

**EXERCISE SCIENCE MAJOR: CLINICAL EXERCISE SCIENCE OPTION**

**SCHOOL OF HEALTH SCIENCES**  
**EXERCISE & HEALTH SCIENCE DIVISION**  
**CLINICAL EXERCISE SCIENCE OPTION**

Applications accepted August 27, 2018 through September 27, 2018

The Clinical Exercise Science option is for students intending to pursue a career in the clinical aspects of exercise science: cardiopulmonary rehabilitation, diagnostic testing, or other related field.

Name: \_\_\_\_\_ Student #: \_\_\_\_\_ Date: \_\_\_\_\_  
                     Last                      First                      M initial

Email: \_\_\_\_\_ Phone: \_\_\_\_\_

Bulletin year: \_\_\_\_\_ Previously signed major: \_\_\_\_\_

Admission to Exercise Science Major requires:

- 1) An overall GPA of 2.5
- 2) Completing the courses listed below with at least a grade of "C"
- 3) Successful completion of any required course with only one repeat allowed. The repeat grade will be the grade that is counted.
- 4) Meeting the Exercise Science Technical Standards

To apply for admission into the program:

- 1) Complete the worksheet below
- 2) Attach a copy of your unofficial transcripts – make sure this prints with your name on it.
- 3) Attach a copy of your signed technical standards document
- 4) Turn in your completed packet to the Health Sciences main office (HP 2219) **before 5:00 p.m. on September 29, 2017.**
- 5) Provide a brief personal statement which should reflect the applicant’s professional goals and how this major will help you achieve those goals.

Course	Grade		Course	Grade
HSC 190			HSC 205	
CHM 120 or 131			HSC 214	
CHM 127 or 132			HSC 215	

Overall GPA	
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**Note: Admission into this major is limited and competitive. No applications will be reviewed until the deadline. You will be notified ONLY by email regarding admission into the program approximately two weeks after the deadline.**

## **Exercise Science Major/ Health Fitness Minor**

Essential Functions and Technical Standards Required for coursework & signing Major or Minor

### Introduction

The Exercise Science Major and Health Fitness Minor are part of the Exercise Science program in the School of Health Sciences at Central Michigan University. The demands placed on students during their academic preparation are designed to reflect those encountered in the field upon graduation. Courses will educate students in the skills, knowledge, and abilities to perform the required functions associated with the entry level exercise/fitness specialist. This document will identify the essential functions and technical standards required of students as stipulated by the faculty of the Exercise Science program. The student is expected to be able to meet these standards in order to be admitted into the Exercise Science Major/Health Fitness Minor and maintain the standards throughout their academic program.

If a student has a disability which may require special accommodation to perform the tasks listed, it is the student's responsibility to contact the Director of the Exercise Science Area and the Student Disabilities Services Office so appropriate steps can be taken to determine whether reasonable accommodations may be made. In the event that a student is unable to fulfill these essential functions and technical standards they may be asked to leave the program.

Candidates for selection to the Exercise Science Major/Health Fitness Minor must:

1. Possess effective verbal and written communication skills in English and appropriate nonverbal demeanor in order to interact and develop rapport with faculty, students, staff, administrators, program participants and others which may include individuals from different cultural and social backgrounds.
2. Prescribe appropriate exercise programs and perform appropriate exercise testing and exercise leadership procedures in a safe, reliable, ethical, legal and efficient manner. Properly observe subjects undergoing the above procedures and instruments recording pertinent data.
3. Demonstrate the mental capacity to assimilate, analyze, synthesize, and integrate concepts in the classroom and laboratory and then be able to solve simple and complex problems likely to be encountered in exercise science settings.
4. Possess sufficient postural and neuromuscular control, sensory function and coordination to perform appropriate assessment procedures and demonstrate proper exercise methods utilizing standard techniques and instruments/equipment in working with subjects/clients.
5. Demonstrate emotional maturity, composure and patience and the ability to be flexible under stress in a variety of situations.
6. Demonstrate honesty, integrity, professionalism and maintain a high personal code of conduct both on and off campus.

## *TECHNICAL STANDARDS*

To perform the essential functions of the role of exercise science technician and be successful in this exercise science educational curriculum, an individual must possess specific skills and abilities. These can be divided into 4 categories:

1. Observational skills
2. Psychomotor skills
3. Cognitive skills
4. Affective/behavioral skills

These technical skills are outlined below for each of the four categories.

To accomplish the essential function of the role of entry-level exercise/fitness specialist the student must be able to:

1. Observational skills
  - Accurately observe the patient/client activity and behavior during evaluations and treatments.
  - Take an appropriate history.
  - Observe changes in patient/client status which may require modification of activity or intervention such as: skin color (pallor or flushing), breathing regularity and effort, heart rate, ECG, temperature of skin, muscle tone, gait pattern, facial expressions.
  - Read and interpret information from diagnostic tests, equipment, and patient/client charts or files such as ECG, radiographs, sphygmomanometers, metabolic analyzers.
  - Accurately monitor and operate dials, displays, and equipment used in evaluating and treatment of patients/clients including exercise equipment (treadmills, ergometers, cycles, etc), ECG machines, stethoscopes and sphygmomanometers, resistance training machines and free weights, calipers and dynamometers, pulmonary function and body composition equipment.
  
2. Psychomotor skills
  - A. Mobility
    - Attend lecture and laboratory classes and access laboratories, classrooms and work stations.
    - Attend internships in assigned locations.
    - Accomplish required physical tasks for assessment, demonstration, leadership, and assistance in academic, laboratory, and internship settings.
    - Perform emergency procedures such as first aid or CPR in laboratory and internship setting.
  
  - B. Strength tasks
    - Safely and effectively administer exercise and training techniques which require demonstration, facilitation, spotting, or resistance.
    - Manually adjust exercise and training equipment.
    - Safely assist and guard patients/clients during exercise testing and training.

C. Fine motor and coordination skills

- Use palpation and touch to accurately assess pulse, locate and prep sites for electrode placement, skinfold measurement.
- Accurately set equipment dials and switches, calipers, use stethoscopes and sphygmomanometers, tape measures.
- Accurately assess blood pressure.
- Legibly and accurately complete documentation activities.

3. Cognitive skills

- Comprehend, integrate, and synthesize a large body of knowledge and technical skill in a short period of time.
- Understand theory, research literature, and principles that apply to exercise science, exercise testing and training.
- Reflect on performance accurately to self-assess.
- Use appropriate written and verbal formats and skills for communication of patient/client information and classroom assignments.
- Utilize knowledge of natural, exercise, and social sciences, along with appropriate test results, protocols, and training principles to develop, implement, and modify appropriate exercise testing and training sessions and programs.

4. Affective /behavioral skills

- Demonstrate professionally appropriate behaviors, emotional status, and attitudes to protect the safety and wellbeing of patients/clients and classmates.
- Display tolerance for individual, social, gender, and cultural differences in fellow students, colleagues, faculty, patients/clients and community members.
- Demonstrate the ability to professionally cope with situations that may be physically, emotionally, and/or intellectually stressful.
- Behave in an ethical and moral manner, upholding professional and community standards.
- Demonstrate flexibility and the ability to adjust to changing situations and uncertainty in an academic or internship environment.
- Accept critical feedback and respond by appropriate modification of behavior.
- Demonstrate the ability to work effectively alone as well as in small and large groups.

I \_\_\_\_\_ have read and understand the essential functions and technical standards expected of me as an Exercise Science Major or Health Fitness Minor in the School of Health Sciences, and indicate that I am able to meet these technical standards or can be terminated from the Major or Minor.

Student Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed name \_\_\_\_\_