Department of Health Sciences

Exercise Science Major

Professor Jody Mashinter, Program Director

Exercise Science Mission Statement

The mission of the Exercise Science Program is to prepare graduates entering health-related disciplines with the knowledge and skills needed to continue open-minded pursuits, including the development of human movement and the promotion of a healthy lifestyle in practice and throughout the community.

Program Description

The Exercise Science Program at the University of Charleston offers students interested in pursuing a career in fitness/wellness, strength & conditioning, and rehabilitation sciences as an interdisciplinary approach to healthcare. Academic coursework in biology, exercise physiology, motor development, movement analysis, fitness, kinesiology, psychology, and strength & conditioning provide students a strong educational foundation followed by real-world, hands-on experience.

- Exercise Science focuses on the understanding and promotion of human movement and a healthy lifestyle.
- A strong health science emphasis provides students with a robust Exercise science foundation.
- Students will have the opportunity to work in collaboration with Strength & Conditioning Coaches and Human Movement Specialists from the University of Charleston and the surrounding area during practicum experiences and immersed internships.
- Exciting and practical immersed internship experiences.
- Eligible for certifications through the American College of Sports Medicine (ACSM), the National Strength and Conditioning Association (NSCA), and the National Academy of Sports Medicine (NASM).
- Enrolled students have opportunities to work with clientele of all ages, athletic ability, and motivation.

Exercise Science graduates will acquire the skills and knowledge for a wide range of career opportunities. Sample jobs titles include:

- Strength & Conditioning Coach/Specialist
- Fitness Personal Trainer
- Corrective Exercise Specialist
- Health & Fitness Educator
- Wellness Coordinator

Exercise Science graduates will have the foundation to pursue graduate programs in the following areas (additional prerequisites may be required)

- Athletic Training
- Exercise Physiology
- Occupational Therapy
- Health and Fitness
- Physical Therapy

Exercise Science Program Learning Outcomes

The graduate will:

1. Apply and examine a body of knowledge in exercise science and related fields.
2. Evaluate, develop, and implement programs addressing all paradigms of fitness and wellness.
3. Analyze basic human movement and design movement-oriented exercise prescriptions.
4. Select and apply appropriate strength and conditioning principles related to human movement and the promotion of a healthy lifestyle.
5. Develop and implement physical fitness/health assessment programs.

Admission and Successful Progression

All undergraduate students are eligible to declare Exercise Science as their major. To progress in the Exercise Science Program and graduate, students must pass their required courses, including a 3-credit or 12-credit immersed internship, with a C or better and meet the institutional academic requirement of maintaining a minimum cumulative 2.0 GPA. Students must meet all Institutional Learning Outcomes required for graduation by the University of Charleston.

What You Will Study

The following is a guide based on a 4-year completion period. **Students may accelerate their experience and complete the program in 3 ½ years if desired**. Every student is assigned an academic advisor who will assist with degree completion planning and career exploration.

FIRST YEAR			
Fall Semester		**Spring Semester**	
EXER 101X Introduction to Exercise Science	3	UNIV 105 Character & Leadership	3
UNIV 104 Motivation & Success	3	SPCH 103 Oral Communication	3
ENGL 101 Freshman Writing I	3	ENGL 102 Freshman Writing II	3
MATH 1XX	3	EXER 225 Medical Terminology	3
PSYC 101 Introduction to Psychology	3	PSYC 212 Life Span Development	3
		Humanities Elective I	3
Total	**15**	**Total**	**18**

SECOND YEAR			
BIOL 251L Anatomy & Physiology I	3	BIOL 252L Anatomy & Phys II	3
BIOL 251L Anat & Phys I Lab	1	BIOL 252L Anat & Phys II Lab	1
EXER 113 Structural Kinesiology	3	EXER 252 Found. of Injury Mgmt	3
EXER 201 Training Concepts	3	EXER 275 Program Design & Implementation	3
HSCI 110 History of Health Science	3	HSCI 204 Nutrition	3
Humanities Elective II	3	Elective	3
Total	**16**	**Total**	**16**

THIRD YEAR			
EXER 325 Exercise Prescription	3	HSCI 312 Statistics	3
EXER 340 Ex & Psych Mindfulness	3	EXER 212 Exercise Science Practicum	3
HSCI 370 Physiology of Exercise	3	EXER 330 Special Populations	3
HSCI 230 Interprofessional Collaboration	3	EXER 304 Sports Nutrition	3
Elective	3	Elective	3
Total	**15**	**Total**	**15**

FOURTH YEAR			
HSCI 302 Health Ethics & Policy	3	EXER 497 Internship	3
EXER 355 Motion Analysis	3	EXER 452 Organization & Admin	3
EXER 400X Exercise Metabolism and Energy Sources	3	Elective	3
EXER 475 Senior Capstone	3	Elective	3
Elective	3	HSCI 402 Research	3
Total	**15**	**Total**	**15**
Total Credits in Program			**122**

Immersive Internship – Graduates are Ready for the Real World

Enrolled students will have the opportunity to develop hands-on client interaction through didactic classroom and practical-based community engagement. Exercise Science students will obtain knowledge in anaerobic and aerobic training as they matriculate through the program and will gain real-world experiences before graduation through interactive courses and internships. Graduates will develop an understanding and ability to

practically apply concepts from fitness management, biomechanics, and nutrition to promote healthy living across the lifespan.

Professional Certifications

- National Strength & Conditioning Association Certified Strength & Conditioning Specialist (CSCS)
- National Strength & Conditioning Association Certified Personal Trainer (NSCA-CPT)
- American College of Sports Medicine Certified Personal Trainer (CPT)
- National Academy of Sports Medicine Corrective Exercise Specialist (CES)
- National Academy of Sports Medicine Performance Enhancement Specialist (PES)
- Athletics and Fitness Association of America Group Fitness Instructor (GFI)
- Functional Movement Specialist (FMS)
- Selective Functional Movement Assessment (SFMA)

Admission Requirements

Students must gain general acceptance to the University of Charleston.

Strength and Conditioning Minor

The Strength & Conditioning minor at the University of Charleston will expand students' knowledge of performance enhancement through interdisciplinary coursework in Exercise Science.

Students completing the Strength & Conditioning minor can take recognized credentialing certification exams offered by the National Strength & Conditioning Association (NSCA), American College of Sports Medicine (ACSM) and the National Academy of Sports Medicine (NASM).

The Strength & Conditioning minor consists of 18 credit hours. Course requirements:

Strength & Conditioning Minor	
The following courses are required:	
EXER 201 Training Concepts	3
EXER 225 Medical Terminology in Exercise Science and Healthcare	3
EXER 275 Program Design & Implementation	3
HSCI 204 Nutrition	3
	12
Choose two (2) elective courses from the list below based on individual student goals for implementing this minor into their future career:	
EXER 252 Foundations of Injury Management	3
EXER 304 Sports Nutrition	3
EXER 325 Exercise Prescription	3
EXER 330 Special Populations	3
EXER 340 Exercise & Psychological Mindfulness	3
Total	**18**