

HEALTH AND EXERCISE SCIENCE, BS

Contact

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The B.S. degree in health and exercise science allows students to gain experience with, and understanding of, the physiological, mechanical, and psychological aspects of physical activity and health-related behavior.

Program Description

This program in the Department of Exercise Science examines all aspects of human

performance including a background in natural sciences, human physiology, anatomy, metabolic and muscular systems, and research and testing protocols.

There are three paths available for this program:

1. The general health and exercise science path prepares students for careers in community or corporate fitness, clinical physiology, medicine, sports medicine, research, public health, and a wide range of clinical health-related professions.
2. The pre-physical therapy path allows students to complete some requirements for graduate study in physical therapy or related areas as a part of their undergraduate degree, with a modified version of the general track via advising.
3. The 3+3 DPT program allows students to complete both their undergraduate degree and their physical therapy doctoral degree (DPT) in SIX years rather than seven. Students who are accepted into the 3+3 DPT Early Assurance program have guaranteed acceptance into SUNY Upstate's DPT program providing they have met all conditions outlined in their acceptance letter. This program requires that students apply to both Syracuse University and SUNY Upstate Medical University at the same time, indicating to both Universities that they wish to be in the 3+3 DPT program.

Criteria for IUT into the Health and Exercise Science, BS Program

Syracuse University students interested in an intra-University transfer into the Health and Exercise Science, BS program must meet the intra-University transfer requirements. To be considered eligible to transfer, students must:

1. Have a minimum of 3.2 GPA
2. Have completed a minimum of 15 credit hours at Syracuse University
3. Have already completed EXE 195 with a B or better

Students who meet the above criteria must then complete the following:

1. Complete the IUT form
2. Provide a Curriculum Vitae
3. Attend an information session
4. Meet with an academic advisor or program director

Students who meet the criteria listed above will only be accepted into the Health and Exercise Science, BS program on a space available basis, based on current program enrollment.

Student Learning Outcomes

1. Synthesize principles from the natural sciences, including the life sciences, chemistry, and mathematics, to Health and Exercise Science.
2. Explain human physiological function and anatomy.
3. Illustrate how metabolic, muscle, cardiovascular, and pulmonary systems underlie human physical performance.
4. Interpret and critique research findings in the exercise sciences.
5. Demonstrate basic exercise testing protocols that are used to measure human performance in the laboratory.

Program Requirements

| Code | Title | Credits |
|---|---|---------|
| Liberal Arts Requirements | | |
| <i>Writing and Communications</i> | | |
| WRT 105 | Studio 1: Practices of Academic Writing | 3 |
| WRT 205 | Studio 2: Critical Research and Writing | 3 |
| WRT 307 | Advanced Writing Studio: Professional Writing | 3 |
| Select one of the following: | | 3 |
| CRS 225 | Public Advocacy | |
| CRS 325 | Presentational Speaking | |
| CRS 435 | Interviewing | |
| <i>Quantitative Skills</i> | | |
| MAT 221 | Elementary Probability and Statistics I | 4 |
| Select one of the following: | | 6-7 |
| MAT 194 & MAT 285 | Precalculus and Life Sciences Calculus I | |
| MAT 285 & MAT 286 | Life Sciences Calculus I and Life Sciences Calculus II | |
| <i>Natural Sciences</i> | | |
| BIO 121 | General Biology I | 3 |
| BIO 122 | General Biology I Laboratory | 1 |
| BIO 123 | General Biology II | 3 |
| BIO 124 | General Biology II Laboratory | 1 |
| BIO 216 | Anatomy & Physiology I | 4 |
| BIO 217 | Anatomy and Physiology II | 4 |
| CHE 106 | General Chemistry Lecture I | 3 |
| CHE 107 | General Chemistry Laboratory I | 1 |
| CHE 116 | General Chemistry Lecture II | 3 |
| CHE 117 | General Chemistry Laboratory II | 1 |
| NSD 225 | Nutrition in Health | 3 |
| <i>Social Sciences</i> | | |
| PSY 205 | Foundations of Human Behavior | 3 |
| And any PSY course | | 3 |
| <i>Liberal Arts Electives</i> | | |
| Select nine credits of Liberal Arts Electives | | 9 |
| University Requirement | | |

In addition to FYS 101, the BS in Health and Exercise Science requires completion of an IDEA course (chosen from a select list) - The IDEA course may count as a liberal arts, departmental course, or elective depending on the course chosen. Please see the undergraduate course catalog for a full listing of IDEA Courses.

| | | |
|---|--|----------------|
| FYS 101 | First Year Seminar | 1 |
| Exercise Science Core Courses | | |
| <i>EXE Required Courses</i> | | |
| EXE 185 | Concepts of Fitness | 3 |
| EXE 195 | Introduction to Exercise Science | 3 |
| EXE 282 | Motor Behavior Across the Lifespan | 3 |
| EXE 339 | Physiology of Exercise | 3 |
| EXE 464 | Internship in Exercise Science | 3 |
| Select four of the following: | | 12 |
| EXE 285 | Measurement and Evaluation in Exercise Science | |
| EXE 299 | Exercise & Health Promotion | |
| EXE 408 | Analysis of Human Motion | |
| EXE 427 | Exercise Testing and Interpretation | |
| EXE 436 | Scientific Principles of Conditioning | |
| <i>EXE Electives</i> | | |
| Lower-level electives - choose 2 of the following courses | | 6 |
| EXE 344 | Becoming a Personal Trainer | |
| EXE 415 | Worksite Health Promotion | |
| EXE 417 | Prevention and Care of Athletic Injuries | |
| EXE 435 | Introduction to Sports Psychology | |
| Advanced 450+ electives - Select three of the following: | | 9 |
| EXE 452 | Advanced Metabolic Exercise Testing | |
| EXE 455 | Kinesiology for Athletic Performance and Injury Prevention | |
| EXE 456 | Human Performance in Extreme Environments | |
| EXE 462 | Cardiac Rehabilitation | |
| EXE 471 | Pediatric Obesity | |
| General Electives | | |
| Select 18 credits of General Electives: | | 18 |
| Total Credits | | 125-126 |

Note for Pre-PT Track

Students interested in pursuing an advanced degree in Physical Therapy (and not interested in following the 3+3 program described below) should work closely with their academic advisor to choose elective coursework to meet the prerequisite coursework requirements to apply to graduate school.

The 3+3 DPT Program with SUNY Upstate Medical University

This program requires students to apply to both Syracuse University and SUNY Upstate Medical University at the same time, indicating to both Universities that they wish to be in the 3+3 DPT program. Students who are accepted into the 3+3 program must work with their academic advisor to ensure proper course sequencing to be ready to begin graduate study during their 4th year. Fourth year SUNY Upstate Medical University courses will count in lieu of EXE electives and general electives in the Health and Exercise Science BS program. For further information regarding the 3+3 program, please visit https://www.upstate.edu/chp/programs/pt/how-to-apply/early_3-3_chp.php

Total Credits 134

SU Credits: 94

SUNY Upstate credits: 40

Total Credits: 134

Undergraduate University Requirements

The following requirements and experiences apply to all Syracuse University Undergraduate matriculated degree programs.

- IDEA Course Requirement (<https://coursecatalog.syracuse.edu/undergraduate/idea-course-requirement/>)
- First Year Seminar (<https://coursecatalog.syracuse.edu/undergraduate/courses/fys/>)