Seminar in the History of Philosophy
Fall. 2 to 4 credits. May enroll for a maximum of 10 credits. R: Graduate standing or approval of the department. Major thinkers, themes, periods, or movements in the history of Philosophy. QA: PHL825

Seminar in Continental Philosophy
Fall of even-numbered years. 2 to 4 credits. May enroll for a maximum of 10 credits. R: Graduate standing or approval of department. Major figures or themes in 19th and 20th century continental philosophy. QA: PHL825 PHL841 PHL860

Seminar in Logic and the Philosophy of Language
Fall of odd-numbered years. 2 to 4 credits. May enroll for a maximum of 10 credits. R: Graduate standing or approval of department. Selected topic in Philosophy of Language, Philosophical Logic, and Metalogic. QA: PHL837 PHL870

Seminar in Value Theory
Fall. 2 to 4 credits. May enroll for a maximum of 10 credits. R: Graduate standing or approval of department. Major figures, themes, or periods in ethics or aesthetics. QA: PHL839

Seminar in Business Ethics
Spring. 3-0 Interdepartmental with the Department(s) of General Business and Business Law. R: Graduate standing or approval of department. Ethical dimensions of such issues as corporate responsibility, preferential hiring, advertising, government regulation. QA: PHL895

Seminar in Social and Political Philosophy
Spring of even-numbered years. 2 to 4 credits. May enroll for a maximum of 10 credits. R: Graduate standing or approval of department. Major figures, themes, or periods in social and political philosophy. QA: PHL896

Seminar in Metaphysics and Epistemology
Fall. 2 to 4 credits. May enroll for a maximum of 15 credits. R: Graduate standing or approval of department. Selected topics in metaphysics, epistemology, and philosophy of mind. QA: PHL841 PHL846

Seminar in Philosophy of Health Care
Fall. 2 to 4 credits. May enroll for a maximum of 15 credits. R: Graduate standing or approval of department. Ethical, political, theoretical, and methodological issues in medicine and health care.

Seminar in Philosophy of Science
Spring. 2 to 4 credits. May enroll for a maximum of 10 credits. R: Graduate standing or approval of department. Selected topics in the philosophy of the special sciences, in the metatheory of science, and in the social studies of science. QA: PHL880

Independent Study
Fall, Spring, Summer. 1 to 10 credits. May enroll for a maximum of 20 credits. R: Approval of the Department Special projects, directed reading, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings. QA: PHL 890

Practicum in Philosophy of Health Care
Spring. 4 to 6 credits. R: PHIL 344 R: Doctoral Standing or approval of the Department. Study of ethical and policy issues in hospital and governmental agency settings. QA: PHL 894

Master's Thesis Research-Plan A
Fall, Spring, Summer. 1 to 12 credits. May enroll for a maximum of 12 credits. R: Approval of the Department. Directed research leading to a master's thesis, used in partial fulfillment of plan A master's degree requirement. QA: PHL 989

Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 12 credits. May enroll for a maximum of 50 credits. R: Approval of the Department. QA: PHL 999

PHYSICAL EDUCATION AND EXERCISE SCIENCE

Aquatics
Fall, Spring, Summer. 1 to 3 credits. R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108. Skill and knowledge development in water-related activities. Separate course sections in activities such as swimming, diving, life guarding, water polo, and sailing. QA: HCP 109

Combative Sports
Fall, Spring, Summer. 1-3 credits. R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108. Skill and knowledge development in the art or sport of physical training. Separate course sections in activities such as judo, karate, aikido, and fencing. QA: HCP 109

Conditioning
Fall, Spring, Summer. 1-3 credits. R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108. Knowledge and competency in physical fitness activities that emphasize cardiovascular and musculoskeletal training. Separate course sections in activities such as aerobic exercise, power walking, swim conditioning, and weight training. QA: HCP 109

Dance
Fall, Spring, Summer. 1-3 credits. R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108. Skill and knowledge development in dance activities. Separate course sections in dance styles such as ballet, modern, jazz, Latin, and social. QA: HCP 811 HCP 111

Gymnastics
Fall, Spring, Summer. 1-3 credits. R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108. Skill and knowledge development in gymnastics. Separate sections in activities such as apparatus, tumbling, and floor exercise. QA: HCP 110

Individual Sports
Fall, Spring, Summer. 1-3 credits. R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108. Skill and knowledge development in individual sports. Separate course sections in activities such as bowling, golf, skating, self defense, and track and field. QA: HCP 104 HCP 105

Racquet Sports
Fall, Spring, Summer. 1-3 credits. R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108. Skill and knowledge development in racquet sports. Separate course sections in sports such as badminton, racquetball, and tennis. QA: HCP 106 HCP 107

Team Sports
Fall, Spring, Summer. 1-3 credits. R: A student may earn a maximum of 8 credits in all enrollments for this course if different activities or the same activities at higher levels are involved. Students are limited to a combined total of 8 credits in PES 101 through PES 108. Skill and knowledge development in team sports. Separate course sections in sports such as basketball, ice hockey, lacrosse, soccer, softball, and volleyball. QA: HCP 108

Personal Health
Fall, Spring, Summer. 3-0 credits. Physical, mental, emotional, social, and spiritual domains of health. Alternative health values and behaviors. Developing healthy lifestyles. QA: HCP 199

The Healthy Lifestyle
Fall, Spring, Summer. 3-2 credits. Cardiovascular risk factors, lifestyle habits, and exercise capacities and their relationship to optimal health and longevity. Individual physical activity required as part of the course. QA: HCP 270

First Aid and Personal Safety
Fall, Spring, Summer. 3-0 credits. Knowledge and application of first aid concepts relating to anatomy and cardiopulmonary resuscitation, shock, wounds, burns, fractures, drug poisoning, childbirth, litigation. Preventing trauma by recognizing and avoiding safety hazards. QA: HCP 125

Courses with an asterisk (*) have not been approved by the University Committee on Curriculum.
PHYSICAL EDUCATION AND EXERCISE SCIENCE

170*. Foundations of Physical Education and Exercise Science
Fall, Spring. 2(2-0)
Physical education and exercise science as a disciplin­
ant major. Subdisciplines and professions. Historical
perspectives.
QA: HCP 135

171*. Athletics in Higher Education
Fall. 1(1-0)
Philosophy and organization of athletics. Athletics and
academic achievement. Ethical
issues, legal issues, social conduct, eligibility, athletes' rights and respon­
sibilities. Coaches' responsibilities and institutional
obligations.
QA: HCP 130

201*. Water Safety Instruction
Fall, Spring. 2(1-2)
Knowledge and skills necessary to plan and conduct
water safety courses. Current
liasing certification is assumed.
QA: HCP 345

202*. Aerobic Exercise Instruction
Fall, Spring. 3(2-3)
Theory and practice for aerobic exercise leaders.
Functional effects of physical activity. Safe exercise
techniques. Modifications and precautions for special
populations. Choreography practice. Health and exer­
cise screening. Legal issues.
QA: HCP 470

216*. Applied Human Anatomy
Fall. 3(3-0)
R: Not open to freshmen. Open only to
students in Physical Education and Exercise Science.
Structural anatomy of the human body. Interrela­tion­ships of science, function, and human movement.
QA: ANT 216

217*. Applied Human Anatomy Laboratory
Spring. 1(0-3)
P: PES 216 R: Sophomores and above
Physical Education and Exercise Science
Identification, orientation, and position of major
bones, muscles, nerves, vessels, and organs of the
human body. Articulations, muscle organs, muscle
insertions, and prime moving actions.
QA: ANT 216

250*. Measurement in Physical Education and Exercise Science
Fall, Spring. 3(3-0)
Methods and materials for measurement and evalu­
ation. Motor skills, physical fitness, knowledge, and
attitudes associated with physical activity.
QA: HCP 240

300*. Physical Growth and Motor Behavior
Fall, Spring. 3(3-0)
R: Not open to freshmen.
Physical growth and biological maturity as related to
motor performance and skill learning. Sequential
progressions of fundamental motor skills. Physical
fitness of children and youth. Motor abilities. Stages of
skill acquisition.
QA: HCP 260

310*. Physiological Bases of Physical Activity
Fall. Spring. 3(3-0)
P: PSL 250, CEM 141, PES 216, PES 217.
R: Open only to Physical Education and Exercise
Science majors.
Acute and chronic effects of exercise on various body
systems. Principles of training, exercise prescription,
and the role of physical activity in health and disease.
QA: PSL 240 PSL 441 ANT 216 QA: HCP 246

316*. Community Health Problems
Spring. 2(2-0)
P: PES 120.
Community health problems and needs. Special
attention to various health organizations working
toward the solution of these problems.
QA: HCP 120 QA: HCP 316

320*. Athletic Training
Fall, Summer. 3(3-0)
P: PES 125, PES 216, PES 217, PES 310
or concurrently. R: Not open to freshmen.
Athletic injury recognition, prevention, evaluation,
management, care, counseling, and rehabilitation.
Organization and administration.
QA: HCP 125 ANT 216 QA: HCP 306

323*. School Health Problems
Spring. 2(2-0)
P: PES 120.
Health problems of school-age children. Special
attention to school health services and healthful
school living.
QA: HCP 120 QA: HCP 328

330*. Structural and Mechanical Analysis of Physical Activity
Fall, Spring. 3(3-0)
P: PES 216, PES 217, PHY 231.
Biomechanical analysis of human movement based
upon musculoskeletal structure and function. Mechani­
cal principles.
QA: ANT 218 QA: HCP 252 HCP 253

340*. Psychological Bases of Physical Activity
Fall, Spring. 3(3-0)
P: PES 260 or concurrently. R: Not open to
freshmen.
Psychological factors affecting motor skill acquisition
and performance. Psychological skills which enhance
sport performance. Applications of learning theory.
QA: HCP 261

382A*. Coaching Baseball
Fall. 2(1-2)
Techniques for coaching baseball. Rules, strategies,
and training. Development and evaluation of player
skills. Planning, conducting, and evaluating practices.
QA: HCP 349

382B*. Coaching Sports for Athletes with Disabilities
Spring of even-numbered years. 2(2-0)
Interdepartmental with the Department(s) of Park and Recreation
Resources.
Techniques for coaching athletes with disabilities.
Rules, strategies, and training. Developing and evalu­
ing player skills. Planning, conducting, and evalua­
ing sport practices. Injury prevention. Health and
safety concerns.
QA: HCP 382

382C*. Coaching Soccer
Spring. 2(1-2)
Techniques for coaching soccer. Developing and evalu­
ing player skills. Planning, conducting, and evalu­
ing sport practices and games. Rules, drills,
strategies and training.
QA: HCP 382

400*. Principles of Coaching I
Fall. 4(4-0)
Basic principles of anatomy, biomechanics, and physi­
ology for coaching competitive sports. Applications to
athletes of different ages and abilities.
QA: HCP 246 HCP 252 HCP 253

401*. Principles of Coaching II
Spring. 4(4-0)
Sociological, administrative, philosophical, legal,
ethical, and chemical health issues related to coach­ing
competition. Applications to athletes of different
ages and abilities.
QA: HCP 480

402*. Sports, Physical Education, and the Media
Spring, Summer. 3(2-2)
R: Not open to freshmen.
Sports and physical education programs as presented
in print and electronic media. Supervised practice in
oral and written communications with sports media.
QA: HCP 402

403*. Physical Education and Elementary Schools
Fall. 3(1-5)
P: PES 260 or PES 460. R: Not open to freshmen.
Methods of instruction for teaching physical activity
to preschool and elementary school children. Develop­
ment of teaching sequences. Clinical experience in
teaching children and peers.
QA: HCP 440 OR HCP 260 QA: HCP 441

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E-147
452*. Physical Education in Middle and High Schools
Spring, 3(2-0)
R: Open only to seniors and graduate students.
Methods of instruction for teaching physical activities to middle and high school students. Development of teaching sequences. Clinical experience in teaching students and peers.
QA: HCP 300 OR HCP 440  TE: 330

453*. Administration of Intramural Sport Programs
Spring, 2(2-0)
R: Not open to freshmen or sophomores.
Organization and administration of intramural programs in recreational settings. Philosophy, values, planning, scheduling, competitive units, classification systems, budgeting, facilities, officiating, clubs, issues, and trends.
QA: HCP 418

454*. Facility Planning and Construction
Spring, 3(2-0)
R: Not open to freshmen or sophomores.
Planning of athletic and physical education facilities such as gymnasiums, ice rinks, swimming pools, and outdoor areas. Space utilization standards and guidelines. Selection of materials and equipment.
QA: HCP 404

455*. Developmental Bases of Motor Skills
Fall, Spring, Summer. 2(2-0)
R: Open only to College of Education and College of Human Ecology majors. Not open to students with credit in PES 360.
QA: HCP 440

456*. Developmental Bases of Motor Skills Laboratory
Fall, Spring, Summer. 1 to 4 credits.
May enroll for a maximum of 4 credits.
P: PES 460. R: Students must apply one term in advance of enrollment.
Application of concepts related to physical growth and motor development. Practice in planning and teaching fundamental motor skills. Methods of evaluating teaching.
QA: HCP 449

457*. Physical Activity for Special Populations
Fall, Spring, Summer. 2(2-0)
R: Not open to freshmen or sophomores.
Methods and materials for teaching physical activity in school and community settings for persons with disabilities and youths at risk.
QA: HCP 452

458*. Practicum in Adapted Physical Activity
Fall, Spring, Summer. 1 to 4 credits.
May enroll for a maximum of 4 credits.
R: Approval of department.
Supervised teaching of physical activities and/or coaching sports to persons with disabilities and youths at risk.
QA: HCP 453

470*. Proseminar in Physical Education and Exercise Science
Fall, Spring, 3(2-0)
R: Open only to seniors and graduate students.
Philosophical perspectives in physical education, sport, and exercise science.
QA: HCP 425

482*. Topics in Physical Education and Exercise Sciences (MTC)
Fall, Spring, Summer. 3(3-0)
May enroll for a maximum of 4 credits.
Issues, problems, and/or topics in physical education and exercise science.
QA: HCP 492

490*. Independent Study
Fall, Spring, Summer. 1 to 4 credits.
May enroll for a maximum of 4 credits.
R: Approval of department.
Supervised individual or group study in various fields of emphasis in physical education and exercise science.
QA: HCP 424

494*. Fieldwork
Fall, Spring, Summer. 1 to 4 credits.
May enroll for a maximum of 4 credits.
R: Approval of department.
Supervised practice in teaching physical education activities, coaching sports, administering sports programs, or conducting research or service activities in physical education and exercise science.
QA: HCP 490

810*. Physiology of Physical Activity
Fall, 3(3-0)
R: Graduate students
Acute and chronic effects of exercise on the various body systems. Practical application of knowledge for training. Program design and discussion of issues in exercise physiology.

811*. Methods of Physiological Evaluation and Exercise Prescription
Fall, 2(2-0)
P: PES 810 or concurrently R: Graduate students
Techniques in evaluation of physiological capacity and in exercise prescription for various population groups.
QA: HCP 823  HCP 829

812*. Cardio-Respiratory and Metabolic Responses to Exercise
Spring of even-numbered years. 3(3-0)
P: PES 810 R: Graduate students
Acute and chronic effects of exercise on energy metabolism, cardiovascular, and respiratory system functions. Role of these systems in limiting exercise performance.
QA: HCP 824

813*. Neuromuscular and Endocrine Responses to Exercise
Spring of odd-numbered years. 3(3-0)
P: PES 810 R: Graduate students
Acute and chronic effects of exercise on nervous, muscular, and endocrine system functions. Role of these systems in limiting exercise performance.
QA: HCP 825

830*. Biomechanical Analysis of Physical Activity
Fall, 2(2-0)
R: Graduate students
Kinematic analysis of mechanical and anatomical characteristics in performing physical activity and sport skills.
QA: HCP 853

831*. Advanced Biomechanics of Physical Activity
Spring of even-numbered years. 3(3-0)
Interdepartmental with the Department(s) of Biomechanics.
P: PES 830 R: Graduate students
Three-dimensional analyses of human motion in sport activities with emphasis on maturation level, performance level, and injury causation prevention.
QA: HCP 853

854*. Psychosocial Aspects of Physical Activity
Fall, 3(3-0)
R: Graduate students
Social psychology of sport and physical activity.
QA: HCP 835  HCP 836

855*. Sociocultural Practices in Sport
Spring of odd-numbered years. 3(3-0)
Critical, conflict, and feminist theoretical perspectives to explore dominant ideologies and social practices in sport.

851*. Curriculum and Instruction in Physical Activity Programs
Spring of even-numbered years. 3(3-0)
R: Graduate students
Curriculum theory and behavior of physical education and exercise science. Interaction of curriculum and instructional decision making in physical education and exercise science.
QA: HCP 863  HCP 867

852*. Evaluation of Physical Activity Programs
Spring of odd-numbered years. 3(3-0)
R: Graduate students
Skills and knowledge necessary to design, implement, analyze, interpret, and report program evaluations in physical education and exercise science.
QA: HCP 864

853*. Athletic Administration in Higher Education
Spring, 3(3-0)
R: Graduate students
Organization and administration of athletic programs in higher education. Administrative theory, structure, and budget. Facilities, athletic equipment and marketing. Legal, medical, and safety aspects.
QA: HCP 860

860*. Growth and Motor Behavior
Fall, 3(3-0)
R: Graduate students
QA: HCP 816  HCP 817

861*. Growth, Maturtion, and Physical Activity
Spring of even-numbered years. 3(3-0)
R: Graduate students
QA: HCP 816  HCP 817

862*. Motor Skill Learning
Spring of odd-numbered years. 3(3-0)
R: Professional and graduate level students
Learning and performance theory applied to gross motor skills with emphasis on neuropsychological and human performance models. Conditions influencing skill acquisition.
QA: HCP 819

865*. Curriculum and Instruction in Adapted Physical Education
Fall of even-numbered years. 3(3-0)
R: Graduate students
Designing and implementation of curricula and effective instruction in physical education for students with disabilities.
QA: HCP 840
Research Methods

Quantitative, historical, philosophical, theoretical bases of research and analytical methodology in physical activity, motor development, and motor learning.

Required of MSU faculty.

Influence of growth, biological maturity, aging, body composition, nutrition, training, and rest on health and performance.

Research Methods in Physical Education and Exercise Science

Supervised practice in teaching physical activities and/or coaching sports for persons with disabilities.

Project in Physical Education and Exercise Science

Field Experiences in Physical Education and Exercise Science

Inorganic Chemistry

Statistical Thermodynamics

Doctoral Dissertations Research

Supervised practice in teaching physical activities and/or coaching sports for persons with disabilities.

Field Experiences

Independent Study

Research Practicum in Physical Education and Exercise Science

989A. Seminar in Physical Chemistry

Fall, Spring. 1(1-0) May reenroll for a maximum of 3 credits.

R: Graduate students

Natural Science

PhD

Research in inorganic chemistry and reports by graduate students on research.

Quantitative methods.

PhD

Research in inorganic chemistry and reports by graduate students on research.

Quantitative methods.

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