

## Physical Education Teacher Education and Exercise Science

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A major 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. 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 field

### Department Goals:

- Design, revise and analyze exercise programs,
- Coach team sports and group activities,
- Identify and implement exercise programs for a range of individuals, from athletes to disabled people

### Teacher Education Goals:

- Prepare students for teaching Physical Education in both elementary and secondary schools
- Show commitment to a standards-based approach in the development of beginning educators
- Recognize and incorporate safe programs and facilities, such as risk management and liability considerations within school-based programs
- Develop and implement assessment plans consistent with national and/or state standards
- Be knowledgeable in the area of accommodations for physical education programs to meet the needs of all individuals

### Teacher Education Outcomes:

- 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.

### Careers for this Concentration:

- Elementary/Secondary Physical Education Teachers

### Exercise Science Goals:

- Prepare students for nationally recognized certifications, such as the American College of Sports Medicine (ACSM) and National Strength and Conditioning Association (NSCA)
- Engage students in practical experiences in a range of venues from outdoor education to fitness facilities
- Prepare students for research opportunities.

### Exercise Science Outcomes:

- Each student will demonstrate proficiency in the areas of exercise science. Success will be measured by completion of PE 441 Advanced Exercise Physiology and Prescription.

### Careers for this Exercise Science Concentration:

- Graduate school in exercise physiology or related area
- Strength and conditioning
- Outdoor leadership
- Recreation
- Cardiac or pulmonary rehabilitation
- Nutrition
- Clinical research.

## B.S. in Physical Education-Exercise Science Curriculum Map

<b>Freshman</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
BI 101 Principles of Biology I (General Education Lab Science)	4	BI or CH or PS Elective (CH 101 recommended) General Education Lab Science	4
EN 101 Composition and Literature I (General Education English)	3	EN 102 Composition and Literature II (General Education English)	3
MA 107 Precalculus Mathematics (General Education Math)	4	MA 232 Elementary Statistics (General Education Math)	3
PE 161 Physical Fitness & Wellness Assessment <sup>c</sup>	3	PE 265 Lifelong Motor Development <sup>c</sup>	3
PE 260 Personal and Community Health <sup>c</sup>	3	PE 107 Foundations of Physical Education <sup>c</sup>	3
	<b>17</b>		<b>16</b>
<b>Sophomore</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
BI 215 Human Anatomy & Physiology I	4	BI 216 Human Anatomy & Physiology II	4
CH 102 Introduction to Organic and Biochemistry	4	BI 253 Foods and Nutrition	4
PE 261 Foundations in Health Education <sup>c</sup>	4	General Education Literature	3
PE 306 Outdoor Physical Education I <sup>c</sup>	3	PE 307 Outdoor Physical Education II <sup>c</sup>	3
		PY 211 Introduction to Psychology (General Education Social Science)	3
	<b>15</b>		<b>17</b>
<b>Junior</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
PE 355 Coaching:Leadership in Sports (General Education Ethics) <sup>c</sup>	3	BI 364 Pathophysiology in Sports Medicine <sup>c</sup>	4
PE 365 Kinesiology <sup>c</sup>	4	General Education Arts & Humanities	3
PE 333 Management Sports Facilities <sup>c</sup>	3	General Education History	3
PS 201 General Physics I	4	PE 371 Physiology of Exercise <sup>c</sup>	4
		PE 432 Organization and Administration in Physical Education <sup>c</sup>	3
	<b>14</b>		<b>17</b>
<b>Senior</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
BI 401 Senior Seminar <sup>c</sup>	3	PE 426 Internship (OR Free Elective)	12
BI 440 Reading and Research (OR Free Elective)	3-4		
PE 441 Advanced Exercise Physiology and Prescription <sup>c</sup>	4		
PE 450 Exercise Testing and Electrocardiography <sup>c</sup>	4		
	<b>14-15</b>		<b>12</b>
<b>Total Credits: 122-123</b>			

<sup>c</sup> Grade of C or higher required.

- All sciences must be taken as lab sciences (4 credit courses)
- Certification in First Aid & CPR is also required for graduation

• CH 111 is required if there is no high school chemistry on the transcript

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

<b>Freshman</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
EN 101 Composition and Literature I (General Education English)	3	EN 102 Composition and Literature II (General Education English)	3
BI 101 Principles of Biology I (General Education Lab Science)	4	PE 107 Foundations of Physical Education <sup>c</sup>	3
MA 101 Mathematics: A Liberal Art (General Education Math)	3	PE 265 Lifelong Motor Development <sup>c</sup>	3
PE 260 Personal and Community Health <sup>c</sup>	3	PY 211 Introduction to Psychology (General Education Social Science)	3
PE 161 Physical Fitness & Wellness Assessment <sup>c</sup>	3	MA 232 Elementary Statistics (General Education Math)	3
	<b>16</b>		<b>15</b>
<b>Sophomore</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
BI 215 Human Anatomy & Physiology I (General Education Lab Science)	4	BI 216 Human Anatomy & Physiology II	4
PE 223 Motor Skills Development I <sup>c</sup>	3	PE 307 Outdoor Physical Education II <sup>c</sup>	3
PE 261 Foundations in Health Education <sup>c</sup>	4	BI 253 Foods and Nutrition	4
PE 306 Outdoor Physical Education I <sup>c</sup>	3	PE 224 Motor Skills Development II <sup>c</sup>	3
General Education Literature	3	PE 243 Instructional Design in Physical Education <sup>c</sup>	3
	<b>17</b>		<b>17</b>
<b>Junior</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
PE 341 Instructional Strategies for Physical Education in Elementary School <sup>c</sup>	4	PE 342 Instructional Strategies for Physical Education in Middle-Secondary School <sup>c</sup>	4
PE 365 Kinesiology <sup>c</sup>	4	PE 371 Physiology of Exercise <sup>c</sup>	4
General Education History	3	PE 373 Activities and Programs for the Disabled and Aging <sup>c</sup>	3
PE 355 Coaching:Leadership in Sports (General Education Ethics) <sup>c</sup>	3	PE 432 Organization and Administration in Physical Education <sup>c</sup>	3
	<b>14</b>		<b>14</b>
<b>Senior</b>			
<b>Fall</b>	<b>Credits</b>	<b>Spring</b>	<b>Credits</b>
PE 406 Readings in Physical Education (Capstone) <sup>c</sup>	3	ED 425 Student Teaching or PE 426 Internship <sup>c</sup>	12
PE 441 Advanced Exercise Physiology and Prescription <sup>c</sup>	4		
SO 214 Racial and Cultural Minorities	3		
SO 320 Drugs and Society	3		
General Education Humanities	3		
	<b>16</b>		<b>12</b>
<b>Total Credits: 121</b>			

## Coaching Minor

Physical Education majors can declare a Concentration in Coaching.

The concentration or minor is designed to meet proposed national standards preparation in coaching for elementary through high school level. The primary goals are to teach coaching fundamentals, injury prevention, health awareness, motor skill development, adolescent behavior, and youth leadership skills. The following courses are required:

All courses must be passed with a grade of C or higher.

PE 161	Physical Fitness & Wellness Assessment	3
PE 224	Motor Skills Development II	3
PE 355	Coaching:Leadership in Sports	3
PE 432	Organization and Administration in Physical Education	3

**Two courses from the following list:** 7-8

PE 223	Motor Skills Development I	3
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PE 341	Instructional Strategies for Physical Education in Elementary School	4
PE 342	Instructional Strategies for Physical Education in Middle-Secondary School	4
PE 371	Physiology of Exercise	4
SM 220	Care and Prevention of Athletic Injuries	4
PY 324	Adolescent Psychology	3-4
<b>Total Credits</b>		<b>41-43</b>

## Health Minor

Physical Education majors can declare a Concentration in Health.

This concentration or minor is designed to add depth and breadth to a student's education in health and wellness, develop healthy lifelong patterns, and increase the marketability of graduates. Students must complete:

All courses must be passed with a grade of C or higher.

PE 161	Physical Fitness & Wellness Assessment	3
PE 224	Motor Skills Development II	3
PE 355	Coaching:Leadership in Sports	3
PE 432	Organization and Administration in Physical Education	3
<b>Two courses from the following list:</b>		<b>7-8</b>
PE 223	Motor Skills Development I	3
PE 341	Instructional Strategies for Physical Education in Elementary School	4
PE 342	Instructional Strategies for Physical Education in Middle-Secondary School	4
PE 371	Physiology of Exercise	4
SM 220	Care and Prevention of Athletic Injuries	4
PY 324	Adolescent Psychology	3-4
<b>Total Credits</b>		<b>41-43</b>

## 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**

This course is designed to help prepare students for careers associated with sport facility management. A detailed examination of facility utilization, including safety and security, scheduling, maintenance, and emergencies and emergency response will be applied to a variety of facilities. Additionally the administration of a facility with special attention to preventative supervision, risk management, facility assessment and design, project planning, and staffing will be examined. Facilities covered will include but not be limited to parks, recreation centers, gymnasiums, aquatic facilities, fitness centers, sports arenas, tennis courts, and golf courses. 3 lecture hours. Prerequisites: PE 107 or PE 161. Offered even year fall semesters.

**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 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: ED234.

**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.