
Physical Education

In the Department of Exercise and Nutritional Sciences
In the College of Professional Studies and Fine Arts

OFFICE: Exercise and Nutritional Sciences 351

TELEPHONE: (619) 594-5541

Faculty

- B. Robert Carlson, Ph.D., Professor of Exercise and Nutritional Sciences, Chair of Department
- Peter M. Aufesser, Ph.D., Professor of Exercise and Nutritional Sciences
- Peter R. Francis, Ph.D., Professor of Exercise and Nutritional Sciences
- Thomas L. McKenzie, Ph.D., Professor of Exercise and Nutritional Sciences
- Robert A. Mechikoff, Ph.D., Professor of Exercise and Nutritional Sciences
- Robert Moore, Ph.D., Professor of Exercise and Nutritional Sciences
- Patricia Patterson, Ph.D., Professor of Exercise and Nutritional Sciences (Graduate Adviser)
- Brent S. Rushall, Ph.D., Professor of Exercise and Nutritional Sciences
- Dennis J. Selder, Ph.D., Professor of Exercise and Nutritional Sciences
- Roger Simmons, Ph.D., Professor of Exercise and Nutritional Sciences
- Nancy L. Knop, Ph.D., Assistant Professor of Exercise and Nutritional Sciences
- Kathryn J. LaMaster, Ph.D., Assistant Professor of Exercise and Nutritional Sciences
- Denise A. Wiksten, Ph.D., Assistant Professor of Exercise and Nutritional Sciences

Associateships

Graduate teaching associateships in exercise and nutritional sciences are available to a limited number of qualified students. Application blanks and additional information may be secured from the chair of the department or the graduate adviser.

General Information

The Department of Exercise and Nutritional Sciences offers graduate study leading to the Master of Arts degree in physical education.

The Master of Arts degree permits the selection, under advisement, of a program of study which may be oriented either towards a generalist approach or with a specialization in one of three areas. The generalist approach encompasses theoretical foundations provided by various relevant disciplines and their application to professional aspects of contemporary physical education. This program is appropriate for individuals who require a broad theoretical foundation that might be applied to teaching, coaching, and administration in fields that involve the acquisition of gross motor skills and the enhancement of physical fitness. The

three areas of specialization offered by the department are Biomechanics and Athletic Training, Instructional Effectiveness, and Sports Psychology. Each specialization has a strong theoretical component that provides a basis for students who anticipate employment in the academic, public, or private sectors, or who intend to pursue a doctoral degree within the area of specialization.

The faculty includes researchers who are professionally active in each of the areas of specialization. The department also has several clinical facilities that provide the opportunity for students and faculty to work with students, patients and subjects. In addition, newly renovated facilities for biomechanics, motor control, teaching and coaching, and kinanthropometry are available for teaching and for student and faculty research. A variety of other health and education-related projects are routinely conducted in conjunction with local educational and medical institutions.

Master of Arts Degree in Physical Education

Admission to Graduate Study

Students will be admitted to the graduate program in physical education only after careful consideration of their qualifications by the physical education graduate adviser.

Students will be admitted in BOTH fall and spring semesters. Submit applications no later than April 1 for the fall and no later than October 1 for spring.

All students must satisfy the general requirements for admission to the University with classified graduate standing as described in Part Two of this bulletin. In addition, a student applying for admission to the graduate program in physical education must meet the following requirements:

1. A bachelor's degree in kinesiology. Applicants who do not have an undergraduate major in kinesiology may be admitted to conditionally classified graduate standing on the recommendation of the departmental graduate adviser. They will be required to complete the minimum requirements for an undergraduate major in physical education (i.e. up to 18 units of upper division exercise and nutritional sciences coursework) in addition to the minimum of 30 units required for the master's degree.
2. A grade point average of not less than 3.0 in the last 60 units attempted.
3. A minimum score of 475 on each of the verbal and quantitative sections of the Graduate Record Examination (General Aptitude Test).

Advancement to Candidacy

All students must satisfy the general requirements for advancement to candidacy, as described in Part Two of this bulletin.

Specific Requirements for the Master of Arts Degree

(Major Code: 08351)

In addition to meeting the requirements for classified graduate standing the student must satisfy the basic requirements for the master's degree, described in Part Two of this bulletin. The 30-unit program includes a minimum of 21 units in exercise and nutritional sciences selected from courses listed in this bulletin as acceptable on master's degree programs, of which at least 18 units must be in 600- and 700-numbered courses. Exercise and Nutritional Sciences 585, 586, 684, 792, and 799 are required.

Students seeking a Master of Arts degree in Physical Education are required to develop and sign a formal plan of study which must be approved by the graduate adviser before being forwarded to the Graduate Division. The approved plan of study should be developed in consultation with a faculty member who teaches graduate coursework of interest to the student.

The generalist program allows students to combine courses that best fit their interests. The department's graduate coordinator counsels students in the general degree program before suggesting a program adviser. Students are required to take mandated core courses as well as being able to select a number of electives. The offerings in a specialization allow a student to identify certain curricula and competencies that have been achieved once the degree has been completed.

The department expects a student to complete the degree within seven years. Failure to complete the degree requirements within seven years will result in dismissal from the program.

Specialization in Biomechanics and Athletic Training

Anatomy, mechanics, and neuromotor control of normal and abnormal movements, as well as injury and rehabilitation, are studied with an emphasis on scientific bases of body structure and function. Attention is given to health related concerns and prevention of injuries in sport and exercise.

Required courses (12 units):

ENS 630 Advanced Biomechanics: Human Motion Analysis (3)

ENS 644 Scientific Basis of Therapeutic Exercise (3)

ENS 660 Advanced Kinesiology (3)

ENS 673 Advanced Principles of Motor Control (3)

Electives: Six units to be chosen in consultation with a specialization adviser.

Specialization in Instructional Effectiveness

This specialization is designed to increase a practitioner's pedagogical knowledge and effectiveness for teaching in diverse physical activity settings. Students who have experience in pedagogy will find the program particularly relevant.

Required courses (9 units):

ENS 667 Seminar in Adapted Physical Education (3)

ENS 685 Seminar in Evaluating Teaching and Coaching Effectiveness (3)

ENS 691 Application of Movement Instruction for Children (3)

Electives: Nine units to be chosen in consultation with a specialization adviser.

Specialization in Sport Psychology

Students may take coursework that will develop competence as a sports psychology consultant in sport and exercise settings. Students with previous experience in coaching will find the program of particular interest.

Required courses (12 units):

ENS 671 Seminar in Advanced Sport Psychology (3)

ENS 688 Applied Psychology of Effective Coaching (3)

ENS 689 Applied Psychology for Superior Performance (3)

ENS 793 Sport Psychology and Pedagogy

Internship (1-3) Cr/NC

Electives: Six units to be chosen in consultation with a specialization adviser.

Adapted Physical Education Credential

(Credential Code: 00980)

Admission Categories

Level I: Kinesiology major with an interest in adapted physical education, completion of a minimum of 45 units with a grade point average of 2.5 or better, and official application to the coordinator of Adapted Physical Education.

Level II: Kinesiology major with a minimum of 2.75 after 90 units including the completion of Exercise and Nutritional Sciences 301, 303, 304, 348, 363, and at least one unit of Exercise and Nutritional Sciences 388, 135 hours of practicum in school and community settings and official application to the coordinator of Adapted Physical Education.

Level III: Certified. Completion of all courses required for physical education major in the single subject teaching credential major, all classes for the certification including completion of the entire student teaching experience. (Preliminary credential.) The student must have a 3.0 average and no grade lower than C in all the academic classes required to be certified. A required course in which a grade lower than C is earned may be repeated only with prior approval of the coordinator.

Pre-Service Program

Candidates for this program in adapted physical education must complete the requirements for the single subject teaching credential in physical education, apply for the program, be accepted, and complete the following specialist coursework.

1. **Adapted Program:** Minimum 16 units.

Exercise and Nutritional Sciences 398* (1 unit), 348, 363, 667, 672, and Special Education 501.

2. **Practical Experience and Student Teaching:**

The candidate must complete one unit of Exercise and Nutritional Sciences 388, 135 hours of practicum in school and community settings, and a full-time student teaching experience in adapted physical education.

In-Service Program

Candidates for this program in adapted physical education must complete the requirements for the single subject teaching credential in physical education, apply for the program, be accepted, and complete the following specialist coursework.

1. **Adapted Program:** Minimum 16 units. Exercise and Nutritional Sciences 398* (1 unit), 348, 363, 667, 672, 684.
2. **Practical Experience and Student Teaching:** The candidate must complete one unit of Exercise and Nutritional Sciences 388, 135 hours of practicum in school and community settings, and a full-time student teaching experience in adapted physical education or equivalent experience.

* Approved by Coordinator, Adapted Physical Education.

Courses Acceptable on Master's Degree Programs in Physical Education

UPPER DIVISION COURSES

Exercise and Nutritional Sciences Courses

585. Quantitative and Computer Methods in Kinesiology (2) I, II

Prerequisite: Biology 215, Economics 201, Psychology 270, Sociology 201, or Statistics 119.

Analysis of large physical education and exercise science data sets. Methods for understanding characteristics of data sets. (Formerly numbered Physical Education 585.)

586. Experimental Methods in Kinesiology (2) I, II

Prerequisite: Exercise and Nutritional Sciences 585.

Experimental methods and designs in research literature of kinesiology. (Formerly numbered Physical Education 586.)

596. Selected Topics in Exercise and Nutritional Sciences (1-3) I, II

Selected topics in exercise and nutritional sciences. May be repeated with new content and approval of instructor. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596 applicable to a bachelor's or master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

GRADUATE COURSES

Exercise and Nutritional Sciences Courses

630. Advanced Biomechanics: Human Motion Analysis (3)

Prerequisites: Exercise and Nutritional Sciences 303 and 306.

Kinematic analysis of human movement using photo-optical systems including high speed cinematography and videography, together with automated data reduction procedures. (Formerly numbered Physical Education 630.)

644. Scientific Basis of Therapeutic Exercise (3)

Prerequisite: Exercise and Nutritional Sciences 463.

Mechanical and neurophysiological principles related to application of therapeutic exercise techniques. (Formerly numbered Physical Education 644.)

660. Advanced Kinesiology (3)

Prerequisites: Exercise and Nutritional Sciences 303 and 306.

Tissue structure, neuromuscular function and performance. Electromyography and movement analysis. (Formerly numbered Physical Education 660.)

664. Seminar in Anthropometry and Motor Performance (3)

Prerequisites: Exercise and Nutritional Sciences 301 and 303.

Relationships between body structure and motor performance as compared through the techniques of anthropometry, somatotyping and body composition. (Formerly numbered Physical Education 664.)

665. Advanced Sports Medicine (3)

Prerequisite: Exercise and Nutritional Sciences 365 or a physical therapy major.

Clinical sports medicine. Relationship of biomechanics, nutrition, environment and conditioning to medical problems of athletes. (Formerly numbered Physical Education 665.)

667. Seminar in Adapted Physical Education (3)

Prerequisites: Exercise and Nutritional Sciences 348 and 363.

Trends, programs and crucial problem areas in adapted physical education as they relate to the organization, planning and implementation of these programs. (Formerly numbered Physical Education 667.)

671. Seminar in Advanced Sport Psychology (3)

Prerequisite: Exercise and Nutritional Sciences 461.

Research and theory of psychological behavior in sport and physical activity. Theoretical models, research issues, and applications. (Formerly numbered Physical Education 671.)

672. Perceptual Motor Learning (3)

Prerequisite: Exercise and Nutritional Sciences 307.

Basic psychological parameters underlying perceptual motor impairment. Emphasis on utilizing these concepts to evaluate and remediate perceptual motor problems in the young child. (Formerly numbered Physical Education 672.)

673. Advanced Principles of Motor Control (3)

Prerequisite: Exercise and Nutritional Sciences 307.

Investigation of the control of human movement using electromyography, biomechanics, and neurophysiology. (Formerly numbered Physical Education 673.)

684. Behavior Change in Sport and Physical Education (3)

Prerequisite: Exercise and Nutritional Sciences 307.

Principles and applications of operant psychology to the development and maintenance of behavior in physical education and sport environments. Behavioral techniques to manage and motivate learners in diverse physical activity settings. (Formerly numbered Physical Education 684.)

685. Seminar in Evaluating Teaching and Coaching Effectiveness (3)

Prerequisites: Exercise and Nutritional Sciences 347A and 347B.

Coaching and teaching in physical activity settings. Research and systematic observation techniques for analyzing leader effectiveness. Teaching and coaching behavior. (Formerly numbered Physical Education 685.)

688. Applied Psychology of Effective Coaching (3)

Controlling physical performance in training and competitions. Psychological procedures which improve sporting performances. (Formerly numbered Physical Education 688.)

689. Applied Psychology for Superior Performance (3)

Prerequisite: Exercise and Nutritional Sciences 688.

Psychological factors for preparing superior athletes to compete, with particular emphasis on the day of competition. (Formerly numbered Physical Education 689.)

691. Application of Movement Instruction for Children (3)

Two lectures and three hours of laboratory.

Prerequisite: Exercise and Nutritional Sciences 684.

Application of the movement education approach to teaching children's physical education. (Formerly numbered Physical Education 691.)

696. Advanced Topics in Exercise and Nutritional Sciences (3)

Intensive study in specific areas of exercise and nutritional sciences. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree. (Formerly numbered Physical Education 696.)

792. Research Evaluation in Physical Education (2)

Prerequisite: Exercise and Nutritional Sciences 586.

Techniques in designing, conducting, and reporting research in physical education. Qualitative and quantitative paradigms examined. Ethical considerations in human research. (Formerly numbered Physical Education 792.)

793. Sport Psychology and Pedagogy Internship (1-3) Cr/NC

Three hours of supervision per unit.

Prerequisites: Exercise and Nutritional Sciences 671, 684, 689, and consent of instructor.

Supervised field work involving assessment and evaluation of psychological and pedagogical variables in sport, physical education, fitness, and health settings. Maximum credit six units, three units applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP

Prerequisite: Consent of department chair.

Individual study. Maximum credit six units applicable to a master's degree.

799A. Thesis or Project (3) Cr/NC/SP

Prerequisites: An officially appointed thesis committee and advancement to candidacy.

Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC

Prerequisite: Prior registration in Thesis or Project 799A with an assigned grade symbol of SP.

Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis or project is granted final approval.
