

Physical Education Teacher Education and Exercise Science

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Physical Education and Exercise Science

A degree in Physical Education emphasizes principles, problems and procedures for the improvement of individual and community health. The program provides an introduction to the Physical Education profession, and includes historical and philosophical implications and modern trends in program design with an emphasis on the study of the human body. Professional ethics, client privacy and liability issues are stressed throughout the program. Our students learn to design, revise and analyze exercise programs, how to coach team sports and group activities, and how to identify and implement exercise programs for a range of individuals, from athletes to disabled people.

The Physical Education students have access to the facilities and equipment of the Department of Biology and Physical Education. There are various courses designed to develop the students' interest in both pedagogy and the fitness related fields. The Physical Education Major offers two options, **Teacher Education** and **Exercise Science**:

Teacher Education

The courses in the Teacher Education option are designed to prepare students for teaching Physical Education in both elementary and secondary schools. The Teacher Education option is committed to a standards-based approach in the development of beginning educators.

Student goals for the Teacher Education option include, but not limited to:

- The ability to organize, develop, implement, and evaluate a physical education program (this includes Pre-K-12 curriculum, as well as planning athletic and health fitness programs)
- Recognizing and incorporating safe programs and facilities, such as risk management and liability considerations within school-based programs.
- Development and implementation of assessment plans consistent with national and/or state standards.
- Knowledge in the area of accommodations for physical education programs to meet the needs of all individuals.

Each student choosing to become a teacher is responsible for developing a portfolio for licensure. The portfolio is constructed throughout the tenure of the undergraduate experience thus demonstrating individual learning and growth to become proficient Vermont State regulations and standards for teacher preparation.

Exercise Science

The courses in the Exercise Science option are designed to prepare the student for nationally recognized certifications, such as the American College of Sports Medicine (ACSM) and National Strength and Conditioning Association (NSCA). There are courses available to engage the student in practical experiences in a range of venues from outdoor education to fitness facilities, as well as research opportunities.

An undergraduate degree in Physical Education Exercise Science option may also serve toward continued education in graduate school in exercise physiology or related area. Students also enter specialized programs leading to careers in strength and conditioning, outdoor leadership, recreation, cardiac or pulmonary rehabilitation, nutrition, and clinical research.

B.S. in Physical Education-Teacher Education - Curriculum Map

First Year			
Fall	Credits	Spring	Credits
EN 101 Composition and Literature I	3	EN 102 Composition and Literature II	3
BI 101 Principles of Biology I	4	PY 220 Developmental Psychology	3
MA 1XX	3-4	PE 265 Lifelong Motor Development	3
PE 161 Physical Fitness & Wellness Assessment	3	PE 107 Foundations of Physical Education	3
PY 211 Introduction to Psychology	3	BI/CH/GL/PS Elective	3
	16-17		15
Second Year			
Fall	Credits	Spring	Credits
BI 215 Human Anatomy and Physiology	4	BI 216 Human Anatomy and Physiology	4
MA 232 Elementary Statistics	3	BI 253 Foods and Nutrition	4
PE 223 Motor Skills Development I	3	PE 305	4
PE 260 Personal and Community Health	3	PE 342 Instructional Strategies for Physical Education in Middle-Secondary School	4
PE 341 Instructional Strategies for Physical Education in Elementary School	4		
	17		16

Third Year			
Fall	Credits	Spring	Credits
PE 355 Coaching:Leadership in Sports	3	PE 371 Physiology of Exercise	4
PE 365 Kinesiology	4	PE 373 Activities and Programs for the Disabled and Aging	3
Literative General Education Elective	3	PE 432 Organization and Administration in Physical Education	3
PE 306 Outdoor Physical Education I	3	PE 307 Outdoor Physical Education II	3
HI 1XX	3	Humanities General Education Elective (EN 206 or higher excluding 240,241, 242; FA; MU 101; CM 109, 261, 335; CN; Lanugage above 112 or PH)	3
	16		16
Fourth Year			
Fall	Credits	Spring	Credits
SM 136 Emergency Care, Injury/Illness	3	ED 425 Student Teaching (PETE students must have a 2.0 GPA and passed Praxis II to enroll in ED 425)	12
PE 406 Readings in Physical Education	3	Free Elective	3-4
Biology Elective above 200	4		
Humanities General Education Elective	3		
Free Elective	3-6		
	16-19		15-16
Total Credits: 127-132			

Physical Education: Exercise Science Curriculum Map

First Year			
Fall	Credits	Spring	Credits
EN 101 Composition and Literature I	3	EN 102 Composition and Literature II	3
MA Elective Precalc recommended)	3	MA 232 Elementary Statistics	3
BI 101 Principles of Biology I	4	PE 265 Lifelong Motor Development	3
PE 161 Physical Fitness & Wellness Assessment	3	PE 107 Foundations of Physical Education	3
PE 260 Personal and Community Health	3	BI/CH/PS Elective	4
	16		16
Second Year			
Fall	Credits	Spring	Credits
BI 215 Human Anatomy and Physiology	4	BI 253 Foods and Nutrition	4
CH 102 Introduction to Organic and Biochemistry	4	Literature Elective	3
PE 261 Foundations in Health Education	4	BI 216 Human Anatomy and Physiology	4
PE 306 Outdoor Physical Education I	3	PE 307 Outdoor Physical Education II	3
		PY 211 Introduction to Psychology	3
	15		17

Third Year			
Fall	Credits	Spring	Credits
PE 355 Coaching:Leadership in Sports	3	PE 371 Physiology of Exercise	4
PE 365 Kinesiology	4	PE 432 Organization and Administration in Physical Education	3
PE 333 Management Sports Facilities	3	BI 364 Pathophysiology in Sports Medicine	4
PS 201 General Physics I	4	History Elective	3
		Humanities Elective ¹	3
	14		17
Fourth Year			
Fall	Credits	Spring	Credits
BI 401 Senior Seminar	3	PE 426 Internship or Free Electives	12
PE 441 Advanced Exercise Physiology and Prescription	4		
PE 450 Exercise Testing and Electrocardiography	4		
Free Elective (BI 440 suggested)	4		
	15		12
Total Credits: 122			

¹ • Humanities: English above 206 (except 240-242), Communications 109, 216, 335, 436, Fine Arts, Music 101, Modern Language above 112, or Philosophy

- All PE/BI courses toward the degree requirement must be a **C or higher**
- All sciences must be taken as lab sciences (4 credit courses)
- **Certification in First Aid & CPR is also required for graduation**
- ROTC coursework requires additional content each semester, senior year being optional
- Transfer credits require permission of the Registrar. Credit transfers; not grade.
- Business minors available
- Biology minors available
- CH 111 is required if there is no high school chemistry on the transcript

Physical Education Courses

PE 107 Foundations of Physical Education 3 Credits

A course designed to provide students with an introduction to the professional aspects of the physical education profession. Includes historical and philosophical implications with emphasis on modern trends in program design. Acquaints students with professional organizations and reviews career possibilities in the field.

PE 161 Physical Fitness & Wellness Assessment 3 Credits

Introduces the student to the theory and practice of teaching physical fitness activities. A personalized assessment is conducted of health-related fitness and wellness components. Based on the evaluation results and individual interests, an exercise program is designed by each participant, which she/he is expected to revise and update during her/his professional preparation at Norwich University. Individualized exercise program prescriptions may include aerobics, cycling, jogging, lap swimming, walking, yoga, or weight training. Professional ethics, client privacy, and liability issues are stressed throughout the program.

PE 199 Phys Ed Topics; 4 Credits

PE 223 Motor Skills Development I 3 Credits

This course teaches students to apply principles of best practice to the development and delivery of appropriate instructional programs in individual and elementary activities currently being taught in the public schools (e.g. dance, throwing, catching, kicking, and gymnastics). Strong consideration is given to the development of personal performance and skill acquisition in order to more effectively lead practical lessons in school. Students must demonstrate an understanding of, and competence in motor skill acquisition. Offered fall semester. 4 hour lab.

PE 224 Motor Skills Development II 3 Credits

This course teaches students to apply principles of best practice to the development and delivery of appropriate instructional programs in team, dual, and secondary activities currently being taught in the public schools (e.g. basketball, volleyball, soccer, racquet sports) as well as non-traditional activities (e.g. Indiaka, Takraw, pateka, tchoukball). Consideration is given to the development of personal performance and skill acquisition in order to effectively lead practical lessons in school. Students must demonstrate an understanding of, and competence in motor skill acquisition and physical education pedagogy in the context of public school instruction programs. Offered spring semester. 4 hour lab.

PE 243 Instructional Design in Physical Education 3 Credits

This course is targeted for students who plan to teach school physical education. Planning and Instructional Design is the introductory course in a sequence of professional teaching skills courses. The emphasis of the course is to identify and develop the beginning teaching skills and planning that are necessary for effective instruction in physical education and other sport settings. Classroom 3 hours. Prerequisites: PE 107 and PE 223 or PE 224. Offered Spring semester.

PE 260 Personal and Community Health 3 Credits

A course that emphasizes principles, problems, and procedures concerned with the improvement of individual and community health. Consideration is given to the nature of communicable diseases and the preventative measures used in schools and community. Health information protection and client privacy are stressed as an integral part of the community health care provider's professional ethics.

PE 261 Foundations in Health Education 4 Credits

This course will teach historical development, professional standards, philosophy and program planning, including current best practices in the development, implementation and evaluation of health education programs. It will focus on developing personal and social health skills, including decision making, interpersonal communication, goal setting and self management skills. In addition, this course will integrate teaching students media literacy, personal advocacy, and how to access valid health information, products and services and how to teach this to prospective students. Lecture 3 hours: Field Experience 2 hours. Prerequisite: PE260. Offered even-numbered fall semesters.

PE 265 Lifelong Motor Development 3 Credits

This course studies the sequential, continuous age-related process whereby movement behavior changes. The class will cover information processing theories, theories of motor learning, effects of practice regimens and feedback and biological changes experienced over a lifetime, which affect motor skill acquisition. Understanding lifespan motor development is important for educators at all levels, special education teachers, physical educators, coaches, and adult fitness leaders.

PE 306 Outdoor Physical Education I 3 Credits

This course provides students with a comprehensive background in warm weather Outdoor Physical Education. Skills in trip planning, risk management, equipment selection concerning use and care, and group leadership techniques will be covered. This class will prepare students to recognize the assumption of risk, attractive nuisances, negligence, and the standard of care when facilitating an Outdoor Physical Education program. Students will study and practice principles and protocols for administering safe, high-quality outdoor education experiences in activities such as, canoeing, mountain biking, hiking & backpacking, and adventure. Also covered will be topics in animal and wilderness conservation, nutrition, compass use and navigation, and environmental ethics. 3 classroom/field experience hours. Prerequisites: PE 107, PE 161, or permission of instructor. Offered fall semester.

PE 307 Outdoor Physical Education II 3 Credits

This course provides students with a comprehensive background in cold weather Outdoor Physical Education. Students will be actively engaged in winter activities. This class will prepare students to conduct classes in outdoor education during the winter in activities such as, snowshoeing, cross-country skiing, and ice skating. Also presented will be, but not limited to, topics in animal and wilderness conservation, nutrition, mountain and cold weather illness and injuries, and snow science, such as avalanche assessment and ice assessment. An emphasis will be placed on preparing individuals to be active in cold weather under winter conditions. 3 classroom/field experience hours. Prerequisites: PE 107, PE 161, or permission by instructor. Offered spring semester.

PE 333 Management Sports Facilities 3 Credits

PE 341 Instructional Strategies for Physical Education in Elementary School 4 Credits

A course that provides classroom and laboratory experience designed to acquaint the student with basic materials, methods, and principles necessary to meet the educational needs of the elementary school child. Emphasis on curriculum development with consideration given to concepts of movement education and perceptual motor development. Application of movement theory to specific sports skills and activities. Health information protection and student privacy issues are included throughout the course of instruction. Classroom 2 hours, laboratory 3 hours on site at Barre Town Middle, Elementary School.

PE 342 Instructional Strategies for Physical Education in Middle-Secondary School 4 Credits

A course that places emphasis on ethics, principles, procedures, and techniques related to teaching health and physical education in the elementary and secondary schools. Methods of organization, types of programs, and content and materials of health and physical education courses. Laboratory experience provided in traditional and new media, self and peer evaluation, and micro teaching. Health information protection and student privacy issues are reinforced throughout this course. Classroom 2 hours, laboratory 3 hours on site at U-32 Jr. - Sr. High School.

PE 355 Coaching:Leadership in Sports 3 Credits

A course with a strong focus on the philosophy, ethics, principles, and techniques of coaching individual and team sports. Identifying and addressing the ethical dilemmas pervading our sport organizations today will be emphasized. This course provides an emphasis on the organization of interscholastic athletics in relation to the achievement of education objectives, and satisfies the university's General Education Ethics requirement. In addition, students will be prepared for the National Federation of State High School coaching certification. 3 lecture hours.

PE 365 Kinesiology 4 Credits

A review of the structure and function of the skeletal and muscular systems with special emphasis on an analysis of human motion as related to human performance. Classroom 3 hours, laboratory 2 hours. Prerequisite: BI2 15, BI 216 or permission of the instructor.

PE 371 Physiology of Exercise 4 Credits

A review of physiological principles of muscular activity with emphasis on the integration of body systems in the performance of exercise and various athletic activities. Classroom 3 hours, laboratory 2 hours. Prerequisite: BI 215, BI 216 or permission of the instructor.

PE 373 Activities and Programs for the Disabled and Aging 3 Credits

A study of activities and programs focused on meeting the needs of special population groups and the aging. Consideration given to teaching methodology and program planning for individuals and groups. Health information protection and client privacy is stressed as it relates to professional ethics and liability.

PE 399 Topics: 3 Credits

PE 406 Readings in Physical Education 3 Credits

This course examines the current literature on issues facing future professional educators of an ethical, legal or pedagogical nature. Students are expected to think, read, write and speak critically about these professional issues in the physical education discipline. The submission of a professional portfolio is required. Seminar 3 hours.

PE 426 Internship 6,12 Credits

A course designed to provide the Physical Education 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.

PE 432 Organization and Administration in Physical Education 3 Credits

A course that emphasizes the study of administrative principles, functional organization, and supervision in relation to the total physical education program in grades K-12 and to managing sports facilities and sports programs. Major topics include personnel, curriculum, legal liability, intramurals, evaluation, budgeting and risk management.

PE 441 Advanced Exercise Physiology and Prescription 4 Credits

This course prepares and qualifies students to work as personal trainers and fitness specialists in corporate fitness and health club facilities. The course bridges the gap between exercise physiology and the practical application skills of personal training. Advanced exercise physiology knowledge is presented to assure new knowledge and exercise techniques are acquired. Students will learn how to design and implement exercise prescriptions for multiple populations and as well as successful goal attainment. Students will be prepared to sit for certification examinations. Three lecture hours per week and two hour laboratory component. Prerequisites: PE 365, PE 371, or permission of instructor. Offered Fall semesters.

PE 450 Exercise Testing and Electrocardiography 4 Credits

This course focuses on the theory and methods of administering exercise stress tests using different modes of exercise and consideration of different populations. Further analysis of information gained from exercise testing, studying deviations from normal, and applications of exercise test information in adult fitness and cardiac rehabilitation programs will be highlighted. Emphasis will be placed on the recognition and interpretation of normal and abnormal resting and exercise ECG monitoring. Three lecture hours per week and two hour laboratory component. Prerequisites: BI 215, BI 216 and PE 371 or permission of instructor. Offered fall semester.

PE 499 TEST COURSE 12 Credits**Education Courses****ED 101 Foundations of Education I 1 Credit**

This is a one-credit course that is offered during the first semester of the freshman year and introduces teacher education licensure candidates to the teaching profession. Topics include teacher characteristics, demands of the profession, self assessment, the nature of teaching, and an introduction to the development of the professional portfolio. Offered in the Fall.

ED 102 Foundations of Education II 1 Credit

Observations of children and adolescents in day care, preschool, and the public schools. 1 lecture hour.

ED 104 Foundations of Education 3 Credits

This course examines the historical, sociological, and philosophical foundations of the American educational system. Current trends in education will be reviewed and evaluated. Issues affecting the role of the teacher, including school governance and finance, legal foundations, social influences, and educational reform will be explored. This course is a prerequisite course for ED 234 Learning Strategies for Education Majors. Offered Fall and Spring semesters. 3 lecture hours.

ED 234 Learning and Teaching Strategies 4 Credits

This course includes an overview of the most commonly used strategies in elementary and secondary classrooms. Topics include planning, instructional objectives, media and computer applications, common learning strategies (lecture, discussion, cooperative learning, role playing, questioning, discovery learning) evaluation and assessment of learning. Secondary teacher licensure candidates prepare units and lessons in their fields of study applying specific methods and materials of the subject area. All students participate in microteaching situations. Required for elementary and secondary teacher licensure candidates. Twelve hours of classroom observation are required in this course. Offered in Fall. Prerequisite: ED 104.

ED 315 Special Needs Child 3 Credits

An introduction to the developmental, emotional, behavioral, and learning characteristics of the special child. Topic areas include learning disabilities, intellectual disabilities, emotional disorders, and physical handicaps. Also included are federal and state laws, regulations, curricular adaptations and integration strategies. Required and only for elementary and secondary Teacher/Education Licensure Candidates. Prerequisite: ED 234 or permission of the instructor. 3 lecture hours.

ED 351 Methods of Teaching Science to Elementary Students 3 Credits

This course examines objectives, methods, and content in elementary science instruction. Emphasis will be on student preparation, teaching and carrying out science activities. These activities will be ready for classroom use. National standards, Vermont Framework, and Vermont Grade Cluster Expectations will be the basis for the content and for the appropriateness of content at different grade levels. This course cannot be used to meet the general education laboratory levels. Prerequisite ED 234. Ten hours of practicum is required and development of portfolio continues. A service-learning component is also offered to all students.

ED 360 Language Arts and Teaching Reading in the Elementary School 4 Credits

A study of language development and reading, including an introduction to traditional instructional methodologies of reading and a study of the whole language approach to the language arts. Students will have opportunities to apply theory in various settings. Required for elementary teacher licensure candidates. Prerequisite: ED 234. Twelve hours of classroom observation are required in this course. A service Learning component is also attached to this course which will provides students an opportunity to work in the community in the context of literacy. Development of portfolio continues.

ED 363 Reading and Writing in the Content Area 4 Credits

A course designed to familiarize content area teachers with the theories and practices of reading and writing in specific disciplines. Students will examine the developmental nature of the reading and writing processes and design discipline-specific materials. Students work as tutors at the secondary and college levels. Required of secondary teacher licensure candidates. Prerequisite: ED 234. A Practicum of 30 hours will be done by Secondary track students during this course. Offered in Spring.

ED 368 Curriculum & Methods in Secondary Subjects 4 Credits

An examination of the curriculum and teaching strategies associated with the subjects taught in the secondary school, including English, mathematics, science, and social studies. Students will learn about the general methods for teaching at the Middle/High school level, but will concentrate on their area of content concentration in both their practicum and final project. Knowledge and research in child growth and development is used as a guide for determining the curriculum materials and procedures that are suitable for secondary education students. Students work with adolescents, develop curriculum, and teach lessons in the Middle/High School. Students will keep a reflective journal of all their experiences in the practicum. Required for Teacher Education Licensure secondary track. A Practicum of 30 hours will be required in this course. Offered in the fall. Development of a portfolio continues.

ED 401 Topics in Education 1 Credit

In this course students are involved in individual investigation, survey, or a project related to education. Offered on demand.

ED 403 Topics in Education 3 Credits

In this course the student has an opportunity to select and read in a specific area of interest in education that is not available through regular course offerings. Offered on demand.

ED 425 Student Teaching 12 Credits

In this course there is a full-time student teaching assignment. This course may be taken only as a part of the teacher education licensure program. This is a capstone course for teacher education Licensure students. Offered every semester. 14 lecture hours. A service-learning component is embedded in this course.

ED 432 Curriculum and Methods of the Elementary School 4 Credits

An examination of the curriculum and teaching strategies associated with the subjects taught in the elementary school, including mathematics, science, social studies, health, physical education, and the fine arts. Knowledge and research in child growth and development are used as a guide for determining the curriculum materials and procedures that are suitable for children. Students work with children to develop curriculum and teach lessons in the elementary school. Required for elementary teacher licensure candidates. A Practicum of 30 hours will be done during this course. Usually offered in the spring semester.