Department of Geosciences
Mathematics-Geology Building, Room 104
Telephone (208) 385-1631

Chair and Professor: Paul R. Donaldson; Professors: Bentley, Hollenbaugh, Pelton, Spinosa, Waag, White, Wilson, Wood; Associate Professor: Snyder; Assistant Professor: Michaels; Visiting Research Professors: Dougherty, Gillerman, Zollweg.

Degrees Offered
- B.S. in Geology
- B.S. in Geophysics
- B.S. in Earth Science Education, Secondary Education
- M.S. in Geology: cooperative program with Idaho State University (See Graduate College Catalog for details).
- M.S. in Geophysics (See Graduate College Catalog for details).
- M.S. in Education, Earth Science emphasis (See Graduate College Catalog for details).
- Minor in Environmental Studies (see page 48)

Special Information for Students
The curriculum leading to the B.S. degree in Geology is designed for those students who plan a career in Geology or who plan to attend graduate school. The curriculum leading to the B.S. degree in Earth Science Education is designed to prepare the student to teach Earth Science in secondary schools and to meet the teacher certification requirements of the State of Idaho. The curriculum leading to the B.S. degree in Geophysics is designed for students who would like a career in Geophysics or who plan to attend graduate school. The curriculum offers a broad background of courses in Geology, Mathematics, Chemistry and Physics to support the Geophysics courses. The curriculum leading to the MS in Secondary Education, Earth Science emphasis, is designed to provide advanced academic training in the topics of Earth Science to those students pursuing a teaching career. Refer to Graduate College Catalog. For details regarding the Master of Science in Geology and the Master of Science in Geophysics refer to the Graduate College Catalog.

In addition to the courses formally offered in all degree programs, a student may acquire credit for independent study, internship, under-graduate or graduate thesis, or for participation in departmental research projects.

Non-degree course offerings in Geography meet the 15 credit require-ment under the 30-15-15 Social Science, Secondary Education Degree Program offered in the Departments of Economics, History, Political Science and Sociology, Anthropology and Psychology.

Degree Requirements

GEOLOGY MAJOR
Bachelor of Science Degree Requirements
1. General university & B.S. degree requirements .......................... 30
   Note that Area III is fulfilled by the major requirements below.
   Recommended Core Courses:
   Area I, Foreign Language (201 or higher)
   Area II, Economics, Geography
2. Major Requirements:
   Geology and Geophysics .............................................. 55
   Physical Geology GO 101 ............................................. 4
   Historical Geology GO 103 ........................................... 4
   Mineralogy GO 221 .................................................... 4
   Field Geology GO 280 ................................................ 3
   Petrology GO 323 ...................................................... 3
   Petrography GO 324 ................................................... 1
   Sedimentation & Stratigraphy GO 310 ............................... 4
   Geomorphology GO 313 .............................................. 3
   Structural Geology GO 314 ......................................... 4
   Invertebrate Paleontology GO 351 ................................. 3
   Geophysics GP 300 or GP 301 ...................................... 3
   Summer Field Camp GO 482 ......................................... 4
   Summer Field Camp Report GO 483 ............................... 2
   Senior Seminar GO 498 or 499 ................................. 1
   Geology Electives ..................................................... 12
   College Chemistry C 131, 132, 133, 134 .......................... 9
   Physics
   Option I: (Recommended for students planning graduate studies)
   Mechanics, Waves & Heat & Lab PH 211, 212 ...................... 5
   Electricity, Magnetism & Optics + Lab PH 213-214* ........... 5
   *Physical Chemistry & Lab C 321, 323 can be substituted for PH 213, 214
   Option II:
   General Physics PH 101-102 ........................................ 8
   Mathematics M 204-205* or M 211-212 ............................ 9-10
   (Mathematics through M 206 is recommended for students planning graduate studies.)
   Basic Surveying EN 215 or Cartography GG 220 ............... 2-3
   Free Electives ......................................................... 14-19

EARTH SCIENCE EDUCATION MAJOR
Bachelor of Science Degree Requirements
1. General university & B.S. degree requirements: .......................... 30-33
   English Composition E 101-102 ..................................... 6
   Area I Core ............................................................. 12
   Area II Core (to include P 101, TE 201, GG 101) ................. 12
   Upper division electives .............................................. 0-3
   2. Major Earth Science Requirements: ................................ 36
   Physical Geology GO 101 ............................................. 4
   Historical Geology GO 103 ......................................... 4
   Intro to Descriptive Astronomy PH 105 ......................... 4
   Intro to Oceanography GO 201 .................................... 3
   Intro to Meteorology GG 213 ...................................... 3
   Mineralogy GO 221 .................................................. 4
   Geomorphology GO 313 ............................................. 3
   Petrology GO 323 .................................................... 3
   Petrography GO 324 ................................................. 1
   Senior Seminar GO 498 or 499 ................................... 1
   Upper division Geology course or GG 331 or GP 300 .......... 6
   3. Supporting Sciences & Mathematics: ................................ 31
   General Chemistry C 131, 132, 133, 134 .......................... 9
   General Physics PH 101-102 ....................................... 6
   General Botany BT 130 & General Zoology Z 230 ............. 9
   Algebra & Trigonometry M 111 ..................................... 5
   4. Education Requirements for Secondary Education: .............. 27-33
   Intro Secondary Teaching: Classroom Observation TE 172 .... 1
   Foundations of Education TE 201 .................................. 3
   Educational Psychology TE 225 .................................... 3
   Educ the Except Secondary Student TE 333 ..................... 1
   Reading in Content Subject TE 407 ................................ 3
   Secondary School Science Methods TE 384 ...................... 3
   Secondary School Methods TE 381 ................................ 3
   Secondary Student Teaching ....................................... 10-16

NOTE: Completion of all requirements for graduation with a secondary education option may require more than 128 credit hours. See the Teacher Education listing for more information.
GEOPHYSICS MAJOR
Bachelor of Science Degree

1. General university & B.S. degree requirements ........................................... 30

NOTE: Area III is fulfilled by the major requirements below.

2. Major Requirements:

Geophysics .................................................. 21
Gravimetric-Magnetic Methods GP 310 .................................................. 3
Electrical Methods GP 320 .................................................. 3
Seismic Methods GP 330 .................................................. 6
Geophysics Field Camp GP 340 .................................................. 6
Exploration Well Logging GP 410 .................................................. 3
Geophysical Applications Digital Signal Process GP 420 .................................. 3

Geology .................................................. 27
Physical Geology GO 101 .................................................. 4
Historical Geology GO 103 .................................................. 4
Mineralogy GO 221 .................................................. 4
Field Geology GO 280 .................................................. 3
Petrology GO 323 .................................................. 3
Petrography GO 324 .................................................. 1
Sedimentation and Stratigraphy GO 310 .................................................. 4
Structural Geology GO 314 .................................................. 4

Chemistry .................................................. 7
College Chemistry & Lab C 131, 132 .................................................. 4
College Chemistry C 133 (C 134 not required) .................................................. 3

Physics .................................................. 13
Mechanics, Waves and Heat & Lab PH 211, 212 .................................................. 5
Electricity, Magnetism and Optics & Lab PH 213, 214 .................................................. 5
Electricity and Magnetism PH 381 .................................................. 3

Mathematics .................................................. 24
Digital Computer Programming CS 124 or EN 104 .................................................. 2
Calculus & Analytic Geometry M 204 .................................................. 5
Calculus & Analytic Geometry M 205 .................................................. 5
Calculus & Analytic Geometry M 236 .................................................. 4
Vector Calculus M 320 .................................................. 3
Differential Equations M 331 .................................................. 3
Linear Systems & Signal Processing CS 426 .................................................. 4

Electives* .................................................. 6
*Recommended electives usually include courses tailored to an individual student's needs. See an advisor for assistance.

Recommended Programs

GEOLlGY MAJOR

FRESHMAN YEAR

1st SEM 2nd SEM

English Composition E 101-102 .................................................. 3 3
College Chemistry C 131, 132-133, 134 .................................................. 4 5
Physical Geology GO 101 .................................................. 4 5
Algebra and Trigonometry M 111 .................................................. 5 4
Calculus and Analytic Geometry M 204 .................................................. 5 4

SOPHOMORE YEAR

Cartography GG 220 or alternate .................................................. 3 3
Mineralogy GO 221 .................................................. 4 5
Petrology GO 323 .................................................. 3 3
Petrography GO 324 .................................................. 1 1
Field Geology GO 280 .................................................. 3 3
Mechanics, Waves and Heat & Lab PH 211-212 .................................................. 5 5
Calculus & Analytic Geometry M 205 or alternate .................................................. 4 4

SOPHOMORE YEAR (continued)

Area I & II Electives .................................................. 3 6

JUNIOR YEAR

Structural Geology GO 314 .................................................. 4 4
Sedimentation & Stratigraphy GO 310 .................................................. 4 4

SUMMER OF JUNIOR YEAR

Summer Field Camp GO 482-483 .................................................. 6 6

SENIOR YEAR

Area I and II Electives .................................................. 3 6
Free Electives at least 3 cr of upper division .................................................. 3 6
Invertebrate Paleontology GO 351 .................................................. 3 3
Upper division Geology & Geophysics electives .................................................. 4 4

EARTH SCIENCE EDUCATION MAJOR

FRESHMAN YEAR

1st SEM 2nd SEM

English Composition E 101-102 .................................................. 3 3
General Botany BT 130 .................................................. 4 4
General Zoology Z 140 .................................................. 5 5
Physical Geology GO 101 .................................................. 4 4
Historical Geology GO 103 .................................................. 4 4
Mathematics M 111 .................................................. 5 5
General Psychology P 101 .................................................. 3 3

SOPHOMORE YEAR

College Chemistry C 131-132, 133-134 .................................................. 4 5
Mineralogy GO 221 .................................................. 4 4
Petrology & Petrography GO 323-324 .................................................. 4 4
Foundations of Education TE 201 .................................................. 3 3
Intro to Secondary Education TE 172 .................................................. 1 1
Intro to Meteorology GG 213 .................................................. 3 3
Area I Core classes .................................................. 6 6

JUNIOR YEAR

General Physics PH 101-102 .................................................. 4 4
Geomorphology GO 313 .................................................. 3 3
Intro to Oceanography GO 201 .................................................. 3 3
Secondary School Methods TE 381 .................................................. 3 3
Secondary School Science Methods TE 384 .................................................. 3 3
Upper division Earth Science elective .................................................. 3 3
Educational Psychology TE 225 .................................................. 3 3
Reading in Content Subject TE 407 .................................................. 3 3

SENIOR YEAR

Area II Core Classes .................................................. 6 6
Secondary Student Teaching .................................................. 10-16 10-16
Intro Descriptive Astronomy PH 105 .................................................. 4 4
Geology Seminar GO 498, 499 .................................................. 1 1
Educ Except Secondary Student TE 333 .................................................. 1 1
Electives .................................................. 0-5 0-3

GEOPHYSICS MAJOR

FRESHMAN YEAR

1st SEM 2nd SEM

English Composition E 101-102 .................................................. 3 3
Physical Geology GO 101 .................................................. 4 4
Historical Geology GO 103 .................................................. 4 4
College Chemistry C 131 .................................................. 3 3
College Chemistry I Lab C 132 .................................................. 1 1
College Chemistry II C 133 .................................................. 3 3
Calculus & Analytic Geometry M 204 .................................................. 5 5
Digital Computer Programming EN 104 or CS 124 .................................................. 2 2
Area I ............................................................................. 3 -
Elective ............................................................................. 3 -
17 17

**Sophomore Year**

- Mineralogy GO 221 ................................................. 4 -
- Field Geology GO 280 ............................................. 3 -
- Calculus & Anal Geometry M 205 ......................... 4 -
- Petrology GO 323 ..................................................... 3 -
- Petrography GO 324 ................................................ 4 -
- Mechanics, Waves & Heat & Lab PH 211, 212 ............. 5 -
Area I or II ...................................................................... 3 -
16 11

**Junior Year**

- Differential Equations M 331 ................................. 3 -
- Electricity, Magnetism and Optics & Lab PH 213, 214 ... 5 -
- Gravimetric and Magnetic Methods GP 310 .............. 3 -
- Sedimentation & Stratigraphy GO 310 .................... 4 -
- Structural Geology GO 314 ....................................... 4 -
- Vector Calculus M 320 .............................................. 2 -
- Electrical Methods GP 320 ....................................... 3 -
- Seismic Methods GP 330 ......................................... 3 -
Area II ............................................................................. 6 -
Elective ............................................................................. 3 -
17 19

**Summer of Junior Year**

- Geophysics Field Camp GP 340 ............................... 6 -

**Senior Year**

- Linear Systems & Signal Proc CS 426 ...................... 4 -
- Elec & Mag (advanced) PH 381 ............................... 3 -
- Exploration Well Logging GP 410 ......................... 3 -
- Geophysical Applications Digital Signal Processing GP 420 ... 3 -
Area I & II ...................................................................... 6 -
Elective ............................................................................. 3 -
16 12

**Course Offerings**

See page 4 for definition of course numbering system

**GG Geography**

- **Lower Division**
  - GG 101 Introduction to Geography (3-0-3)(F/S)(Area II). A survey of Earth environments, basic concepts and techniques used in geography and the utilization of natural resources.
  - GG 102 Cultural Geography (3-0-3)(Area II). A study of the distribution and character of cultural activities throughout the world with emphasis on human landscapes.
  - GG 201 The Use and Interpretation of Maps (3-0-3)(F/S). An intensive use and interpretation of a wide spectrum of map types, their advantages and limitations for students of various fields, such as Archaeology, History, Geography, and Teaching.
  - GG 210 Survey of World Regional Geography (3-0-3)(F/S). A survey of human population and their relationship to their physical environments. Countries, regions, cultures, ethnic geography, religion, language and major economic units will be discussed. Students will learn to use maps, aerial photographs and reference materials.
  - GG 213 Introduction to Meteorology (3-0-3)(F). A study of weather phenomena in terms of origin, distribution and classification. Instruments and research methods are also investigated. PREREQ: GG 101 or GO 101 or PERM/INST.
  - GG 220 Cartography (1-6-3)(F/S). A study of the methods, concepts, techniques and instrumentation of map construction. Involves compilation and graphic presentation of data through the use of coordinate systems, map projections and scale. Lettering tools, graphic design, dimensional problems, computer mapping and aerial photographs are discussed.
  - GG 221 Geography of Idaho and the Pacific Northwest (3-0-3)(F/S). Physical and cultural geography of the Pacific Northwest with emphasis on Idaho.

- **Upper Division**
  - GG 301 Historical Geography of the United States (3-0-3)(F/S). The course explores the changing physical and cultural landscapes of the United States through time and space and analysis of the various regions. Included is the study of the distribution and relationships between peoples, land and resources. PREREQ: GG 102 PERM/INST.
  - GG 311 World Economic Geography (3-0-3)(F/S). Economic Geography is the study of the areal distribution and variation of resources and human activity related to producing, exchanging and consuming commodities. Economic activities are studied in the context of wherein they occur, their regional characteristics and their relationship to national or international phenomena. PREREQ: GG 101 or PERM/INST.
  - GG 321 Conservation of Natural Resources (3-0-3)(F/S). Informative study of resources, their use and relative values. Discussions will include perception, attitudes, character of resources, demand factors, social implications and population characteristics. Local and regional examples are emphasized. Local experts on conservation issues will serve as guest speakers. PREREQ: GG 101 or PERM/INST.
  - GG 340 Geography of the Slavic States (3-0-3)(F/S). A study of physical and cultural phenomena that have shaped the urban and rural landscapes of the fifteen republics. PREREQ: GG 101 or GO 102, PERM/INST.
  - GG 350 Regional Geography of Europe (3-0-3)(F/S). Identification and study of physical and cultural regions of Europe. Climate, landforms and soils along with resources, national groups and political geography. PREREQ: GG 101 or 102, PERM/INST.

GG 100 Fundamentals of Geology (3-2-4)(Area III)(Lab fee)(Field trip required). An introduction to the principles of Physical and Historical Geology. Topics include weathering, erosion, glaciation, volcanism, earthquakes, rocks, minerals, maps, the origin of the earth and its physical and biological development. Open to all students except those with previous credit in Geology, or Earth Science majors and those non-science majors who plan an eight hour sequence in Geology.

GG 101 Physical Geology (3-2-4)(Area III)(Lab fee)(Field trip required). A study of the origin and development of the earth, its materials and processes. Topics include weathering, erosion, volcanism, earthquakes, landscapes and plate tectonics. Rocks, minerals and topographic and geologic maps are studied in the laboratory.

GG 103 Historical Geology (3-3-4)(Area III)(Field trip required). A study of the geologic setting and history of Idaho and its immediate surroundings. Includes major topographic and scenic features, structural and stratigraphic features, mineral deposits, fossil and gem areas and current problems in natural resource products. PREREQ: GO 103 or PERM/INST.

GG 201 Introduction to Oceanography (3-0-3)(F/S). A general study of the phyisography and biological oceanography and ocean geology, including the phyisography, circulation patterns, waves, tides and the sedimentation and biologic processes that occur in the various ocean environments. PREREQ: GO 103.

GG 221 Mineralogy (2-4-3)(F). A study of minerals including crystal forms, atomic structure, chemical properties and environments of origin. The laboratory meets twice each week. Lab exercises emphasize identification of minerals by recognizing their physical properties in hand specimen and utilizing their optical properties in all mounts and thin sections. Several exercises involve use of the x-ray diffractometer. PREREQ: GO 101 COREQ: C 191.

GG 410 Optical Mineralogy (1-3-2)(F). (Alternate years) A study of the behavior of light in crystals and the use of the polarizing microscope in the examination.
and identification of minerals in immersion media and thin sections. PREREQ: GO 324.

**GO 280 FIELD GEOLOGY (1-6-3)(F)(Lab Fee)(Field trip required).** Techniques of field mapping to solve geologic problems. Field exercises will use topographic maps, stereo-pair air photos, Brunton compass, transit and plane table alidade for mapping. A detailed geologic map and written geologic report will be made, interpreting one area of moderate complexity and regional significance. Two weekend field trips required. Required field work on Friday afternoons. PREREQ: GO 101, 103, E 102. COREQ: M 111. (Field trip required.)

**GO 293 SEDIMENTATION AND STRATIGRAPHY (3-1-4)(S).** The study of the transportation and deposition of sediments and their depositional environments. Emphasis is placed on the identification and correlation of sedimentary facies and on basin analysis. PREREQ: GO 103, GO 323. (Field trips required.)

**GO 313 GEOMORPHOLOGY (2-3-3)(F); (Field trips required).** A study of the features of the earth's surface such as mountains, valleys, beaches and rivers and the process by which they are formed and changed. Laboratory work consists of map studies and field investigations. PREREQ: GO 103, E 102.

**GO 314 STRUCTURAL GEOLOGY (3-3-4)(S); (Field trips required).** Fundamentals of descriptive, kinematic and dynamic analysis of structures within the Earth's crust and a theoretical treatment of stress and strain. Laboratory problems in orthogonal and stereographic methods and solution of structural problems using geologic maps and cross-sections. PREREQ: M 111, GO 101, 221, 280.

**GO 323 PETROLOGY (2-3-3)(S).** A study of igneous, sedimentary and metamorphic rocks with emphasis on methods of their classification, physical and chemical constraints on their origin and their tectonic associations. PREREQ: GO 221. COREQ: GO 324.

**GO 324 PETROGRAPHY (3-1-3)(S).** A systematic study of igneous, sedimentary, metamorphic rocks in hand specimen and thin section. The polarizing microscope is used extensively. The origins and histories of representative specimens are interpreted through examination of their mineral assemblages, textures, fabrics and alteration. PREREQ: GO 221. COREQ: GO 323.

**GO 351 INVERTEBRATE PALEONTOLOGY (2-3-3)(F); (Field trips required).** The study of the invertebrate phyla represented in the fossil record. Special emphasis is placed on hardpart morphology, ontogeny, phylogeny and taxonomy of geologically important groups. Laboratory work based on standard collections. Special project. PREREQ: GO 103.

**GO 370 ENVIRONMENTAL GEOLOGY (3-3-3)(S); (Alternate Year).** A study of the ways in which geological materials and processes constrain human interaction with the natural environment. This includes the availability and use of geological resources, dealing with waste disposal and pollution and minimizing the impact of geological hazards. PREREQ: An introductory course in geography or geology.

**GO 403-403G ENGINEERING GEOLOGY (2-3-3)(S); (Field trip required).** Introduction to soil and rock mechanics. Slope stability analysis. Surface and subsurface exploration of sites. Geological and geophysical considerations for construction projects. Current applications of geology to engineering projects. Alternate years. PREREQ: GO 280, PH 102 or PH 211, GO 323 or PERM/INST.

**GO 412-412G HYDROGEOLOGY (3-0-3)(S); (Field trip required).** The study of subsurface water and its relationship to surface water, the hydrologic cycle and the physical properties of aquifer systems. Flow nets and flow through porous and fractured media. Methods of determination of aquifer characteristics and performance and groundwater modeling. PREREQ: GO 310, 314.

**GO 414 ADVANCED STRUCTURAL GEOLOGY (2-3-3)(F); (Alternate years); (Field trip required).** A study of the geometric properties of deformed rocks, their measurement and analysis. Course will emphasize structural analysis of folded and faulted terrains and metamorphic tectonics, mapping procedures, map interpretation and data analysis. Study will include review and comparison of tectonic styles of deformation of different geologic provinces throughout North America. PREREQ: GO 314.

**GO 421 ORE DEPOSITS (2-3-3)(F); (Field trips required).** Genesis, structure, associations and classification of mineral deposits. Discussion of modern theories of ore deposition, origin and migration of ore-bearing fluids and the processes of alteration, and secondary enrichment, controls of ore occurrence and the economics of exploration, development, and use of ores. Laboratory work consists of detailed studies of ore and alteration suites. Transmitted and reflected-light microscopy will be used to supplement hand-specimen study. PREREQ: GO 323 or PERM/INST.

**GO 422 EXPLORATION AND MINING GEOLOGY (3-0-3)(S).** The course emphasizes geologic, engineering and economic factors as they relate to exploring for and developing mineral deposits. The philosophy and methodology of systematically gathering, evaluating and presenting data pertinent to exploration and development discussions are also studied. Field trips required. PREREQ: GO 323 or PERM/INST.

**GO 431-431G PETROLEUM GEOLOGY (2-3-3)(F); (Field trips); (Alternate years).** A study of the nature and origin of petroleum, the geologic conditions that determine its migration, accumulation and distribution and methods and techniques for prospecting and developing petroleum fields. PREREQ: GO 311, 314.

**GO 450-450G GEOLOGY OF NATIONAL PARKS (3-0-3)(S).** A systematic study of geologic materials, structures, processes and landforms in the National Parks. The course is structured by geological regions and emphasizes geological knowledge as a key to greater appreciation and understanding of these scenic areas. PREREQ: GO 103. (Offered odd years.)

**GO 451-451G PRINCIPLES OF SOIL SCIENCE (3-0-3)(F/S).** Major aspects of soil science, including the physical, chemical and biological characteristics of soils will be presented in the classroom lectures. Demonstration laboratory exercises and field trips will be required. PREREQ: Background in Geology and Chemistry.

**GO 460-460G VOLCANOLOGY (2-0-2)(F); (Field trip); (Alternate years).** A study of volcanic processes and the deposits of volcanic eruptions. An in-depth review of the generation, rise and eruption of magmas and of the types of vent structures produced. Field and petrographic characteristics of various types of volcanic deposits as well as their volcanic-tectonic relationships will be emphasized. An independent project pertaining to volcanoes or volcanic rocks will be required of all students taking the course for graduate credit. PREREQ: GO 323.

**GO 471-471G REGIONAL FIELD STUDY (1, 2, or 3 CR)(F/S); (SU).** Field trips and field exercises to study geology of selected localities in North America. Review of pertinent literature and maps, recording of geologic observations and the preparation of a comprehensive report on the geology of the areas visited. PREREQ: GO 103 or PERM/INST.

**GO 482 GEOLOGY SUMMER FIELD CAMP (0-0-4)(SU).** The study of geology in its natural environment. The field, emphasis upon geologic mapping, the collection, plotting and analysis of data to solve geologic field problems, mapping on aerial photograph and topographic base. Student should expect to be in the field 8-10 hours per day, 6 days per week for 4 weeks. Students working toward a professional degree in geology (Bachelor of Science) at SUU must take COREQ: GO 483.

**GO 483 GEOLOGY SUMMER FIELD CAMP REPORT (0-0-2)(S).** A comprehensive geologic report, map and cross-section based upon mapping experiences at summer field camp. Map, report and cross-section must be of professional quality. COREQ: GO 482.

**GO 493 INTERNSHIP (4-6 credits).**

**GO 495 SENIOR THESIS (4-6 credits).** Field study involving an original investigation in geology or geophysics, carried out independently, but supervised by one or more faculty members. Problem must be well-stated and method of study designed to give a conclusive result. Project may be substituted for GO 480 upon approval of a written proposal by a committee of three department faculty members. PREREQ: Senior standing.

**GO 498, 499 GEOLOGY SEMINAR (1-0-1).** Research project based on field and/or literature studies. Fundamentals of geologic report preparation and oral presentations. PREREQ: Geology, Geophysics or Earth Science Education major.

**GP GEOPHYSICS**

**Upper Division**

**GP 300 PHYSICS OF THE EARTH (3-0-3)(F).** The course will include a discussion of the earth's gravity, magnetism, electricity, seismology, heat and radiactivity and the significance of these properties in understanding the complexities of the earth. Alternate years. PREREQ: PH 102.

**GP 301 INTRODUCTION TO APPLIED GEOPHYSICS (3-0-3)(F).** A survey of surface based geophysics methods, including elementary theory, basic field practice, computation fundamentals, interpretation techniques and economic considerations of seismic, gravimetric, magnetic and electrical techniques. Applicability of various techniques to exploration geology (economic and petroleum), engineering geology and groundwater geology will be stressed. Alternate years. PREREQ: PH 102, GO 101.

**GP 310-310G GRAMIMETRIC AND MAGNETIC METHODS (3-0-3)(F).** Basic potential field theory, instrumentation, reduction of observed data, methods of data interpretation. Applications to petroleum and mineral exploration, geotechnical and engineering investigations. PREREQ: GO 101; must be concurrently taking or have taken PH 213, PH 214.


GP 410-410G EXPLORATION WELL LOGGING (2-3-3)(F). Fundamentals of geophysical and geological well logging applied to petroleum, mineral and groundwater exploration and engineering site evaluation. Conventional interpretation of logs in sedimentary sections; special consideration for logs in igneous, metamorphic and fresh-water sections. Lithologic description, natural gamma-ray, temperature, density, resistivity and sonic logging. Integration of well logging, seismic reflection data and surface geologic maps. Field and laboratory exercises. PREREQ or COREQ: GO 310.


GP 430-430G MATHEMATICAL MODELING IN GEOPHYSICS (3-0-3)(S). Examination of useful mathematical methods in geophysics including: statistical analysis of aeromagnetic anomalies, the Dirichlet problem and continuation of potential fields, wave equation migration in reflection seismology, formulation of geotomography in terms of the Radon transform. Emphasis is on problem solving and the development of skills in applied mathematics. PREREQ: M 301.

GS GENERAL SCIENCE

GS 305 TEACHING SCIENCE IN THE SECONDARY SCHOOL (3-0-3)(S)(alternate years). A course designed to introduce the prospective secondary school science teacher to an understanding of the nature of science as subject matter and as processes of scientific inquiry. Special emphasis is placed on problems of communicating scientific ideas, effective modes of instruction and evaluation and curricular materials for secondary school science teaching.

Department of Health, Physical Education and Recreation

Gymnasium, Room 209
Telephone (208) 385-1570

Chair and Professor: Glenn Potter; Professors: Button, Hoeger, Kozar, Pfeiffer, Vaughn; Associate Professors: Fahleson, Lewis, Petlichoff, Thorngren; Assistant Professors: Dopp, Gibson, Wallace; Special Lecturers: Craner, Koto, Moore, Sandmire, Educational Consultant: Wade.

Degrees Offered

• B.S. in Athletic Training
• B.S. in Physical Education, Secondary Education
• B.S. in Physical Education, Non-Teaching Options
• Biomechanics, Exercise Science or Health Promotion
• M.S. in Exercise and Sport Studies (See Graduate College Catalog for more details)

Department Statement

The Department of Health, Physical Education and Recreation has as its major focus the comprehension, development and promotion of a healthy lifestyle. Our purpose through teaching, research and service activities is to help others enjoy, improve and enrich their quality of life through the three domains of learning: a) psycho/motor developing motor skills and engaging in vigorous fitness activities; b) cognitive understanding, comprehending and experiencing skillful movement through physical activity, games and sports; and c) affective cultivating positive attitudes, beliefs and values through participating in leisure ventures; displaying appropriate conduct in group activities; and achieving self-fulfillment and wellness.

Students completing a course of study within the Department will have acquired and demonstrated pre-identified knowledge and skills in the following areas: a) biomechanics, exercise physiology and exercise science as preparation for graduate school; b) affective cultivating positive attitudes, beliefs and values through participating in leisure ventures; displaying appropriate conduct in group activities; and achieving self-fulfillment and wellness.

To accomplish this challenge, the Department has developed five undergraduate options with different areas of specialty.

1. Teaching Option: For students seeking to certify as teachers at the 6-12 or K-12 grade levels. Complementary areas of emphasis include:
   A. Coaching: College of Education majors who want special preparation for public school coaching should pursue this alternative.
   B. Athletic Training: For those who desire to prepare for the National Athletic Trainers Association Certification Examination and qualify as an Athletic Trainer/Teacher in a school setting.
   C. Health: For students requesting a minor in health education.

2. Biomechanics: Majors desiring a strong biological sciences and mechanical bases of human movement for coaching, research or preparation for graduate school.

3. Exercise Science: Majors desiring a strong biological sciences and exercise physiology background as preparation for graduate school.

4. Health Promotion: This program is designed to prepare students for a career as a fitness consultant in the private sector and to successfully pass the American College of Sports Medicine Health/Fitness Instructor Certification Examination.
5. Athletic Training: For students preparing for the National Athletic Trainers Association (NATA) Certification Exam and qualification as an Athletic Trainer in a college, professional sport or sports medicine clinic. Also, many pre-physical therapy students pursue this option as an undergraduate degree.

Department Admission Requirements

Admission to Upper Division Standing: Admission policies provide students an opportunity to be evaluated prior to enrollment in upper division Physical Education classes. Applications must be submitted NO LATER THAN October 1 or March 1 depending when the applicant's total credit hours, including current course load, exceeds 57. Forms can be picked up from academic advisors and should be returned to G-209 along with:

APPLICATION CRITERIA.
1. The student's total credit hours, including current course load, must exceed 57 credit hours.
2. The student must achieve a grade of "C" or better for each of the following lower division courses (program specific requirements are noted):
   - E 101-102: English Composition (Core)
   - P 101: General Psychology (Area II Core)
   - CM 111: Fund of Speech Communication (Area II Core)
   - PS 100: Found of Physical Science (Area III Core)
   - or
   - PH 101: General Physics (Area III Core)
   - C: Chemistry Sequence (Athletic Training, Exercise Science only)(Area III Core)
   - Z 111-112: Anatomy and Physiology (Area III Core)
   - TE 201: Found of Education (Teaching option only)
   - PE 100: Health Education
   - PE 101: Foundations of PE
   - PE 114: Fitness Foundations
   - PE 113, 150, 151, 153, 155, 156, 159, 203, 212: Training (3 credits); Non-Teaching Options, except Athletic Education
   - PE 121: Standard First Aid & CPR or equivalent
   - PE 230: Applied Anatomy
   - PE 284: Microcomputers in PE or equivalent

3. The student's cumulative GPA will determine acceptance to upper division standing according to:
   - A. 2.50 or above = acceptance
   - B. below 2.50 = denial
   - Students not qualifying for admittance to upper division standing can reaply once their GPA is raised to at least 2.50 and they have a "C" or better grade for each of the courses listed in item #2 above.

4. Each faculty member will be given an opportunity to submit in writing to the Chair recommendations as well as reservations regarding each student's:
   - A. involvement in professional activities (i.e. Physical Education Majors and Minors Club (PEMM), departmental projects, attendance at professional activities).
   - B. performance level in fitness, academic and motor skills.
   - C. commitment to becoming a model physical educator.
   - The Chair will be obligated to discuss the issue(s) with the student as s/he is admitted or denied admission to upper division standing.

5. Those enrolling in upper division Physical Education courses without upper division standing will be administratively withdrawn.

6. Once admitted to upper division standing, student's must maintain a cumulative 2.5 GPA before being permitted to enroll for student teaching, a PE 493 internship and/or graduate.

Degree Requirements

PHYSICAL EDUCATION, SECONDARY EDUCATION

PHYSICAL EDUCATION, NON-TEACHING OPTIONS

ATHLETIC TRAINING

Bachelor of Science Degree

GENERAL UNIVERSITY CORE REQUIREMENTS

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
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<td>Area I-II Electives</td>
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PHYSICAL EDUCATION CORE REQUIREMENTS (Required of all Teaching and Non-Teaching Graduates)

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>Health Education PE 100</td>
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</tr>
<tr>
<td>Foundations of Physical Education PE 101</td>
<td>3</td>
</tr>
<tr>
<td>Fitness Foundations PE 114</td>
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<tr>
<td>Applied Anatomy PE 230</td>
<td>3</td>
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<tr>
<td>Human Growth &amp; Motor Learning PE 306</td>
<td>3</td>
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<tr>
<td>Evaluation In Physical Education PE 309</td>
<td>3</td>
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<tr>
<td>Exercise Physiology PE 310</td>
<td>3</td>
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<tr>
<td>Kinesiology PE 311</td>
<td>3</td>
</tr>
<tr>
<td>Psycho/Social Aspects of Activity PE 401</td>
<td>3</td>
</tr>
<tr>
<td>Adapted Physical Education - PE 451</td>
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</table>

In addition, students must demonstrate:
1. Computer literacy by completing PE 284, a comparable computer class or by passing a proficiency exam offered by the department.
2. Competency in First Aid and CPR. This can be met by completing PE 121 or through the American Red Cross.
3. Competency in swimming. Testing will take place in PE 114 Fitness Foundations. If students fail to pass the test they will be required to take a Fitness Activity swimming class.

NOTE: Completion of all requirements for graduation with a secondary education option may require more than 128 credit hours. See the Teacher Education listing for more information.

Program Requirements

FRESHMAN YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>English Composition E 101-102 (Core)</td>
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<tr>
<td>General Psychology P 101 (Area II Core)</td>
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<tr>
<td>Human Anatomy and Physiology Z 111-112 (Area III Core)</td>
<td>6</td>
</tr>
<tr>
<td>Health Education PE 100</td>
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<tr>
<td>Foundations of Physical Education PE 101</td>
<td>3</td>
</tr>
<tr>
<td><em>Sport &amp; Fitness Activities</em></td>
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</tr>
<tr>
<td>Standard First Aid &amp; CPR PE 121</td>
<td>2</td>
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<tr>
<td>Area I Core 3</td>
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<tr>
<td>Elective (recommend Intro Coaching PE 107)</td>
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SOPHOMORE YEAR

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Applied Anatomy PE 230</td>
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<tr>
<td>Microcomputers in PE - PE 284 or equivalent</td>
<td>3</td>
</tr>
<tr>
<td>Intro to Teaching Physical Educator: Classroom Observation PE 271</td>
<td>1</td>
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<tr>
<td>Fund of Education TE 201 (Area II Core)</td>
<td>3</td>
</tr>
<tr>
<td>Fund of Speech Communication CM 111 (Area II Core)</td>
<td>3</td>
</tr>
<tr>
<td>Fund of Physical Science PS 100 (Area III Core)</td>
<td>4</td>
</tr>
<tr>
<td>General Physics PH 101 (Area III Core)</td>
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</tr>
<tr>
<td>Area I Core-Second &amp; Third Fields</td>
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</tr>
<tr>
<td>Area II Core-Sociology Elective</td>
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</tbody>
</table>
*Sport & Fitness Activities ...................................................... 4
Adolescent Psychology P 212 ................................................... 3

JUNIOR YEAR
Curriculum Proficiency PE 300 ................................................ 2
Instructional Styles PE 304 ......................................................... 3
Human Growth and Motor Learning PE 306 ............................. 3
Evaluation in Physical Education PE 309 .................................. 3
Exercise Physiology PE 310 ....................................................... 3
Kinesiology PE 311 ................................................................. 3
*Sport & Fitness Activities ....................................................... 2
Educational Psychology TE 225 ............................................... 3
Educational Technology TE 356 ............................................... 2
Secondary School Methods TE 381 .......................................... 3
Evaluating Exceptional Secondary-Age Students TE 333 .......... 1
Area I Core-Any Field ............................................................ 3

SENIOR YEAR
Psycho/Social Aspects of Activity PE 401 ............................... 3
Reading in Content Subject TE 407 ......................................... 3
Adapted Physical Education PE 451 ......................................... 3
Organization and Administration of Physical Education PE 457 .. 2
Student Teaching ................................................................. 10-16
Electives .............................................................................. 10

NOTE: *All 6-12 PE majors must successfully complete PE 113, 114, 150, 151, 153, 155, 156, 159, 203, & 212.

PHYSICAL EDUCATION, NON-TEACHING OPTION

FRESHMAN YEAR
English Composition E 101-102 (Core) ............................... 6
General Psychology P 101 (Area II Core) ............................... 3
Human Anatomy and Physiology Z 111-112 (Area III Core) .... 8
Health Education PE 100 ......................................................... 3
Foundations of Physical Education PE 101 ............................. 3
Rhythmic Skills/Dance PE 113 ............................................... 1
Fitness Foundations PE 114 ..................................................... 1
Area I Core-Philosophy Elective ............................................. 3
Digital Computer Programming CS 124/EN 104 .................... 2

SOPHOMORE YEAR
Applied Anatomy PE 230 ...................................................... 3
Microcomputers in Physical Education PE 284 or equivalent .... 3
Internship PE 293 ................................................................. 3
Area II Core-Any Field ........................................................... 3
Area II Core-Sociology Elective .............................................. 3
Area I Core-Second Field ....................................................... 3
College Chemistry & Labs C 131-134 (Area III Core) .......... 9

JUNIOR YEAR
Human Growth & Motor Learning PE 306 ............................. 3
Evaluation in Physical Education PE 309 ............................... 3
Exercise Physiology PE 310 ..................................................... 3
Kinesiology PE 311 ................................................................. 3
Conditioning Procedures PE 313 ............................................. 2
Area I Core-2 & 3rd Fields ..................................................... 5
Area I Core-Any Field ........................................................... 5
Area II Core-Sociology Elective ............................................. 3
Mechanics/Statistics EN 205 .................................................. 3
Mechanics/Dynamics EN 206 .................................................. 3

SENIOR YEAR
Adapted Physical Education PE 451 ....................................... 3
Psycho/Social Aspects of Activity PE 401 ............................... 3
Internship PE 493 ................................................................. 6
**Electives ........................................................................... 19

NOTES: *Sport & Fitness Activities select from PE 150, 151, 153, 155, 156, 159 or 203.

RECOMMENDED ELECTIVES: (19 credits, of which 14 must be upper division to meet graduation requirements) from PE 301, 306, M 331, 361; PH 207, 341, P 305.

PHYSICAL EDUCATION, NON-TEACHING OPTION

EXERCISE SCIENCE EMPHASIS

FRESHMAN YEAR
English Composition E 101-102 (Core) ............................... 6
General Psychology P 101 (Area II Core) ............................... 3
Human Anatomy and Physiology Z 111-112 (Area III Core) .... 8
Health Education PE 100 ......................................................... 3
Found of Physical Education PE 101 ....................................... 3
Rhythmic Skills/Dance PE 113 ............................................... 1
Fitness Foundations PE 114 ..................................................... 1
*Sport & Fitness Activity ....................................................... 2
Standard First Aid & CPR PE 121 ......................................... 1
Area I Core-Philosophy Elective ............................................. 3

SOPHOMORE YEAR
Applied Anatomy PE 230 ...................................................... 3
Microcomputers in Physical Education PE 284 or equivalent .... 3
Internship PE 293 ................................................................. 3
Area II Core-Any Field ........................................................... 3
Area II Core-Sociology Elective .............................................. 3
Area I Core-Second Field ....................................................... 3

JUNIOR YEAR
Human Growth & Motor Learning PE 306 ............................. 3
Evaluation in Physical Education PE 309 ............................... 3
Exercise Physiology PE 310 ..................................................... 3
Kinesiology PE 311 ................................................................. 3
Conditioning Procedures PE 313 ............................................. 2
Nutrition H 207 ................................................................. 3
Area I Core-Third - Any Field ................................................. 6
**Electives ........................................................................... 10

SENIOR YEAR
Cell Biology B 301 ................................................................. 3
Organic Chemistry & Lab C 317-319 ........................................ 5
Human Physiology Z 401 ......................................................... 4
Psycho/Social Aspects of Activity PE 401 ............................... 3
Adapted Physical Education PE 451 ....................................... 3
Internship PE 493 ................................................................. 3
Health Promotion PE 417 ....................................................... 3
*Electives ........................................................................... 9

NOTE: *Sport & Fitness Activities - select two credits from PE 150, 151, 153, 155, 156, 159 or 203.

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>General Psychology P 101 (Area II Core)</td>
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<td>Standard First Aid &amp; CPR PE 121 or equivalent</td>
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<td>Microcomputers in PE - PE 284 or equivalent</td>
<td>3</td>
</tr>
<tr>
<td>Fund of Speech Communication CM 111 (Area II Core)</td>
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</tr>
<tr>
<td>Found of Physical Science PS 100 (Area III Core) or PH 101</td>
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<td>Area I Core-Second &amp; Third Fields</td>
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### JUNIOR YEAR

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<th>Course</th>
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<tr>
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<tr>
<td>Exercise Physiology PE 310</td>
<td>3</td>
</tr>
<tr>
<td>Kinesiology PE 311</td>
<td>3</td>
</tr>
<tr>
<td>Conditioning Procedures PE 313</td>
<td>2</td>
</tr>
<tr>
<td>Electives-Fitness Activities</td>
<td>2</td>
</tr>
<tr>
<td>Nutrition H 207</td>
<td>3</td>
</tr>
<tr>
<td>Drugs: Use &amp; Abuse H 109</td>
<td>3</td>
</tr>
<tr>
<td>Area I Core - Any Field</td>
<td>3</td>
</tr>
<tr>
<td>Management &amp; Organizational Theory MG 301</td>
<td>3</td>
</tr>
<tr>
<td>Prin of Marketing MK 301</td>
<td>3</td>
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<tr>
<td><strong>SENIOR YEAR</strong></td>
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### SENIOR YEAR

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>Psycho/Social Aspects of Activity PE 401</td>
<td>3</td>
</tr>
<tr>
<td>Adapted Physical Education PE 451</td>
<td>3</td>
</tr>
<tr>
<td>Health Programs: Methods &amp; Administration PE 415</td>
<td>3</td>
</tr>
<tr>
<td>Health Promotion PE 417</td>
<td>3</td>
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<tr>
<td>Internship PE 493</td>
<td>1</td>
</tr>
<tr>
<td>Area II Core</td>
<td>3</td>
</tr>
<tr>
<td>Organizational Behavior MG 401</td>
<td>3</td>
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<tr>
<td><strong>Electives</strong></td>
<td>10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>32</td>
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</tbody>
</table>

### ATHLETIC TRAINING MAJOR

**BACHELOR OF SCIENCE DEGREE**

The Boise State University Athletic Training Program (BSU-AT Program) is currently the only NATA approved undergraduate major in the Northwest. The BSU-AT Program operates within the Department of Physical Education. Graduates have the option of either a teaching or non-teaching Bachelor of Science degree.

Please note that this program is an NATA Undergraduate Program, therefore it is not possible to earn a Masters Degree in Athletic Training at Boise State University.

Undergraduate preparation in Athletic Training includes study in both academic and clinical settings. Academic preparation includes an extensive group of classes, with all of the following:

- Medical Terminology
- Introduction to Athletic Injuries
- Advanced Athletic Training
- Injury Evaluation
- Training Room Modalities
- Theory & Application of Therapeutic Exercise
- Internship in Athletic Training

The clinical program includes working in the athletic treatment centers on campus, being directly associated with an intercollegiate team, assisting with the intramural program, as well as with various sports events held both on and off campus. In addition, BSU is fortunate to be the only institution in the Western United States with a private sports medicine clinic on campus, the Idaho Sports Medicine Institute. Internships are also available at local high schools, hospitals and physical therapy clinics in the Boise area.

Student athletic trainers are required to complete a minimum of 800 clinical hours in addition to the academic requirements. After a student has completed all the requirements they are recommended to take the NATA National Certification Examination. This exam consists of written simulation, objectives and an oral practical component. Upon successful completion, the student is granted Certified Status through the NATA.

Student athletic trainers work under the direct supervision of NATA approved Clinical Instructors both on and off campus providing a vital medical support team for the various activity programs. The BSU-AT program is committed to providing the highest quality program of study for future professionals in the Athletic Training Field.

All applicants should be aware that AT is a "limited enrollment" program. That is, only a limited number of students can be admitted into the upper division courses during an academic year. Candidates are selected on the basis of their previous academic performance, admission to upper division standings in the HPER Department, related experiences, overall attitude and demonstrated interest. Students can only apply after they have completed two years of undergraduate course work.

Applications must be submitted no later than April 15th, in order to be considered for the following academic year.

For information phone Dr. Ron Pfeiffer, A.T.C., Curriculum Director at (208) 385-3709.

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>English Composition E 101-102 (Core)</td>
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<tr>
<td>General Psychology P 101 (Area II Core)</td>
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<tr>
<td>Human Anatomy &amp; Physiology Z 111-112 (Area III Core)</td>
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<tr>
<td>Health Education PE 100</td>
<td>3</td>
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<tr>
<td>Foundations of Physical Education PE 101</td>
<td>3</td>
</tr>
<tr>
<td>Fitness Foundations PE 114</td>
<td>3</td>
</tr>
<tr>
<td>Training Room Procedures PE 120</td>
<td>1</td>
</tr>
<tr>
<td>Standard First Aid &amp; CPR PE 121</td>
<td>1</td>
</tr>
<tr>
<td>Medical Terminology H 101</td>
<td>3</td>
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<tr>
<td>Intro to Philosophy PY 101 (AREA I)</td>
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<tr>
<td><strong>TOTAL</strong></td>
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### SOPHOMORE YEAR

<table>
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<tr>
<th>Course</th>
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<tbody>
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<td>Applied Anatomy PE 230</td>
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<tr>
<td>Microcomputers in PE - PE 284</td>
<td>3</td>
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<tr>
<td>Internship PE 283</td>
<td>2</td>
</tr>
<tr>
<td>Nutrition H 207</td>
<td>3</td>
</tr>
<tr>
<td>Intro Athletic Injuries PE 236</td>
<td>3</td>
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<tr>
<td>Fund of Speech Communication CM 111 (Area II Core)</td>
<td>3</td>
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<td>Found of Physical Science PS 100 (Area III Core) or PH 101</td>
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<td>Area I Core-Second Field</td>
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<td>Area II Core</td>
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<tr>
<td>Essentials of Chemistry &amp; Labs C 107-110 (Area III Core)</td>
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### JUNIOR YEAR

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<tr>
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<tr>
<td>Human Growth &amp; Motor Learning PE 306</td>
<td>3</td>
</tr>
<tr>
<td>Evaluation in Physical Education PE 309</td>
<td>3</td>
</tr>
<tr>
<td>Exercise Physiology PE 310</td>
<td>3</td>
</tr>
<tr>
<td>Training Room Modalities PE 403</td>
<td>2</td>
</tr>
</tbody>
</table>
Pre-physical therapy students should take M 111 or Chem 131-134 instead of C 107-110 & Physics 101-102 instead of PS 100. It is also recommended that specific prerequisite course requirements be checked for the physical therapy schools the student plans to apply to and possibly attend.

Physical Education Minor Teacher Certification Requirements

HEALTH EDUCATION FOR NON-PHYSICAL EDUCATION MAJORS
Health Education PE 100 .................................................. 3
Fitness Foundations PE 114 ............................................. 1
Standard First Aid & CPR PE 121 ................................. 1
First Aid Instructor Training course PE 123 ................. 1
Health Programs: Methods & Administration PE 415 ... 3
Anatomy and Physiology Z 107 ................................. 4
Nutrition H 207 ............................................................. 3
ELECTIVES: Select two (5-6)
Drugs, Use and Abuse H 109 .................................. 3
Human Sexuality P 261 ............................................. 3
Consumer Health PE 405 ........................................... 2
Death: A Confrontation for Everyone P 291 .............. 3
Psychology of Aging P 313 ........................................ 3
Total ........................................................................... 21-22

HEALTH EDUCATION MINOR FOR PHYSICAL EDUCATION MAJORS
First Aid Instructor Training course PE 123 ................. 1
Health Programs: Methods & Administration PE 415 ... 3
Nutrition H 207 ............................................................. 3
ELECTIVES: Select two (5-6)
Drugs, Use and Abuse H 109 .................................. 3
Human Sexuality P 261 ............................................. 3
Consumer Health PE 405 ........................................... 2
Death: A Confrontation for Everyone P 291 .............. 3
Psychology of Aging P 313 ........................................ 3
Total ........................................................................... 12-13

ATHLETIC TRAINING MINOR FOR PHYSICAL EDUCATION MAJORS
Essentials of Chemistry & Labs C 107-110 ..................... 9
Medical Terminology H 101 ......................................... 3
Nutrition H 207 ............................................................. 3
Training Room Procedures PE 120 ......................... 1
Intro Athletic Injuries PE 236 .................................. 3
Internship-Athletic Training PE 293 ......................... 2
Conditioning Procedures PE 313 ............................... 2
Psycho/Social Aspects of Activity PE 401 ................. 3
Advanced Athletic Training PE 402 ......................... 3
Training Room Modalities PE 403 ......................... 2
Injury Evaluation PE 422 .......................................... 2
Theory & Application of Therapeutic Exercise PE 406 ... 3
Internship-Athletic Training PE 493 ......................... 6
Health Promotion PE 417 ......................................... 3
Total ........................................................................... 45

COACHING ENDORSEMENT
The Coaching Endorsement consists of two parts. Those desiring to coach at the elementary school level or as a volunteer in youth sport organizations should complete Part I which leads to American Coaching Effectiveness Program (ACEP) Level I certification. Completion of both Parts I and II is recommended for those desiring to coach sports at the interscholastic level.

Part I-Volunteer coaches
Introduction to Coaching PE 107 ...................................... 2
Complete one of the following:
Standard First Aid-CPR PE 121 ................................... 1
Intro Athletic Injuries PE 236 ........................................ 3
American Red Cross Certification in First Aid-CPR ............. 0
One Coaching Methods Course selected from:
Coaching Baseball PE 250 .......................................... 2
Coaching Basketball PE 251 ....................................... 2
Coaching Football PE 252 ......................................... 2
Coaching Women’s Gymnastics PE 256 ......................... 2
Coaching Tennis PE 257 .......................................... 2
Coaching Track & Field PE 258 .................................. 2
Coaching Volleyball PE 259 ....................................... 2
Coaching Wrestling PE 260 ....................................... 2
Internship in Coaching Youth Sports PE 293 ............. 3

or equivalent experience ........................................... 1
subtotal .................................................................... 4-8

Part II-Interscholastic coaches
Complete Part I .............................................................. 4-8
Anatomy & Physiology Z 107 or Z 111-112 .................. 8
Conditioning Procedures PE 313 ............................. 3
Psycho/Social Aspects of Sport PE 401 ....................... 3
Coaching, Nature of Profession PE 430 ..................... 2
One Coaching Methods selected from:
Coaching Baseball PE 250 .......................................... 2
Coaching Basketball PE 251 ....................................... 2
Coaching Football PE 252 ......................................... 2
Coaching Women’s Gymnastics PE 256 ......................... 2
Coaching Tennis PE 257 .......................................... 2
Coaching Track & Field PE 258 .................................. 2
Coaching Volleyball PE 259 ....................................... 2
Coaching Wrestling PE 260 ....................................... 2
Two skills courses that compliment coaching methods courses: 1+1
Internship “Interscholastic Athletics” PE 493 ............... 3
Total ........................................................................... 22-30

K-12 ENDORSEMENT FOR PHYSICAL EDUCATION MAJORS
Child Psychology P 211 .............................................. 3
Elementary School P E Methods PE 361 .................. 3
Elementary Student Teaching-Specialty Area TE 477 ... 4-8
Total ........................................................................... 10-14

Course Offerings
See page 4 for definition of course numbering system

PE PHYSICAL EDUCATION

Lower Division

PE 100 HEALTH EDUCATION (3-0-3)F/S. Covers nutrition, diseases, health needs, services, drugs, family living and personality structure and development. Enhances
student adjustment toward effective functioning in a changing environment. Required of all PE majors and Athletic Training majors.

PE 101 FOUNDATIONS OF PHYSICAL EDUCATION (3-0-3)(F/S). Instruction in physical education program offerings and requirements at BSU. Emphasis on an understanding of what is involved in the profession, including: interaction of humanities, exercise physiology, kinesiology, psycho-social aspects and human growth and motor development as related to physical education. Required of all PE and Athletic Training majors.

PE 103 INTRODUCTION TO RECREATION (2-0-2)(S). Instruction in the growth and development of recreation education and its role in present-day society. Offered odd numbered years.

PE 107 INTRODUCTION TO COACHING (2-0-2)(F/S). An overview of the various elements that are critical to the coaching process including: coaching philosophy, sport psychology, practice planning, conditioning principles, injury prevention/ rehabilitation and sport management. Successful completion leads to American Coaching Certified Program (ACEP) Level I certification. Special Fee: $7.00.

PE 113 RHYTHMIC SKILLS/DANCE (0-3-1)(F/S). Professional activity. Instruction and practice in rhythmic skills, locomotor, non-locomotor and manipulative dance, emphasizing concepts, fundamental and practical application. Required of all 6-12 PE majors.

PE 114 FITNESS FOUNDATIONS (0-3-1)(F/S). Assessment, prescription and development of an individualized physical fitness program. Designed to improve cardiovascular endurance, strength, flexibility and weight control. Required of all PE and Athletic Training majors.

PE 120 TRAINING ROOM PROCEDURES (0-2.1)(F). Instruction in actual clinical aspects of campus athletic training programs, emphasizing observation and practical application. Required of all Athletic Training majors.

PE 121 STANDARD FIRST AID & CPR (1-1-1)(F). Instruction in and application of basic skills utilizing the multi-media approach to first aid and CPR training. Required of all PE majors.

PE 122 ADVANCED FIRST AID & CPR (3-0-3)(F/S). Instruction in wounds, shock, poisoning, heat and cold injuries, skeletal injuries, water rescue, CPR extraction, emergency child-birth and training required for police, fire and ski patrol persons.

PE 123 FIRST AID INSTRUCTOR TRAINER COURSE (1-1-1)(S). Instruction in methods of teaching CPR and Standard First Aid. Offered spring on odd numbered years.

PE 138 WEIGHT MANAGEMENT (1-0-1)(F/S). A healthy approach to weight loss is presented. Students will learn to self-monitor their progress towards attainment of ideal weight using a simple 100-point scoring system. Behavioral changes in the areas of nutrition and exercise are facilitated by an optional support group composed of class members. Pass/Fail. May be taken for Physical Education credit or Health Science credit (H 138), but not both.

PE 139 STRESS MANAGEMENT (1-0-1)(F/S). A series of exercises are presented to help students identify the various sources of stress in their lives, expand their repertoire of appropriate stress management techniques and develop an action plan for the effective management of stress. Behavioral changes which facilitate stress management are reinforced by an optional support group composed of class members. Pass/Fail. May be taken for Physical Education credit or Health Science credit (H 139), but not both.

PE 140 PREPARING FOR DRUG FREE YEARS (1-0-1)(F/S). An alcohol/drug education program that empowers parents of children age 9-12 to reduce the risk that their children will develop alcohol/drug problems. Program is based on contemporary research which shows parents can make a difference. Pass/Fail. May be taken for Physical Education credit or Health Science credit (H 140), but not both.

PE 150 A.BADMINTON/B.RACQUETBALL (0-3-1)(F/S). Professional activities. Instruction and practice in badminton/racquetball activities, emphasizing concepts, fundamentals, strategy, conditioning and practical application. Required of all 6-12 PE majors.

PE 151 A.BASKETBALL/B.VOLLEYBALL (0-3-1)(F/S). Professional activities. Instruction and practice in basketball/volleyball activities, emphasizing concepts, fundamentals, strategy, conditioning and practical application. Required of all 6-12 PE majors.

PE 153 A.FLAG FOOTBALL/B.AEROBIC CROSS-TRAINING (0-3-1)(F/S). Professional activities. Instruction and practice in flag football/aerobic activities, emphasizing concepts, fundamentals, strategy, conditioning and practical application. Required of all 6-12 PE majors.

PE 155 A.GOLF/B.BOWLING (0-3-1)(F/S). Professional activities. Instruction and practice in golf/bowling activities, emphasizing concepts, fundamentals, strategy, conditioning and practical application. Required of all 6-12 PE majors. Special fee required.

PE 156 A.SOFTBALL/B.TENNIS (0-3-1)(F/S). Professional activities. Instruction and practice in softball/tennis activities, emphasizing concepts, fundamentals, strategy, conditioning and practical application. Required of all 6-12 PE majors.

PE 159 A.SOC/BER/B.TUMBLING (0-3-1)(F/S). Professional activities. Instruction and practice in soccer/tumbling activities, emphasizing concepts, fundamentals, strategy, conditioning and practical application. Offered of all 6-12 PE majors.

PE 160 LIFETIME FITNESS AND HEALTH (3-2-4)(F/S). A survey of contemporary fitness and health related issues. Emphasis is upon providing an understanding of basic concepts that are essential for knowledgeable decision making. Topics include: mental health, stress, fitness, nutrition, drug use/abuse, disease and aging. Laboratory experiences stress lifestyle changes and an opportunity to set and achieve personal goals. May be taken for Physical Education credit or Health Science credit (H 160), but not both.

PE 203 RECREATIONAL ACTIVITIES (0-3-1)(F/S). Recreational games and activities designed for school settings with emphasis on concepts, materials, methods and teaching progressions. Required of all 6-12 PE majors.

PE 212 TRACK AND FIELD (0-3-1)(F/S). Professional activity. Instruction and practice in track and field events emphasizing concepts, basic skills and techniques, conditioning and practical application. Required of all 6-12 PE majors.

PE 217 WRESTLING (0-2-1). Professional activities. Instruction and participation in wrestling for development of basic skills and techniques, emphasizing fundamentals, conditioning and practical application. Offered on demand.

PE 218 RHYTHMIC GYMNASTICS (0-2-1). Professional activity. Instruction and participation in rhythmic gymnastics for development of basic skills and techniques, emphasizing fundamentals, skill progressions, conditioning and practical application. Offered on demand.

PE 230 APPLIED ANATOMY (2-2-3)(F/S). Investigation of human osteology, myology, arthrology and neurology as they relate to movement. Emphasis is on application of anatomy to principles of simple and complex movement. Required of all PE and Athletic Training majors. PREREQ: Z 107 or Z 111 or concurrent enrollment in Z 112.

PE 235 INTRODUCTION TO ATHLETIC INJURIES (2-2-3)(F/S). Introduction to principles of care and prevention of sport induced injury. Emphasis will be on identification and differentiation of minor and major trauma related to sports participation. Required of all Athletic Training majors.

PE 250 COACHING BASEBALL (2-0-2)(S). Instruction in methods of coaching baseball with emphasis on fundamentals, strategy, conditioning and practical application. PREREQ: Sophomore standing. Offered Spring on odd numbered years.

PE 251 COACHING BASKETBALL (2-0-2)(F). Instruction in methods of coaching basketball with emphasis on fundamentals, strategy, conditioning and practical application. PREREQ: Sophomore standing.

PE 252 COACHING FOOTBALL (2-0-2)(F). Instruction in methods of coaching football with emphasis on fundamentals, strategy, conditioning and practical application. PREREQ: Sophomore standing.

PE 254 SPORT OFFICIATING (2-0-2)(S). Instruction in officiating sports for development of skills and application of methods to sports.

PE 256 COACHING WOMEN'S GYMNASTICS (2-0-2). Instruction in methods of coaching women's gymnastics with emphasis on fundamentals, skill progressions, safety, conditioning and practical application. PREREQ: Sophomore standing. Offered upon demand.

PE 257 COACHING TENNIS (2-0-2)(S). Instruction in methods of coaching tennis with emphasis on fundamentals, strategy, conditioning and practical application. PREREQ: Sophomore standing. Offered in spring on even numbered years.

PE 258 COACHING TRACK AND FIELD (2-0-2)(S). Instruction in methods of coaching track and field with emphasis on fundamentals, conditioning, meet organization/administration and practical application. PREREQ: Sophomore standing and PE 212.

PE 259 COACHING VOLLEYBALL (2-0-2)(F). Instruction in methods of coaching volleyball with emphasis on fundamentals, strategy, conditioning and practical application. PREREQ: Sophomore standing.

PE 260 COACHING WRESTLING (2-0-2). Instruction in methods of coaching wrestling with emphasis on fundamentals, strategy, conditioning and practical application. PREREQ: Sophomore standing. Offered on demand.

PE 271 INTRODUCTION TO TEACHING PHYSICAL EDUCATION: CLASSROOM OBSERVATION (1-1-1)(F/S). Participants will be required to observe and report
systematic and anecdotal recordings of teaching/learning events in public school gymnasiums. In addition, students will be asked to take on a more active, teacher assistant role on several occasions throughout the semester.

**PE 282 EMERGENCY AND BASIC WATER SAFETY (1-2-2)(F/S).** American Red Cross (ARC) course. Personal and community water safety and how to respond in an aquatic emergency. Students must be able to pass an intermediate skills test consisting of swimming continuously for 5 minutes including the crawl stroke and sidestroke for 50 yards each; jumping into deep water and treading water for one minute; demonstrating the survival float and water safety assistance skills in reaching, throwing and wading.

**PE 283 WATER SAFETY INSTRUCTOR’S COURSE (1-2-2)(F/S).** Review of courses the student is eligible to teach. Teaching methods and practice teaching. Leads to American Red Cross (ARC), WSI certification. PREREQ: Students must be able to pass an American Red Cross intermediate skills test.

**PE 284 MICROCOMPUTERS IN PHYSICAL EDUCATION (3-0-3)(F/S).** An introduction to the use of microcomputers in physical education and allied disciplines. The course includes BASIC programming, selection and evaluation of hardware and software and unique computer applications for physical educators.

**PE 288 LIFEGUARD TRAINING (1-2-2)(F/S).** The essential skills training will be provided for those desiring to certify through the American Red Cross (ARC) as nonsurf lifeguards. PREREQ: Students must be able to pass an American Red Cross intermediate skills test.

**PE 293 INTERNSHIP (1-3 credits)(F/S).** Practicum field experience in physical education related areas. Practical experience utilizing theory and practice of the assigned activity in various settings. Required in some options.

### Upper Division

**PE 300 CURRICULUM PROFICIENCY IN PHYSICAL EDUCATION (2-0-2)(F/S).** The planning of school physical education program including the activity selection, sequencing, unit development, program model and evaluation. PREREQ: Admission to upper division standing.

**PE 303 INTRAMURAL ORGANIZATION (2-0-2)(F).** Instruction in organization and administration of Intramural activities. Offered in the fall on odd numbered years. PREREQ: Junior standing.

**PE 304 INSTRUCTIONAL STYLES FOR TEACHING PHYSICAL EDUCATION (2-3-3)(F/S).** Instruction and participation in the delivery of physical education lessons for school settings including class management, class organization, instructional methodology, observation skills and the evaluation of teaching. PREREQ: Admission to upper division standing.

**PE 306-306G HUMAN GROWTH AND MOTOR LEARNING (2-2-3)(F/S).** Designed to provide the student with an understanding of human growth, movement development, motor learning and control. Application to skilled behavior is emphasized. PREREQ: Admission to upper division standing.

**PE 309 EVALUATION IN PHYSICAL EDUCATION (3-0-3)(F/S).** Instruction in: philosophy of evaluation; test construction/evaluation/administration; statistical analysis and interpretation of test scores; computer applications for statistical analysis. PREREQ: Admission to upper division standing.

**PE 310-310G EXERCISE PHYSIOLOGY (2-2-3)(F/S).** In the physiological and biochemical changes accompanying exercise and training with emphasis on application of scientific principles to training program design. Required of all PE majors. PREREQ: Admission to upper division standing.

**PE 311-311G KINESIOLOGY (2-2-3)(F/S).** Anatomical and mechanical considerations applied to human motion in sport and exercise. Required of all PE majors. PREREQ: Admission to upper division standing.

**PE 313 CONDITIONING PROCEDURES (1-0-2)(F).** Instruction in conditioning procedures with emphasis on program planning, objectives, exercise analysis and prescription. PREREQ: Admission to upper division standing and PE 310.

**PE 341 SECONDARY SCHOOL DANCE METHODS (2-0-2)(F).** Instruction in methods of teaching social, folk, square, rounds, mixers and aerobic dance. Offered in the fall on even numbered years.

**PE 357 DANCE FOR CHILDREN (2-0-2)(S).** Instruction in the analysis of fundamentals, development of skills and application of methods in teaching dance to children. Offered in spring on odd numbered years.

**PE 361 ELEMENTARY SCHOOL PHYSICAL EDUCATION METHODS (3-0-3)(F/S).** Instruction in methods of teaching elementary school physical education emphasizing movement needs, analysis and development of skills and practical application. PREREQ: Junior standing.

**PE 362 ELEMENTARY SCHOOL HEALTH & PHYSICAL EDUCATION CURRICULUM & INSTRUCTION (4-0-4)(F/S).** This course provides planning, organization and management techniques for teaching elementary school health and physical education. The health content focuses upon issues, trends, practices, individual/social health problems and topic sequencing, while the physical education portion emphasizes movement needs, skill analysis/development and activity progressions. PREREQ: Junior standing. Admission to Teacher Education.

**PE 369 MOTOR PROGRAMMING FOR SPECIAL POPULATIONS (2-0-2)(F).** Instructing in motor growth and development, identification, assessment, prescription and methods of implementing fitness programs for special populations. PREREQ: Junior standing, PE 361.

**PE 401-401G PSYCHO/SOCIAL ASPECTS OF ACTIVITY (3-0-3)(F/S).** The course examines the cultural aspects of sport including educational, religious, political, social and economical values. Psychological factors related to performance include personality, motivation and anxiety. PREREQ: Admission to upper division standing.

**PE 402-402G ADVANCED ATHLETIC TRAINING (3-3-3)(S).** Instruction in advanced theory and application of techniques of athletic training for student pursuing a career as professional athletic trainer. PREREQ: Admission to upper division standing, PE 236 and 311. Offered in spring on odd numbered years.

**PE 403 TRAINING ROOM MODALITIES (2-0-2)(F).** Instruction in theory and application of various therapeutic modalities for care and treatment of athletic injuries, emphasizing cryotherapy, thermal therapy and electrical modalities. PREREQ: Admission to upper division standing, PE 236 and 311. Offered in the fall on even numbered years.

**PE 405 CONSUMER HEALTH (2-0-2)(S).** Instruction in factors involved in the selection and evaluation of health services and products, emphasizing quackery awareness, consumer protection laws and organizations and health insurance considerations. PREREQ: Junior standing. Offered in the spring on even numbered years.

**PE 415 HEALTH PROGRAMS: METHODS AND ADMINISTRATION (3-0-3)(S).** Introduction to the theory and application of physical exercise for the treatment of musculoskeletal disorders in athletics. Topics will include passive, active and resistive forms of exercise as well as the current therapeutic modalities available. PREREQ: PE 236, 311, Admission to upper division standing. Offered in Spring of even numbered years.

**PE 430 COACHING-NATURE OF THE PROFESSION (2-0-2)(S).** Nature of the coach's role and responsibilities. Emphasis on issues of professional standards and ethics. PREREQ: Admission to upper division standing.

**PE 433 LEISURE COUNSELING (2-0-2)(S).** Instruction in meeting needs of a more free-time society through fitness, social, artistic, community and leisure activities. Offered on demand.

**PE 451 ADAPTED PHYSICAL EDUCATION (3-0-3)(F/S).** Course is designed to acquaint physical educators with the unique needs of the disabled. Emphasis will be placed on understanding disabilities, techniques of adapting physical education and allied disciplines to meet the needs of individuals with disabilities. Required of all PE majors. PREREQ: Permission of the instructor.

**PE 457 ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION (2-0-2)(F/S).** Instruction in the Administration of Physical Education and Professional organizations. Emphasis upon the role of the physical education and athletics in the total education program. Required of all Physical Education Teaching majors. PREREQ: Admission to upper division standing.

**PE 481 FACILITIES AND EQUIPMENT (2-0-2).** Instruction in physical education and athletic facility and equipment care and planning, emphasizing needs, codes, materials, space requirements, equipment and supply purchase and care and computer programming.

**PE 493 INTERNSHIP IN PHYSICAL EDUCATION (1-6 Credits)(FIS).** Field practicum experience in physical education related areas. Opportunity to apply knowledge and theory learned in classroom to practical setting. Required in some options. PREREQ: admission to upper division standing, 2.5 GPA and PERMIINST.
Department of Health, Physical Education and Recreation

FA FITNESS ACTIVITY

The Fitness Activity Program provides for beginning, intermediate and advanced levels of instruction in a variety of activities to meet the needs and interests of the student. The courses meet two hours per week for one semester. One credit will be granted for successful completion. Eight credits of fitness activity courses may be counted as electives toward graduation. No fitness activity course may be challenged for credit. All fitness activity courses are graded pass/fail whereby credit earned will count toward graduation but will earn no quality points to be used in calculation of the grade point average.

FA 106 AEROBIC ACTIVITIES AND FA 107 ADAPTED PHYSICAL EDUCATION may be repeated for credit.

Fitness activity course numbers provide the following information:

1. The first digit indicates skill level (1, II, III):
   1) LEVEL I courses are designed for the beginner who has had little or no instruction in the activity.
   2) LEVEL II is for the individual who has command of basic skills and is of intermediate performance level.
   3) LEVEL III is for the individual who has command of intermediate skills and is ready for emphasis on advanced game strategies and skills.

2. The second digit indicates the activity classification (1—aquatics, 2—dance, 3—individual sports, 4—martial arts, 5—outdoor pursuits, 6—personal fitness, 7—racket and court sports, 8—team sports, 9—participation sports).

3. The third digit indicates the specific activity (example: 1—kayaking, 2—skin and scuba diving, etc.)

Lower Division

FA 111 KAYAKING (0-2-1)(F/S). Basic skills of kayaking. Covers safe handling, self-rescue skills and helping or rescuing others. Students must be able to maintain themselves in deep water, fully clothed for ten minutes. Special fee: full time students exempt. (Pass/Fail).

FA 112 SKIN AND SCUBA DIVING I (0-2-1)(F/S). Basic skin and scuba diving skills. Proper use of mask, fins and snorkel, mechanical use of equipment, safety techniques and panic control are stressed. Students must swim 400 yards, tread water for 15 minutes and carry a ten pound weight 25 yards. Certification is optional. Special fee: full time students exempt. (Pass/Fail).

FA 113 SWIMMING I (0-2-1)(F/S). Basic water safety, skill and knowledge; floating, swimming, treading water and introduction to the crawl, side and elementary backstroke. For students who do not know how to swim. (Pass/Fail).

FA 114 RAFTING (0-2-1)(S). Basic skills of rafting. Covers safe handling, self-rescue skills and helping or rescuing others. Students must be able to maintain themselves in deep water, fully clothed for ten minutes. Special Fee: full time students exempt. (Pass/Fail).

FA 115 CANOEING (0-2-1)(F/S). Develop proper stroking/handling techniques and knowledge of river currents. Learn to paddle on lakes, reservoirs and flat rivers or experience the excitement of white-water canoeing. Must be able to swim. Special fee: full time students exempt. (Pass/Fail).

FA 117 SAILING (0-2-1)(F/S). Learn the basic techniques of sailing. Instruction includes rigging, safety procedures, knot tying, terminology, boat care and navigation. Involves lectures and weekend sailing trip. Special fee: full time students exempt. (Pass/Fail).

FA 119 CYCLING (0-2-1)(F/S). Learn proper cycling technique, bicycle mechanics, road safety and tour planning. Special fee: full time students exempt. (Pass/Fail).

FA 120 ROCK CLIMBING (0-2-1)(F/S). Learn the challenge of rock climbing. Basic knots, repelling, belaying and other climbing skills are taught. No experience necessary. Special fee: full time students exempt. (Pass/Fail).

FA 121 BALLET I (0-2-1)(F/S). A structured class in the basics of classical dance. (Barre) work and technique with historical background stressed. Designed as a tool to help students gain strength and agility. (Pass/Fail).

FA 122 FOLK DANCE I (0-2-1). Instruction and participation in techniques and application of basic steps and patterns used in folk dances from different countries. (Pass/Fail).

FA 123 MODERN DANCE I (0-2-1)(F/S). Opportunities for developing a sensitivity to the use of body movement, space and time for creative expression. Improvement of flexibility, balance, coordination and relaxation by using modern dance techniques and movement exploration. (Pass/Fail).

FA 124 SOCIAL DANCE I (0-2-1)(S). Instruction and participation in dance fundamentals including: waltz, polka, jitterbug, foxtrot, western swing, cha cha, samba, tango, folk, square, round dances and mixers. (Pass/Fail).

FA 125 JAZZ DANCE (0-2-1)(F/S). Basic fundamentals and techniques of Jazz dance. (Pass/Fail).

FA 131 ARCHERY I (0-2-1). Provides the beginning archery students with instruction and participation in fundamental techniques of archery; target, field, clout, bow hunting, novelty, etc. (Pass/Fail).

FA 133 BOWLING (0-2-1)(F/S). Instruction and participation in bowling for development of fundamental skills, rules, handicaps and scorekeeping. Special fee required. (Pass/Fail).

FA 134 FENCING I (0-2-1). Instruction and participation in fencing for development of basic skills and techniques. (Pass/Fail).

FA 135 GOLF I (0-2-1)(F/S). Instruction and participation in golf for development of fundamental skills, rules and proper etiquette of the game. Special fee required. (Pass/Fail).

FA 136 GYMNASTICS I (0-2-1)(Coed). Instruction and participation in gymnastics for development of fundamental skills and spotting and safety techniques. (Pass/Fail.)

FA 141 DEFENSIVE TACTICS I (0-2-1). Defense against one or more persons, arrest, control devices and individual/group tactics. For criminology majors only. GI required. (Pass/Fail).

FA 142 JUDO I (0-2-1). Principles and philosophy of judo and techniques of falling, throwing and grappling. GI required. (Pass/Fail.)

FA 143 KARATE I (0-2-1)(F/S). Presentation of techniques based on the theory of energy conservation. Exercises coordinating the mental and physical powers possessed by every individual. GI required. (Pass/Fail.)

FA 144 SELF-DEFENSE I (0-2-1)(F/S). Defensive tactics of Aikido, Judo and Karate. Coordination of mind and body and nonaggressive application of laws of gravity and force. Improvement of coordination and condition of the participant. GI required. (Pass/Fail).

FA 150 WINTER MOUNTAINEERING (0-2-1)(F/S). Course designed to teach a person how to cope with the mountain winter environment in comfort and safety. Includes mountaineering techniques, first aid, snow shelter, avalanche awareness, equipment, map and compass. Students spend the night in self-made shelters and put knowledge to practical application. Special fee: full time students exempt. (Pass/Fail).

FA 151 ALPINE SKIING I (0-2-1)(S). Basic skills and techniques of alpine skiing. Students furnish equipment and transportation. Special fee required. (Pass/Fail.)

FA 152 BACKPACKING, CAMPING AND SURVIVAL SKILLS I (0-2-1)(F/S). Fundamental skills in backpacking, overnight camping and basic survival. Includes choice and care of equipment, camping sites, outdoor cooking skills and ecology. Students furnish equipment and transportation. (Pass/Fail).

FA 153 CROSS COUNTRY SKIING I (0-2-1)(S). Basic skills and techniques of cross country skiing. Students furnish equipment and transportation. Special fee required. (Pass/Fail).


FA 155 FLIGHTING I (0-2-1)(F/S). A practical orientation and application of flying skills for the beginning or experienced fly tier. The course will focus on tying dry and wet flies, nymphs, bucktails and streamers. Special fee required (Pass/Fail).

FA 156 TRAP AND SKEET SHOOTING I (0-2-1)(F/S). A course in fundamental skills of shotgun shooting. Sighting procedures, gun parts, care of equipment and safety are stressed. Shotgun trap loading is also taught. Students must furnish shotgun, shells and trap range fees. (Pass/Fail).

FA 157 CAVE EXPLORATION (0-2-1)(F/S). Instruction includes information about types of caves, formations, formation growth, essential equipment and utilization of proper safety techniques. Conservation of natural resources is emphasized as part of cave exploration field trips. Special Fee: full time students exempt. (Pass/Fail).

FA 158 RECREATIONAL OUTDOOR PHOTOGRAPHY (0-2-1)(F/S). The mechanics of camera and flash systems are covered along with trouble shooting, use of shutters, speed, aperture and composition. The course consists of four (4) classroom sessions plus weekend field trips to various recreational settings where hiking is involved. Art
students may not substitute this class for another photography course required as part of their major. Special fee: Full-time students exempt. (Pass/Fail).

FA 159 MOUNTAIN BIKING (0-2-1)(F/S). Equipment orientation, basic mechanics and maintenance, riding techniques, trip planning and logistics are all part of the itinerary. Several evening rides as well as an overnight trip in the backcountry are scheduled. Students must provide their own mountain bikes and helmets. Special fee: full-time students exempt. (Pass/Fail).

FA 162 ADAPTED PHYSICAL EDUCATION I (0-2-1)(F/S). Adaptive and corrective exercise programs to aid men and women who are unable to participate in a regular activity class. Course is structured to meet the special needs of the individual. May be repeated for credit. (Pass/Fail).

FA 164 PERSONAL FITNESS AND WEIGHT CONTROL I (0-2-1). Introduction to the essential components of total fitness with prescribed fitness programs for individuals. (Pass/Fail).

FA 165 WEIGHT TRAINING I (0-2-1). Instruction and participation in progressive body-building and conditioning exercises with resistance for development of beginning skills and fitness. (Pass/Fail).

FA 166 YOGA AND STRESS MANAGEMENT I (0-2-1). Introduction to yoga theory, practice and tradition; introduction to stress-relief techniques; in-depth practice of Hatha Yoga postures: in-depth breath control. (Pass/Fail).

FA 168 AEROBIC ACTIVITIES I (0-2-1)(F/S). Instruction and participation in aerobic activities for the development of cardiovascular and neuromuscular fitness. Will include activities such as aerobic dance, jogging and aerobic swimming (refer to class schedule for details). May be repeated for credit. (Pass/Fail).

FA 171 BADMINTON I (0-2-1). Instruction and participation in badminton to encourage skill development, understanding and appreciation of the game. (Pass/Fail).

FA 172 RACQUETBALL I (0-2-1)(F/S). Instruction and participation will emphasize basic techniques and skills of racquetball with emphasis on playing procedures. Students furnish racquets and balls. Protective eye wear required. (Pass/Fail).

FA 173 TENNIS I (0-2-1)(F/S). Instruction and participation in tennis for development of fundamental skills, rules and basic strategy. Students furnish racquets and balls. (Pass/Fail).

FA 181 BASKETBALL I (0-2-1)(F/S). Instruction and participation in basketball for development of fundamental skills, rules and basic team strategy. (Pass/Fail).

FA 182 SOFTBALL I (0-2-1). Instruction and participation in softball for development of fundamental skills and rules and basic team strategy. (Pass/Fail).

FA 188 VOLLEYBALL I (0-2-1)(F/S). Instruction and participation in volleyball for development of fundamental skills, rules and basic team strategy. (Pass/Fail).

FA 187 SOCCER I (0-2-1)(F). Instruction and participation in soccer for development of fundamental skills, rules and basic team strategy. (Pass/Fail).

FA 190 CLUB SPORTS I (0-2-1)(F/S). Instruction and participation in club sports approved by the BSU Student Senate. Club advisor’s approval required. (Pass/Fail).

FA 191 VARSITY SPORTS I (0-2-1)(F/S). Instruction and participation in BSU Department of Athletic’s approved sports. Coach’s approval required. (Pass/Fail).

FA 213 SWIMMING II (0-2-1)(F/S). Instruction and participation in swimming for development of intermediate skills and techniques. In instruction in self-rescue skills, games, diving and contests. Students must be able to swim 50 yards. (Pass/Fail).

FA 216 WHITE-WATER CANOEING (0-2-1)(F/S). Students will canoe white-water rivers and have the opportunity to experience surfing, eddy turns and river hydraulics. American Red Cross Certification is available. All equipment is supplied. Participants must be able to swim. PREREQ: FA 116 or PERMINST. Special fee: Full time students exempt. (Pass/Fail).

FA 220 INTERMEDIATE ROCK CLIMBING (0-2-1)(F/S). Instruction covers techniques for mid-fifth class climbing, protection and placements, belaying and repelling in a safe manner. Content will help improve skill level and develop leading ability on suitable terrain. Personal climbing equipment required. PREREQ: FA 120 OR PERMINST. (Pass/Fail).

FA 222 FOLK DANCE II (0-2-1). Instruction and participation in folk dance for development of advanced skills. (Pass/Fail).

FA 223 MODERN DANCE II (0-2-1). Instruction and participation in intermediate modern dance for development of flexibility, balance, coordination and movement, control leading to dance choreography and production work. PREREQ: FA 123 (Pass/Fail).

FA 224 SOCIAL DANCE II (0-2-1). Instruction and participation in social dance for development of the waltz, cha-cha, fox trot, tango, lindy, western swing, folk, square and various novelty dances. (Pass/Fail).

FA 226 SELF-DEFENSE II (0-2-1). Instruction and participation in social dance for development of intermediate skills and techniques. Special Fee required. PREREQ: FA 133 (Pass/Fail).

FA 225 GOLF II (0-2-1). Instruction and participation in golf for development of intermediate skills and techniques. Special Fee required. PREREQ: FA 135 (Pass/Fail).

FA 235 GYMNASICS II (0-2-1)(Coed). Instruction and participation in gymnastics for development of intermediate skills and techniques, performing combinations, compulsory and optional routines. PREREQ: FA 136. (Pass/Fail).

FA 242 BUDDHIY I (0-2-1). Instruction and participation in judo for those seeking advanced degrees. GI required. PREREQ: FA 142 (Pass/Fail).

FA 243 KARATE II (0-2-1). Instruction and participation in karate for development of advanced skills and techniques. GI required. PREREQ: FA 143. (Pass/Fail).

FA 244 KARATE II (0-2-1). Instruction and participation in advanced defensive tactics of Aikido, Judo and Karate. Coordination of mind and body and nonaggressive application of laws of gravity and force. GI required. PREREQ: FA 144. (Pass/Fail).

FA 245 BICYCLE RACING (0-2-1)(F/S). Pre-race training, coping strategies, time trials and triathlon competition are part of the content. Additional instruction includes bicycle maintenance and safety. Students must provide own bicycles and helmets. Special fee: Full-time students exempt. (Pass/Fail).

FA 256 WEIGHT TRAINING II (0-2-1)(F/S). Instruction and participation in progressive body-building and conditioning exercise with resistance for development of intermediate skills. PREREQ: FA 165. (Pass/Fail).


FA 273 TENNIS II (0-2-1). Instruction and participation in tennis for development of intermediate skills and techniques. Students furnish racquets and balls. PREREQ: FA 173. (Pass/Fail).

FA 373 TENNIS III (0-2-1). Instruction and participation in advanced drills, game experience and strategy and study of the USTA rules and code. Students furnish racquets and balls. PREREQ: FA 273. (Pass/Fail).


FA 286 VOLLEYBALL II (0-2-1)(F/S). Instruction and participation in volleyball for development of intermediate skills and techniques. PREREQ: FA 186. (Pass/Fail).

FA 290 CLUB SPORTS II (0-2-1)(F/S). Instruction and participation in club sports approved by BSU student Senate. Club advisor’s approval required. (Pass/Fail).

FA 291 VARSITY SPORTS II (0-2-1)(F/S). Instruction and participation in BSU Department of Athletics approved sports. Coach’s approval required. (Pass/Fail).

Upper Division

FA 213 SWIMMING III (0-2-1)(F/S). Participation in swimming for development of advanced skills and techniques. Instruction in stroke mechanics, training program design, starts, turns and survival swimming. PREREQ: FA 213. (Pass/Fail).


FA 373 TENNIS III (0-2-1). Instruction and participation in advanced drills, game experience and strategy and study of the USTA rules and code. Students furnish racquets and balls. PREREQ: FA 273. (Pass/Fail).