

Health Sciences

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- College of Science and Mathematics

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Health Sciences program at Norwich University is in the Department of Sports Medicine. The Health Sciences program provides students an in-depth science background, and an introduction to the health care field.

A core curriculum through freshman and sophomore years provides the students with a sound understanding of liberal arts, biology, chemistry, mathematics, physics, assessment, care and prevention.

The Health Science program incorporates hands-on experience in professional settings, with opportunities for internships and other community based learning.

The Health Sciences program prepares students to meet the entrance requirements of graduate programs in areas such as physical therapy, occupational therapy, physician's assistant, medicine, public health, exercise sciences, biomechanics, and hospital administration.

§ Courses must be taken in order presented and passed with a grade of "C" or higher before progressing in the program.

B.S. in Health Sciences - Curriculum Map

SM 426 (<https://currentcatalog.norwich.edu/residentialprograms/catalog/collegeofscienceandmathematics/athletictrainingandsportsmedicine>) Internship may be taken by qualified students during the junior or senior year in place of two or four free electives.

First Year			
Fall	Credits	Spring	Credits
BI 101 Principles of Biology I	4	EN 102 Composition and Literature II	3
EN 101 Composition and Literature I	3	MA 107 Precalculus Mathematics	4
MA 232 Elementary Statistics	3	BI 102 Principles of Biology II	4
SM 136 Emergency Care, Injury/Illness [§]	3	SM 139 Health Science Research Methods [§]	2
SM 138 Introduction to Sports Medicine [§]	3	PE 161 Physical Fitness & Wellness Assessment [§]	3
	16		16
Second Year			
Fall	Credits	Spring	Credits
BI 215 Human Anatomy and Physiology [§]	4	BI 216 Human Anatomy and Physiology [§]	4
CH 103 General Chemistry I	4	CH 104 General Chemistry II	4
PY 211 Introduction to Psychology	3	SM 210 Assessment of Injury and Illness [§]	4
PE 260 Personal and Community Health [§]	3	SM 220 Care and Prevention of Athletic Injuries [§]	4
Literature Elective	3		
	17		16
Third Year			
Fall	Credits	Spring	Credits
PE 365 Kinesiology [§]	4	PE 371 Physiology of Exercise [§]	4
SM 420 Therapeutic Modalities [§]	4	PS 202 General Physics II	4
BI 364 Pathophysiology in Sports Medicine (or Biology Elective)	4	Free Elective	3-4
PS 201 General Physics I	4	SM 422 Therapeutic Exercise [§]	4
		CH 205 Survey of Organic Chemistry (or Free Elective)	4
	16		19-20

Fourth Year			
Fall	Credits	Spring	Credits
BI 364 Pathophysiology in Sports Medicine (or Biology Elective)	3-4	SM 440 Evidence-Based Sports Med [§]	3
SM 439 Leadership & Management in Sports Medicine	3	CH 205 Survey of Organic Chemistry (or Free Elective)	3-4
History Elective	3	Humanities Elective	3
Free Elective	3-4	Free Elective	3-4
Free Elective	3-4	Free Elective [§]	3-4
	15-18		15-18
Total Credits: 130-137			

Courses

SM 128 Clinical Anatomy I 3 Credits

This course is part one of a two part series of anatomy courses in a modular format aligned with clinical practice. It provides an introduction to human anatomy with a basic survey of the body and pathological processes. Students will learn basic concepts related to anatomy, pathology and medical assessment of the head, eyes, ears, nose, throat, neck, back, and upper extremities. Classroom 2 hours, laboratory 2 hours. Offered fall semesters.

SM 129 Clinical Anatomy II 3 Credits

This course is part two of a two part series of anatomy courses in a modular format aligned with clinical practice. It provides an introduction to human anatomy with a basic survey of the body and pathological processes. Students will learn basic concepts related to anatomy, pathology and medical assessment of the thorax, abdomen, pelvis, cranial nerves, and lower extremities. Classroom 2 hours, laboratory 2 hours. Offered spring semesters.

SM 136 Emergency Care, Injury/Illness 3 Credits

SM 138 Introduction to Sports Medicine 3 Credits

This course provides students with an introduction to the principles of pharmacology, medical terminology, and documentation used in the care of physically active individuals.

SM 139 Health Science Research Methods 2 Credits

This course provides the foundation for understanding basic research methods and the application of research findings to health care. Current literature is used to demonstrate the fundamentals of research design, research ethics, basic biostatistics, and other research-related issues applicable to future health care providers. Classroom 2 hours. Prerequisite: MA 232. Offered spring semesters.

SM 199 New Course 3 Credits

SM 200 Clinical Education in Athletic Training I 1 Credit

This course provides students the opportunity to integrate clinical proficiencies introduced in prerequisite courses during a supervised practicum in an athletic training setting. Clinical rotation(s) (3 hours/week) and clinical proficiency evaluations. Prerequisites: SM 136, SM 138, and SM 220.

SM 201 Clinical Education in Athletic Training II 2 Credits

This course provides students the opportunity to integrate clinical proficiencies introduced in prerequisite courses during a supervised practicum in an athletic training setting. Clinical rotation(s) (6 hours/week) and clinical proficiency evaluations. Prerequisites: SM 212 and 231, MA 235.

SM 210 Assessment of Injury and Illness 4 Credits

Building on the assessment principles acquired in SM 138 and SM 220; this course focuses on the techniques necessary to evaluate body systems for injury/illness. Classroom 3 hours, laboratory 3 hours. Prerequisites: SM 220. Co-Requisite: BI 216.

SM 212 Health Promotion 3 Credits

This course provides students with the knowledge and skills essential for understanding the etiology and prevention of common injuries and illness. Special emphasis is placed on acute and chronic conditions of the musculoskeletal system and chronic conditions of the cardiovascular, endocrine and respiratory systems. Classroom 3 hours. Offered fall semesters.

SM 220 Care and Prevention of Athletic Injuries 4 Credits

Course provides students with the knowledge and skills essential for the proper prevention, evaluation, and treatment of common athletic injuries. Risk management and professional ethics are stressed. Classroom 3 hours, laboratory 3 hours. Prerequisite: SM 138.

SM 226 Clinical Education in Sports Medicine 2 Credits

Emphasis will be placed on the application of knowledge and skills introduced in SM 135, SM 138, SM 210 and BI 215. This course provides students the opportunity to develop clinical proficiencies introduced in preceding courses. Supervised practicum in athletic train setting. Class meets for 2 hours/week utilizing lecture, demonstrations and hands-on instructional techniques, plus Clinical Rotation (average 4 hours/week). Prerequisites: SM 135 and SM 138.

SM 227 Clinical Anatomy&Biomechanics 3 Credits

This course is designed to explore clinical anatomy and biomechanical principles, exposing students to the structural interrelationships that serve to form the basis for normal function and as a means to understanding structural and functional pathology. Classroom 3 hours. Co-requisite: SM 220.

SM 228 Clinical Physiology I 4 Credits

This course is part one of a series of two physiology courses in a modular format aligned with clinical practice. It provides an introduction to human physiology with a basic survey of the physiologic and pathological processes. Students will learn concepts related to cellular, neuromuscular, renal, and cardiovascular physiology. Classroom 3 hours, laboratory 3 hours. Offered fall semesters.

SM 229 Clinical Physiology II 4 Credits

This course is part two of a series of two physiology courses in a modular format aligned with clinical practice. It provides an introduction to human physiology with a basic survey of the physiologic pathological processes. Students will learn concepts related to respiratory, gastrointestinal, endocrine, and reproductive physiology and temperature regulation. Classroom 3 hours, laboratory 3 hours. Prerequisite: SM 228. Offered spring semesters.

SM 230 Fundamentals of Evidence-Based Practice 2 Credits

This course prepares students to make independent judgments about the validity of clinical research and implement evidence-based clinical practice in their careers. Focus is on concepts of evidence-based practice with emphasis on forming answerable clinical questions, effective literature search strategies, and structured evaluation of the strength and relevance of clinical evidence. Classroom 2 hours. Offered spring semesters.

SM 231 Management of Spine and Pelvic Conditions 3 Credits

This course will focus on a critical analysis of injuries and conditions that may affect the spine and pelvis in physically active individuals. The application of joint and musculoskeletal anatomy will be utilized to assess the various joints and body regions of the spine and pelvis to determine the appropriate management of these conditions. Classroom 2 hours, Laboratory 2 hours. Offered fall semesters.

SM 232 Lower Extremity Injuries 3 Credits

This course will focus on a critical analysis of injuries and conditions that may affect the lower extremity in physically active individuals. The application of joint and musculoskeletal anatomy will be utilized to assess the various joints and body regions of the lower extremity to determine the appropriate management of these conditions. Classroom 2 hours, Laboratory 2 hours. Offered spring semesters.

SM 233 Upper Extremity Injuries 3 Credits

This course will focus on a critical analysis of injuries and conditions that may affect the upper extremity in physically active individuals. The application of joint and musculoskeletal anatomy will be utilized to assess the various joints and body regions of the upper extremity to determine the appropriate management of these conditions. Classroom 2 hours, Laboratory 2 hours. Offered fall semesters.

SM 299 Topics 1-3 Credit**SM 300 Clinical Education in Athletic Training III 4 Credits**

This course provides students the opportunity to integrate clinical proficiencies introduced in prerequisite courses during a supervised practicum in an athletic training setting. Clinical rotation(s) including non-traditional seasons (12 hours/week) and clinical proficiency evaluations. Prerequisites: SM 228, SM 229, and SM 232.

SM 301 Clinical Education in Athletic Training IV 4 Credits

This course provides students the opportunity to integrate clinical proficiencies introduced in prerequisite courses during a supervised practicum in an athletic training setting. Clinical rotation(s) (12 hours/week) and clinical proficiency evaluations. Prerequisites: SM 233 and SM 420.

SM 400 Clinical Education in Athletic Training V 4 Credits

This course provides students the opportunity to integrate clinical proficiencies introduced in prerequisite courses during a supervised practicum in an athletic training setting. Clinical rotation(s) including non-traditional seasons (12 hours/week) and clinical proficiency evaluations. Prerequisites: SM 212, SM 420, SM 422; BI 253 and PE 371.

SM 401 Clinical Education in Athletic Training VI 4 Credits

This course provides students the opportunity to integrate clinical proficiencies introduced in prerequisite courses during a supervised practicum in an athletic training setting. Clinical rotation(s) (12 hours/week) and clinical proficiency evaluations. Prerequisites: SM 400 and SM 439.

SM 420 Therapeutic Modalities 4 Credits

Investigation of the physiological response of selected human body tissues to trauma and inactivity as well as the implications of said responses for the selection, use, and application of therapeutic modalities. Classroom 3 hours, laboratory 3 hours. Prerequisites: SM 220.

SM 422 Therapeutic Exercise 4 Credits

Investigation of principles, objectives, indications, contraindications and progression of various modes of conditioning and reconditioning exercises. Methods for evaluation, progress assessment and development of criteria for return to activity. Classroom 3 hours, laboratory 3 hours. Prerequisite: SM 420.

SM 426 Internship 12 Credits

A course designed to provide the Sports Medicine students with an intern-type experience in a professional setting appropriate to their career goals. Prerequisite: satisfactory completion of all courses in the major through the sixth semester. Cross listed as PE/SM. A student may not receive credit for both.

SM 439 Leadership & Management in Sports Medicine 3 Credits**SM 440 Evidence-Based Sports Med 3 Credits**

Part of a two-semester capstone experience in sports medicine/athletic training. This course focuses on the development and utilization of evidence-based practice research as it is applied to sports medicine. Prerequisites: SM 439 and MA 232.

SM 450 Capstone Experience I 1 Credit

This course will focus on the development of two evidence-based practice projects that have direct application to clinical practice. Classroom 1 hour. Offered fall semesters.

SM 451 Capstone Experience II 1 Credit

This course will focus the presentation and evaluation of two evidence-based practice projects from SM 450. Classroom 1 hour. Offered spring semesters.

SM 460 Emerging Practice Skills 3 Credits

This course will focus on emerging topics in sports medicine practice. Included in the course will be advanced airway management, advanced wound closure techniques, IV therapy, advanced cardiac examination and advanced immobilization techniques. Classroom 2 hour, Laboratory 2 hours. Offered spring semesters.