00-1:30, T/R 11:00-12:00

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Course Description

An introduction to the profession of Fitness Training and the five components of physical fitness, as it relates human anatomy and physiology, exercise, and nutrition to fitness and its effects on the body.

Prerequisite: ENG*K101 eligibility

Course Outcomes

1. The student will gain an understanding of the concepts of safe and effective exercise.
2. The student will demonstrate knowledge of the contribution of energy systems to activity.
3. The student will be able to show basic understanding of how muscles relate to movement and the importance of joint stability during movement.
4. The student will understand the value of pre-screening/testing in the exercise environment.
5. The student will be able to demonstrate leadership, motivation and the role of the leader in fitness setting.
6. The student will have the ability to determine target populations and further understand the needs and options of a variety of participants.
7. The student will have knowledge of the basic structures of bone, skeletal muscle, and connective tissue
8. The student will gain knowledge of the basic anatomy of the cardiovascular system and respiratory system
9. The student will demonstrate the knowledge of the definition of the following terms: inferior, superior, medial, lateral, supination, pronation, flexion, extension, adduction abduction, hyperextension, rotation, circumduction, agonist, antagonist, and stabilizer.
10. The student will be able to distinguish between aerobic and anaerobic metabolism.
11. The student will have knowledge of how the principle of specificity relates to the components of fitness

12. The student will demonstrate knowledge of muscle actions, such as isotonic, isometric, isokinetic, concentric, eccentric.
13. The student will have the ability to identify the major muscles of the body.
14. The student will be able to identify the major bones of the body.
15. The student will be able to identify the various joints of the body.
16. The student will be able to identify the primary action and joint range of motion for each major muscle group.
17. The student will be able to discuss the physiologic basis of the major components of physical fitness.
18. The student will know and be able to demonstrate the components of a health/medical history.
19. The student will have knowledge of the value of a medical clearance before exercise participation.
20. The student will demonstrate knowledge of the limitations of informed consent and medical clearance.
21. The student will demonstrate an ability to obtain a basic health history and risk appraisal and to stratify risk in accordance with ACSM Guidelines.
22. The student will demonstrate an ability to explain and obtain informed consent.
23. The student will demonstrate knowledge of and ability to prepare for the initial client consultation.
25. The student will demonstrate knowledge of training principles, such as progressive overload, variation and specificity
26. The student will demonstrate knowledge of the stages of motivational readiness and effective strategies that support and facilitate behavioral change.
27. The student will demonstrate knowledge of the types of feedback and ability to use communication skills to optimize a client's training session.
28. The student will understand the common obstacles that interfere with adherence to an exercise program and strategies to overcome these obstacles.
29. The student will understand knowledge of appropriate professional responsibilities, practice standards, and ethics in relationships dealing with clients, employers, and other allied health/medical/fitness professionals.
31. The student will develop coping skills and behaviors to meet the challenges of college education.
32. The student will assess personal strengths and limitations to set and achieve appropriate goals.

- 33. The student will develop skills that enhance planning, studying, communication and critical thinking.
- 34. The student will learn about and use the resources of Three Rivers Community College.
- 35. The student will establish personal, career and academic goals, with an understanding of what are the obstructions to these goals.

Instructional Materials

Kinesiology Flashcards (Loose Pages)

NSCA'S Essentials of Personal Training, Coburn. 2nd ed

So, You are going to college?!, Bolken, 2012

Academic Misconduct

The instructor has primary responsibility for control over classroom behavior and maintenance of academic integrity, and can request the temporary removal or exclusion from the classroom of any student engaging in conduct that violates the general rules and regulations of the institution. 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, quiz or 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.

Grade Determination

3 exams	100 points each
Homework	10 points each
Vocabulary	10 points each
Quizzes	11 points each
Muscle Quizzes	5 points each
Group project	100 points
Career Exploration paper	100 points
Research Article Review/presentation	75 points

The grading in this course is determined by the 1000 Point Grading Method. Please see My Grades in Blackboard to follow your academic performance during the semester.

Letter Grade	Point Ranges	Grade Point Value
A	950 - 1000	4.000
A-	900 - 949	3.667
B+	890 - 899	3.333
B	810 - 889	3.000
B-	800 - 809	2.667
C+	790 - 799	2.333
C	710 - 789	2.000
C-	700 - 709	1.667
D+	690 - 699	1.333
D	610 - 679	1.000
D-	600 - 609	0.667
F	0 - 599	0.000

Career Exploration Paper: Write a resume and then bring it into the **Writing Center** for assistance with formatting/tips. Using your resume as a guide, write a 5-7 page paper that will analyze what skills, traits, college courses and experience you should gain during your time in college in order to make yourself marketable. Please research career options and make the appropriate citations in your paper. This assignment must be uploaded to digication.

Group project: each small group will receive a component of physical fitness. The group will create, demonstrate, and explain an activity that showcases that component of physical fitness. Please explain how your activity could be used to enhance that component. Be creative! Each activity should be a minimum of 20 minutes in length.

Research article Review: paper

1. The student will locate a professionally reviewed research article that pertains to the information presented in this class. Students are responsible for obtaining a printed version of the article. Students will prepare a 6-8 page typed and double-spaced "reflection" paper of their review of the research presented in the journal article. The paper should include the following:

- a. An APA style cover page.
- b. A summary of the abstract using APA format.

- c. An introduction of the topic presented by the author of the article.
- d. A review of the literature or topic presented by the author of the article.
- e. An outline of the research presented using the headers used in the research: methods, subjects (scope of study)- the who, what, when, where, and why.
- f. Results or a summary of the data gathered or interviews conducted.
- g. A discussion and conclusion(s) from the point of view of the research article author
- h. A section reflecting on what you learned about the topic. In your opinion, what was profound or new? What recommendations do you have for future research:
- i. A reference page citing the journal article reviewed.
- j. Appendixes, tables, and figures presented in the article can be included in the body of your paper.

2. Presentation Requirements

Students will orally present the research from the journal article to the class on a day assigned by the instructor. Dress professionally.

- present the positions from the article to the class in a creative manner.
- Be sure to involve the total class in discussion and stimulate interest.
- The presentation must incorporate class learning
- The depth of material presented from the research article must be sufficient to cover the topic.
- Plan a 10-12 minute presentation, including time for class discussion.
- Visual aids and handouts are required.

The purpose of the presentation is to educate and stimulate fellow students into thinking about how they react to attitudes and beliefs regarding fitness, health and wellness and related concerns; and how a healthy lifestyle influences people's lives when they review research.

Make-Up Work

Any assignment can be obtained from the instructor or on blackboard. Unit tests can only be made up by special arrangement with the instructor. Make-up tests will be granted on an individual basis only following a conference with the instructor; where the reason(s) for missing the test must be determined mitigating circumstances beyond the control of the student such as, illness, death in the family, or change in condition of employment. If two tests are missing during the semester and/or if the final exam

is missed the student will receive an “F” grade if he or she is failing other parts of the course or an “I” if the student is passing all other parts of the course.

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 lab or not. The instructor reserves the right to revise the objectives, topic outline, or academic schedule contained in the syllabus without notice. However, if the revisions affect scheduled unit tests, a 48-hour notice will be given for the new test date.

Technology

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.

Special Notice

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

College Disabilities Service Provider	
Matt Liscum, Counselor (860) 215-9265 Room A113	<ul style="list-style-type: none">• Learning Disabilities• ADD/ADHD• Autism Spectrum• Mental Health Disabilities
Elizabeth Willcox, Advisor (860) 215-9289 Room A113	<ul style="list-style-type: none">• Medical Disabilities• Mobility Disabilities• Sensory Disability

Course Outline

- Sunday, 8/28: 8/29 first day of class, Introduction
- Sunday, 9/11: Unit 1 due, 9/5 Labor Day College closed
- Sunday, 9/18: Unit 2
- Sunday, 9/25: Unit 3
- Sunday, 9/25: Exam 1 (Monday, 9/26)
- Sunday, 10/2: Unit 4, Career Exploration paper due
- Sunday, 10/9: make up
- Sunday, 10/16: Unit 5, Research Article due
- Sunday, 10/23: Unit 6
- Sunday, 10/30: Unit 8, Monday 10/31 Advising Day, Exam 2
- Sunday, 11/6: make-up
- Sunday, 11/13: Unit 9
- Sunday, 11/20: Monday, 11/21 Abstract Presentations, Wednesday 11/23 college closed no classes,
Thursday, 11/24: Thanksgiving, college closed, no classes
- Sunday, 11/27: Abstract Presentations, Group Project review due
- Sunday, 12/4: Abstract Presentations
- Sunday, 12/11: Abstract Presentations, Wednesday, 12/14 Exam 3