



Mercer County Community College
Division of Science and Health Professions
Department of Health and Physical Education

COURSE OUTLINE 2009/2010

Course Number: HPE110
Course Title: Concepts of Health & Fitness
Credits: 2
Lecture Hours: 1
Lab Hours: 2

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Revised: 2009

Catalog description:

Through a series of lectures and laboratories, various aspects of health and physical fitness will be explored. In addition to mastering selected concepts concerning health and physical fitness, each student will develop through self-testing laboratories, his own physical fitness profile. Each student will assess his/her fitness level and will design a program of exercises to achieve and/or maintain fitness for living.

Required texts/other materials:

Concepts of Physical Fitness. Fifteenth Edition, by Corbin, et. al., Dubuque, Iowa
The McGraw Hill Companies

Course goals:

The student of HPE110 will be able to:

01. develop assessment, self-management, and physical skills necessary to improve the quality of life through health, wellness and fitness
02. identify and implement the various health and skill related components of physical fitness and their associated health benefits
03. recognize and appreciate the basic anatomy and physiology of one's biological systems and its interconnectedness and how to correct possible imbalances
04. identify and describe the guidelines for health, wellness and fitness set by the government for the well-being of future generations
05. recognize concerning lifestyle behaviors (i.e. safe-sex, smoking, nutrition, etc.)
06. identify health risks associated with misinformation concerning health and fitness products

Course-specific General Education Core Competencies:

- A. Communication:** Students will communicate effectively in both speech and writing.
- A.1. Students will read, write, and listen actively, critically, and reflectively.
 - A.2. Students will logically, informatively, persuasively, and creatively respond orally and/or in writing to what they read, hear, and see.
 - A.3. Students will evaluate and revise their written communication.
 - A.4. Students will write and speak clearly and effectively in formal American English.

- B. Critical Thinking and Problem-Solving:** Students will use critical thinking and problem solving skills in analyzing information.
- B.1. Students will distinguish among opinions, facts, and inferences.
 - B.2. Students will identify and critique underlying or implicit assumptions.
 - B.3. Students will thoughtfully evaluate diverse perspectives and alternative points of view.
 - B.4. Students will ask informed questions and make informed judgments.
 - B.5. Students will solve problems by applying discipline-appropriate methods and standards.
- C. Ethical Reasoning and Action:** Students will understand ethical issues and situations.
- C.1. Students will recognize, analyze, and assess ethical implications of an issue or a situation.
 - C.2. Students will analyze and evaluate the strengths and weaknesses of different perspectives on an ethical issue or a situation.
 - C.3. Students will integrate their knowledge, take a position on an ethical issue or a situation, and defend it with logical arguments.
- F. Collaboration and Cooperation:** Students will develop the interpersonal skills required for effective performance in group situations.
- F.1. Students will demonstrate communication skills that promote effective function and interpersonal relations within group situations or settings.
 - F.2. Students will recognize and employ strategies and role-playing which encourage a productive and supportive group climate.
 - F.3. Students will employ aspects of reflective thinking to solve problems utilizing brainstorming and consensus within collaborative projects.

General Education Goals

Goal 1: Written and Oral Communication in English: Students will communicate effectively in both speech and writing.

- 1.1. Students will read, write, and listen actively, critically, and reflectively.
- 1.2. Students will logically, informatively, persuasively, and creatively respond orally and/or in writing to what they read, hear, and see.
- 1.3. Students will evaluate and revise their written and/or oral communication.
- 1.4. Students will write and speak clearly and effectively in formal American English.

Goal 2: Mathematics: Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.

- 2.1 Students will develop graphical, numerical, analytical and verbal models to describe quantitative relationships that exist in the world and communicate these concepts effectively.
- 2.2 Students will investigate and interpret these models using the mathematical skills, tools and reasoning appropriate to each type of model.
- 2.4 Students will demonstrate an understanding that mathematics is a precise language that is used to solve complex problems in many disciplines.

Goal 4: Technology or Information Literacy: Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals.

4.2. Students will demonstrate the ability to use a particular technology or group of technologies to analyze or solve problems.

4.3. Students will demonstrate proficiency in the accurate use of interfaces, files, basic productivity software, web browsers and search engines.

4.6. Students will gather information using a variety of appropriate resources, search tools, and strategies, evaluate and analyze that information, and then select information and use it correctly to answer a research question.

4.7. Students will respect the privacy, security and ownership of the information they locate and use, recognizing and honoring the ethical considerations relevant to the use of information with a particular focus on eliminating plagiarism.

Goal 5: Social Science: Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.

5.2. Students will analyze and appreciate how social and political institutions and organizations influence individual development and behavior.

Goal 8: Diversity: Students will understand the importance of a global perspective and culturally diverse peoples.

8.3. Students will evaluate the consequences of prejudicial attitudes and discriminatory actions.

Course Units of Study in Detail:

Unit 1:

Introduction

How to fill out a lab notebook

Health, Wellness and Health Lifestyles

Self-Management and Self-Planning Skills for Health Behavior Change

Preparing for Physical Exercise

How Much Physical Activity is Enough?

Objectives:

- ♦ Define physical fitness, wellness, exercise, and health.
- ♦ Define each of the components of physical fitness.
- ♦ Define each of the dimensions of wellness.
- ♦ Explain the purpose and significance of the Healthy People 2010 goals for the nation.
- ♦ Distinguish between a long life and a long healthy life.
- ♦ Explain the importance of healthy lifestyles to good health and wellness.
- ♦ Explain the importance of regular exercise to good fitness.
- ♦ Assess personal wellness. (Lab)
- ♦ Assess personal fitness with simple estimations. (Lab)

- ♦ Describe the stages of change that people experience in modifying their lifestyle behaviors.
- ♦ Describe personal factors that can influence behavior change.
- ♦ Explain why self-management skills are needed for lasting behavior change.
- ♦ Provide examples of some important self-management skills for behavior change.
- ♦ Assess one's level of exercise adherence. (Lab)
- ♦ Evaluate current level of self-management skills for behavior change. (Lab)
- ♦ Explain the meaning of "activity readiness".
- ♦ Describe the benefits of a warm-up and cool-down.
- ♦ Explain the important characteristics of fitness clothing for different conditions.
- ♦ Explain precautions for exercising in the heat and procedures for cooling the body.
- ♦ Describe the types and severity of heat related illnesses.
- ♦ List the precautions for exercising in the cold.
- ♦ Explain how other environmental factors can affect one's ability to exercise safely.
- ♦ Define and explain the meaning of the specificity principle.
- ♦ Define and explain the meaning of the progression principles.
- ♦ Define and explain the concept of threshold of training.
- ♦ Define and explain the concept of fitness target zones.
- ♦ Explain the FIT formula.
- ♦ Describe the levels of the activity pyramid.
- ♦ Explain the significance of the different activities in the activity pyramid.
- ♦ Evaluate current activity habits according to the activity pyramid. (Lab)
- ♦ Course Goals: 01,02, 04
- ♦ Core Competencies: A, B, F
- ♦ Gen Ed Goals: 1, 2, 5

Unit 2:

Health Benefits of Physical Activity
Cardiovascular Fitness

Objectives:

- ♦ Describe the ways in which activity and fitness contribute to health and wellness.
- ♦ Identify and define important hypokinetic diseases, i.e. cardiovascular disease, cancer, back problems, long-term weight control, diabetes and osteoporosis.
- ♦ Identify and define terms related to cardiovascular diseases and corresponding risk factors.
- ♦ Explain the relationship of activity and fitness to cardiovascular health.
- ♦ Describe the theories for the beneficial effects of activity on the heart.
- ♦ Describe the theories for the beneficial effects of activity on preventing atherosclerosis.
- ♦ Explain the relationship of activity and fitness to other hypokinetic conditions.
- ♦ Explain the effects of activity and fitness on non-hypokinetic conditions.
- ♦ Describe the basic anatomy and physiology of the heart and vascular system.
- ♦ Describe the contributions of the heart, lungs and bloods to good cardiovascular fitness.
- ♦ Explain how exercise improves the fitness of the heart and vascular system.

- ♦ Describe the relationship between CV fitness and heart disease.
- ♦ Discuss the threshold of training and target zones, and FIT formula for cardiovascular fitness.
- ♦ Explain how training target zone changes as fitness improves.
- ♦ Count pulse accurately and determining target heart rates. (Lab)
- ♦ Self-assess cardiovascular fitness. (Lab)
- ♦ Rate perceptions of exertion accurately. (Lab)
- ♦ Identify high blood pressure and how it affects health
- ♦ Understand and experience perceived exertion
- ♦ Explain the effect of regular exercise on the arteries and veins.
- ♦ Course Goals: 01, 02, 03, 04, 06
- ♦ Core Competencies: A, B, F
- ♦ Gen Ed Goals: 1, 2, 4

Unit 3:

Nutrition

Body Composition

Flexibility

Muscle Fitness & Resistance Exercises

Objectives:

- ♦ List and describe the role of the different nutrients in the diet.
- ♦ Distinguish between simple and complex carbohydrates, saturated and unsaturated fat and between complete (animal) and incomplete (vegetable) proteins
- ♦ Calculate the percent of calories from each dietary nutrient.
- ♦ Discuss the recommended amount of vitamins and minerals in one's diet
- ♦ Discuss the importance of soluble and insoluble fiber in the diet.
- ♦ Describe the concept of the food pyramid as a model for diet.
- ♦ Discuss the dietary needs of active people and athletes compared to sedentary people.
- ♦ Describe common types of nutrition quackery.
- ♦ Describe some of the common eating disorders.
- ♦ Evaluate the quality of different sample diets by calculating percent of calories from nutrients. (Lab)
- ♦ Assess the quality of one's own diet. (Lab)
- ♦ Describe the prevalence of overweight conditions in the U.S.
- ♦ Explain the difference between overweight and overfatness and standards for both
- ♦ Describe the importance of regional fat deposition and how it is measured.
- ♦ Explain the use and calculation of body mass index.
- ♦ List and describe various methods of assessing body fatness.
- ♦ Discuss the relationship between overfatness/underfatness and good health.
- ♦ List and explain the common reasons for overfatness and describe appropriate plans for fat reduction.
- ♦ Explain the facts about diet, exercise, and body composition.
- ♦ Discuss pressures to be thin and risks of eating disorders.
- ♦ Evaluate body composition with skinfolds. (Lab)

- ♦ Evaluate body composition with anthropometric measures. (Lab)
- ♦ Evaluate daily energy expenditure. (Lab)
- ♦ State the risks of poor flexibility and the benefits of good flexibility.
- ♦ List causes of poor flexibility and explain the principle of overload used to improve flexibility.
- ♦ Explain differences between different stretching techniques.
- ♦ Give an example of the principle of specificity applied to flexibility exercises.
- ♦ Describe the threshold of training and target zone (FIT) for flexibility.
- ♦ Describe some safety precautions to prevent injury when performing stretching exercises.
- ♦ Describe stretches that would improve flexibility for different joints of the body.
- ♦ Evaluate their personal level of flexibility. (Lab)
- ♦ Plan and log stretching exercises to improve personal flexibility. (Lab)
- ♦ Describe the benefits of good muscular fitness.
- ♦ Distinguish between muscular strength and muscular endurance, how to train for and the need for both.
- ♦ Describe the difference among strength and power
- ♦ Describe the risks associated with using anabolic steroids and/or growth hormones as a way to obtain strength.
- ♦ Explain how the principle of overload and specificity area applied in resistance training.
- ♦ Distinguish among isotonic, isokinetic, and isometric contractions.
- ♦ Distinguish between eccentric and concentric contractions.
- ♦ Describe the threshold of training and the target zone for resistance training.
- ♦ Explain the advantages and disadvantages of free weights and weight machines.
- ♦ Describe exercises to train different body parts.
- ♦ List the dangers of anabolic steroids and other supplements used to improve strength or physique.
- ♦ Evaluate personal levels of strength and endurance. (Lab)
- ♦ Plan a personal resistance training program to suit personal interests and needs. (Lab)
- ♦ Course Goals: 01, 02, 03, 04, 05, 06
- ♦ Core Competencies: A, B, C, F
- ♦ Gen Ed Goals: 1, 2, 4, 5, 8

Unit 4:

Body Mechanics and Posture

Questionable exercises and care of the back and neck

Performance Benefits of Physical Activity

Sexually Transmitted Diseases

Objectives:

- ♦ Describe the impact of back problems on American society.
- ♦ Define and distinguish among body mechanics, static posture, and dynamic posture.
- ♦ Describe the function of the spinal column and list the benefits of good posture.
- ♦ Describe the elements of good standing posture and causes of poor posture.

- ♦ Describe some common postural problems and probable causes of backaches and neck aches.
- ♦ List guidelines for preventing backache and neck ache.
- ♦ Describe the correct methods of moving a heavy object from the floor.
- ♦ Determine your risk for backache or neck ache. (Lab)
- ♦ Recognize postural deviations and assess another person's posture. (Lab)
- ♦ Plan an exercise/stretching program to address personal needs regarding back care. (Lab)
- ♦ Explain the relationship between skill-related fitness, health-related fitness and performance.
- ♦ Distinguish between high-level aerobic and anaerobic capabilities.
- ♦ Describe the specific needs of athletes training for muscular strength
- ♦ Describe the concept of "periodization" and how it applies to performance training.
- ♦ Define power and describe how to train to increase power.
- ♦ Describe which skill-related fitness components are required for different sports.
- ♦ List a few common hyperkinetic conditions.
- ♦ Define the term "ergogenic aid" and provide an example.
- ♦ Evaluate personal levels of skill-related fitness. (Lab)
- ♦ List the methods of transmission, symptoms and treatment of each of following sexually transmitted diseases: chlamydia, gonorrhea, herpes, syphilis, human papilloma virus, AIDS, hepatitis B and pediculosis pubis.
- ♦ Understand the responsibilities involved with sexual activity
- ♦ Course Goals: 01, 02, 03, 04, 05, 06
- ♦ Core Competencies: A, B, C, F
- ♦ Gen Ed Goals: 1, 2, 4, 5, 8

Unit 5:

Stress and Health

Stress Management

Becoming an Informed Consumer

Planning for a Healthy Lifestyle Change

Objectives:

- ♦ Define stress and explain how the autonomic nervous system responds to it.
- ♦ Explain how stress impacts health and promotes illness.
- ♦ List common sources of environmental, physiological, emotional, and social stressors.
- ♦ Distinguish between hypostress, distress, and eustress, and apply these terms to the target zone concept.
- ♦ Describe the common characteristics of stressful events.
- ♦ Explain how "appraisal" of stress can make a difference in the perception of a stressor.
- ♦ Evaluate personal stress level using the Life Experience survey. (Lab)
- ♦ Evaluate personal level of Hardiness that can protect against stress. (Lab)
- ♦ List common coping strategies for stress management.
- ♦ Explain some of the reasons why exercise is found to reduce stress.

- ♦ Discuss the importance of social support for stress management.
- ♦ Differentiate between leisure and recreation and list some of the most popular forms.
- ♦ Differentiate between committed and free time and list steps for managing time more effectively.
- ♦ List and explain the steps for managing stress more effectively.
- ♦ Evaluate levels of muscular tension related to stress and describe ways to reduce it. (Lab)
- ♦ Evaluate personal coping strategies used to manage stress. (Lab)
- ♦ Evaluate personal levels of social support in relation to stress management. (Lab)
- ♦ Monitor time usage in order to improve time management skills for stress management. (Lab)
- ♦ Distinguish between fraud and quackery.
- ♦ Describe the characteristics that make a person susceptible to fraud and quackery.
- ♦ Describe some potentially fraudulent weight loss gimmicks such as spot reducing, cellulite treatments, surgical sculpting for fitness, and others.
- ♦ Describe some potentially fraudulent fitness products such as passive exercise machines.
- ♦ Describe some potentially fraudulent health products and procedures.
- ♦ Explain what massage does and does not do to the body, including its effect on fitness.
- ♦ Explain why tanning salons, saunas, and whirlpools may not be effective and can be harmful.
- ♦ Explain the difference between an expert and a quack and tell how to recognize quackery.
- ♦ List common sources of misinformation and how it contributes to quackery.
- ♦ Apply consumer skills to evaluate health-related products. (Lab)
- ♦ Describe the factors that influence our lifestyles.
- ♦ List the major healthy lifestyles that are crucial to health and wellness.
- ♦ List and explain the five steps for planning for healthy living.
- ♦ Plan a personal lifestyle change program. (Lab)
- ♦ Course Goals: 01, 02, 03, 04, 05, 06
- ♦ Core Competencies: A, B, C, F
- ♦ Gen Ed Goals: 1, 2, 4, 5, 8
- ♦

Class Attendance:

The class attendance policy is as follows:

0-3 absences	no penalty if labs are made up
4-5 absences	final grade will be dropped one letter if work is made up
6-7 absences	final grade will be dropped two letters if work is made up
8 or more	failure. If work is not made up, failure is imminent.

- ♦ Attendance policy for night and summer sessions will be modified accordingly.
- ♦ Students who are **late** for class are subject to loss of points at the discretion of the instructor.

Grading Policy:

A	200-190	C+	159-153
A	189-180	C	152-140
B+	179-173	D	139-120
B	172-166		
B-	165-160		

Tests: Five (5) tests each containing 25 questions will be given during the course. The lowest test score will be dropped resulting in 100 possible points toward course grade. ***The tests may be taken one time only and there will be no make up dates for tests.

Final exam: 50 comprehensive questions, 25 possible points toward course grade. All tests and the final exam are graded by a scanner; therefore, a #2 pencil is required.

Labs: Twenty-five (25) labs will be required. Each lab will have a point value of three (3) points. Assignment of labs, quantity and point value may change at the discretion of the instructor.

Total points possible: 200 computed as follows:

Test points: 100 possible (50% of grade)
Final exam: 25 possible (12.5% of grade)
Labs: 75 possible (37.5% of grade)

Physical Ability and Limitations:

Your athletic body (or lack of it) will not have any influence on your grade. Physical performances are not the basis for your grade. You are graded on what you know, how thoroughly you fill out your lab reports and class attendance.

Lab Reports:

In order to obtain an acceptable grade for your lab reports, you must complete all aspects of the lab; i.e., data and conclusions and implications. All questions must be addressed (answered) using proper language and grammar (complete sentences). You must demonstrate that you have given thought about the questions. All completed labs will be fastened together in proper order, and properly labeled. The instructor may at their discretion change the format of the required lab report. The basic format is as follows:

The front cover of your lab report must contain the following information.

1. Your name
2. Your lab section number
3. Your lab instructor's name
4. Date you completed your report
5. Late lab reports will result in point penalty

Dress code:

Shorts, sweatpants, T-shirt or tank top and/or sweatshirt. SNEAKERS ONLY! If you are not dressed appropriately for activity, you will be considered absent.

Cell phones:

If you must have your cell phone on during class, please keep the ringer off. Cell phones must be out of sight during tests and exams.

Smoking regulations:

Mercer County Community College is a non-smoking campus. Smoking is not permitted in any building.

Locker room regulations:

Lockers are available for your use only while you are participating in class or recreational activities in the gym. Due to an insufficient quantity, lockers cannot be provided for overnight storage. The men's locker room is located on the third floor of the P.E. building. The women's locker room is on the lower level of the P.E. building.

Academic Integrity

Mercer County Community College is committed to Academic Integrity -- the honest, fair and continuing pursuit of knowledge, free from fraud or deception. This implies that students are expected to be responsible for their own work, and that faculty and academic support services staff members will take reasonable precautions to prevent the opportunity for academic dishonesty.

Violations

The college recognizes the following general categories of violations of academic integrity, with representative examples of each. Academic integrity is violated whenever a student:

1. **Uses or obtains unauthorized assistance in any academic work.**
 - ♦ copying from another student's exam
 - ♦ using notes, books, electronic devices or other aids of any kind during an exam when prohibited.
 - ♦ stealing an exam or possessing a stolen copy of an exam
2. **Gives fraudulent assistance to another student.**
 - ♦ completing a graded academic activity or taking an exam for someone else
 - ♦ giving answers to or sharing answers with another student before, during or after an exam or other graded academic activity.
 - ♦ sharing answers during an exam by using a system of signals
3. **Knowingly represents the work of others as his/her own, or represents previously completed academic work as current.**
 - ♦ submitting a paper or other academic work for credit which includes words, ideas, data or creative work of others without acknowledging the source.
 - ♦ using another author's words without enclosing them in quotation marks, without paraphrasing them or without citing the source appropriately.
 - ♦ presenting another individual's work as one's own.
 - ♦ submitting the same paper or academic assignment to another class without the permission of the instructor.
4. **Fabricates data in support of an academic assignment.**
 - ♦ falsifying bibliographic entries

- ♦ submitting any academic assignment which contains falsified or fabricated data or results
5. **Inappropriately or unethically uses technological means to gain academic advantage**
- ♦ inappropriately or unethically acquiring material via the Internet or by any other means.
 - ♦ using any electronic or hidden devices for communication during an exam.

If you have any questions about the policy, seek advice from your instructor or advisor. Do not jeopardize your academic career.