

Majoring in

Clinical Exercise Science

Description of the Clinical Exercise Science Concentration

What is clinical exercise science?

The clinical exercise science program prepares students to serve as allied health professionals who apply exercise to rehabilitation, disease intervention and chronic disease management.

What do clinical exercise science students study?

Clinical exercise science students study the human body at both cellular and functional levels, as it relates to movement and exercise. Comprehensive theoretical, laboratory and applied clinical experiences are integrated into a curriculum for students who want to pursue exercise related careers in clinical settings.

Competencies developed include:

- Analysis of cardiac, pulmonary and metabolic adaptations to acute and chronic exercise;
- Cardiac stress testing including basic EKG interpretation;
- Evaluation of body composition and other health-related fitness components; and
- Development of appropriate exercise programs to improve cardiorespiratory and musculoskeletal fitness for those with chronic disease.

What skills are important for clinical exercise science?

Clinical exercise science students should:

- Have an interest in fitness and wellness;
- Enjoy and excel at the biological sciences;
- Have the ability to work well with others;

- Want to stay current trends related to health and exercise; and
- Possess good communication skills.
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Course Requirements

General education: Approximately 34 credit hours of general education courses are required. These courses provide a broad range of knowledge in biological science, math, writing, arts, history, literature, and human behavior.

Allied professional core: This core includes 26 credit hours in courses such as biology, human anatomy, human physiology, chemistry, health psychology, physiological psychology and physics.

Professional core: Students complete 51 credit hours in courses such as:

- Cardiopulmonary pathophysiology
- Physiology of exercise
- Chronic disease and exercise management
- Assessment and exercise intervention in health and disease
- Strength, endurance and flexibility
- Exercise programming and leadership
- Psychology of physical activity
- Personal health and behavior change
- Structural kinesiology
- Biomechanics

Clinical experiences: Students complete 15 credit hours of clinical experiences. This translates to 700 hours of hands-on field work directly related to the concentration.

Entrance Requirements

Incoming freshmen students may declare this concentration upon acceptance to the university. A 2.0 GPA is required for students who want to change majors to the clinical exercise science concentration.

Careers in Clinical Exercise Science

The clinical exercise science concentration provides a good background for entry to any number of occupations. Some of these careers include:

- Exercise physiologist
- Cardiac rehabilitation
- Exercise/sport scientist
- Industrial rehabilitation
- Corporate wellness director

Post graduate education is recommended in order to work in clinical settings like hospitals, rehabilitation settings and health clinics.

Post Graduate Study with a Degree Concentration in Clinical Exercise Science

Students who pursue this degree track often pursue further study in the following areas.

- Exercise science
- Exercise physiology
- Sports medicine
- Physical therapy (requires additional undergraduate core coursework)
- Medicine (requires additional undergraduate coursework)

Next Steps

If you are interested in learning more about the Clinical exercise science concentration at VCU, consider doing each of the following things. Check them off as you complete each step.

- Check out the VCU School of Education webpage for information related to programs in the Department of Health and Human Performance.
- Read about the clinical exercise science program in the *Undergraduate Bulletin*.
- Review the clinical exercise science graduation worksheet with a clinical exercise science academic advisor.
- Talk to one or more upper-level exercise

- science students about their major.
- Go to the Career Center to read about careers in exercise science.
- Go to the VCU bookstore and browse in the exercise science textbook section.
- Shadow exercise science professionals who work in clinical settings.
- Check out the American College of Sports Medicine website at www.ascm.org for information on topics related to the scope of exercise science.

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