

**STATE UNIVERSITY OF NEW YORK  
COLLEGE OF TECHNOLOGY  
CANTON, NEW YORK**



**COURSE OUTLINE**

**HEFI 401 – Fitness Assessment and Exercise Prescription**

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**SCHOOL OF SCIENCE, HEALTH, AND CRIMINAL JUSTICE  
Health and Fitness Promotion  
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## HEFI 401 – Fitness Assessment and Exercise Prescription

- A. **TITLE:** Fitness Assessment and Exercise Prescription
- B. **COURSE NUMBER:** HEFI 401
- C. **CREDIT HOURS:** 4
- D. **WRITING INTENSIVE COURSE:** No
- E. **COURSE LENGTH:** 15 weeks
- F. **SEMESTER(S) OFFERED:** Spring
- G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:**  
3 hours of lecture, 2 hours of laboratory per week
- H. **CATALOG DESCRIPTION:**  
Students acquire the knowledge and skills to assess the physical fitness of apparently healthy individuals. Focus of the course is on the four components of physical fitness: cardiorespiratory fitness, muscular fitness, body composition, and flexibility. Hands-on training in assessment and exercise prescription for these four components is included during laboratory sessions.

I. **PRE-REQUISITES:** HEFI 303

J. **GOALS (STUDENT LEARNING OUTCOMES):**

By the end of this course, the student will be able to:

<i>Course Objective</i>	<i>Institutional SLO</i>
a. Demonstrate the ability to effectively screen clients for exercise testing and participation.	3. Prof. Competence 4. Inter-intrapersonal
b. Identify the essential elements of physical fitness testing and exercise prescription.	3. Prof. Competence
c. Compare and contrast various tests used to assess cardiorespiratory fitness, muscular fitness, body composition and flexibility.	2. Crit. Thinking 3. Prof. Competence
d. Accurately assess cardiorespiratory fitness, muscular fitness, body composition, and flexibility using standard, evidence-based tests.	3. Prof. Competence
e. Describe essential elements of an aerobic exercise prescription.	3. Prof. Competence
f. Describe the ACSM guidelines for designing resistance training programs for healthy adults.	3. Prof. Competence
g. Compare and contrast methods used to increase flexibility.	3. Prof. Competence
h. Design and implement a comprehensive exercise program addressing the four components of physical fitness based on assessment of a healthy individual	1. Communication 2. Crit. Thinking 3. Prof. Competence 4. Inter-intrapersonal

K. **TEXTS:**

ACSM's Guidelines for Exercise Testing and Prescription 7th Ed., ACSM 2006.  
Advanced Fitness Assessment and Exercise Prescription, 5<sup>th</sup> Ed., Heyward, V.H., Human Kintetics, IL 2006.

**L. REFERENCES:**

Norms for Fitness, Performance, and Health, Hoffman, J., Human Kinetics, IL 2006.

**L. EQUIPMENT:** Metabolic cart for exercise assessment. Exercise equipment available in the fitness center will be used for lab sessions. Basic assessment tools from the PTA laboratory or the athletic department will also be utilized. (i.e. blood pressure cuffs, body composition tools)

**M. GRADING METHOD:** A – F.

**N. MEASUREMENT CRITERIA/METHODS:**

Quizzes

Lab exams

Written homework

Exercise program design and evaluation report/presentation

**P. DETAILED COURSE OUTLINE:**

**I. Physical Activity and Health**

- A. History and Current Statistics
- B. Benefits of Physical Activity
- C. Associated diseases and risk factors
- D. Obesity

**II. Health Screening and Risk Classification**

- A. Screening Tools/Questionnaires
- B. Risk Analysis/classification

**III. Principles of Assessment and Prescription**

- A. Components of Physical Fitness
- B. Physical Fitness Testing
- B. Elements of Exercise Prescription
- C. Exercise Program Adherence

**IV. Cardiorespiratory Fitness**

- A. Graded Exercise Testing
- B. Other Cardiorespiratory Assessments
- C. Elements of the aerobic exercise program
- D. Training methods and modes

**IV. Muscular Fitness**

- A. Strength assessment
- B. Muscle Endurance assessment
- C. Special assessments for children and elderly
- D. Resistance training programs
- E. Effects of Resistance Training

**V. Body Composition**

- A. Body composition assessment methods
- B. Overweight and obesity trends/causes
- C. Weight management principles

**VI. Flexibility**

- A. Flexibility assessment methods
- B. Stretching
- C. Designing flexibility programs

**Q. LABORATORY OUTLINE:**

**I. Introduction to Physical Activity**

- A. Lifestyle self-assessments
- B. Special preventive exercise guidelines

**II. Health Screening and Risk Classification**

- A. Screening Tools/Questionnaires
- B. Risk Analysis/classification
- C. Introduction to basic CV assessment

**IV. Cardiorespiratory Fitness**

- A. Submaximal exercise testing
- B. Aerobic Fitness Field tests
- C. Designing Cardiorespiratory Exercise Programs
- D. Special populations

**IV. Muscular Fitness**

- A. Dynamometers
- B. Dynamic strength tests
- C. Dynamic Endurance Tests
- D. Designing resistance training programs
- E. Special populations

**V. Body Composition**

- A. Skin fold assessment
- B. Bioelectric impedance assessment
- C. Anthropometric assessment
- D. Designing exercise programs for weight loss

**VI. Flexibility**

- A. Direct flexibility assessment methods
- B. Indirect flexibility assessment methods
- C. Designing flexibility programs