

# HEALTH AND EXERCISE SCIENCE (HES)

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## HES 1002 Physical Health and Fitness

The course provides students with the opportunity to assess their current lifestyle and consider the possible consequences for the present and the future. The class provides a mechanism for change by actively involving the student in self-analysis and a trial exercise program. A grade of C or better is required for HPE majors. Two scheduled class meetings and two hours arranged. \$25 course fee. This is an activity course. No more than four hours of activity credit may be counted toward graduation.

A student registering for an activities course in excess of these limits receives no credit for the additional course and the grade is not included in the computation of grade point.

Note: This course will satisfy two credit hours of PE activity.

## HES 1003 Introduction to Exercise Programming

This course will introduce students to four components of fitness (muscular strength & endurance; cardiorespiratory endurance; flexibility; and body composition), the F.I.T.T. principle (Frequency - Intensity - Type - Time), basic physical adaptations, and basic strength & endurance exercises. Students will be taken through example applications of programming, led through programs by the instructor and tested on knowledge of basic programming knowledge. \$25 course fee.

## HES 2003 Field-Based Experience in Health and Exercise Science

Prerequisite: Level 2 courses require completion of the following with a grade of C or better: PE 1201, HES 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and COMM 2173.

The class provides the prospective Wellness/Fitness professional with an opportunity to observe on-site a community-based wellness/fitness agency or business. A combination of classroom and on-site experiences will direct the student's focus to various aspects of commercial or institutional programs and services aimed at lifestyle enhancement. Specific lecture-class meetings and at least 30 hours of observation in an agency or business setting will be required.

Note: A grade of C or better is required for Health and Physical Education majors.

## HES 2013 Weight Training for Personal Trainers, High School Coaches, and Physical Education

Prerequisite: HES 1003.

This course is designed to provide students with practical knowledge of the biomechanical variables, physiological adaptations and coaching methods for drills (i.e. cleans, snatches, front squats, bent over rows, etc.) that can be integrated into a weight training for the development of muscular strength, hypertrophy, and power. Coaching and teaching strategies will be discussed and practices that includes weight training safety, exercise technique assessment, testing, and programming methods. \$20 course fee.

## HES 2023 Endurance Programming and Conditioning

Prerequisite: HES 1003.

This course is designed to provide students the opportunity to understand the various methods of coaching and teaching endurance focused exercises, activities, and programming. Basic endurance principles, techniques, and application of programming will meet the instructional needs of personal trainers, strength & conditioning coaches, and sport coaches. \$20 course fee.

## HES 2043 Applied Fitness Assessment and Development

Prerequisite: PE 2653 and PE 3663; level 2 courses require completion of the following with a grade of C or better: PE 1201, HES 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and COMM 2173.

A survey and application of the knowledge and experiences in assessing and developing all components of physical fitness.

Note: A grade of C or better is required for Health and Physical Education majors.

## HES 3003 Exercise Prescription

Prerequisite: HES 2043 or consent of department head; level 2 courses require completion of the following with a grade of C or better: PE 1201, HES 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and COMM 2173.

A course designed to expose the student to the aspects of health-related and skill-related physical fitness, with particular attention given to prescribing exercise programs. Attention will be given to choosing appropriate fitness assessments, along with development of appropriate goals for clientele.

Note: A grade of C or better is required for Health and Physical Education majors.

## HES 3013 Coaching Power, Speed, and Agility

Prerequisite: HES 1003.

This course is designed to provide students with practical knowledge of the biomechanical variables, physiological adaptations and coaching methods for drills (i.e. plyometrics, springs, 5-10-5, etc.) that can be integrated into a strength and conditioning program for the improvement in athletic performance. \$20 course fee.

## HES 3023 Exercise Behavior and Adherence

Prerequisite: Level 2 courses require completion of the following with a grade of C or better: PE 1201, HES 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and COMM 2173.

The course provides the student with the opportunity to learn about the components which impact exercise behaviors and adherence to physical exercise programs. Emphasis is placed on the identification of components which directly impact on personal motivation for the development of appropriate exercise behaviors, and the development of incentives which assist in adherence to health enhancement programs.

Note: A grade of C or better is required for Health and Physical Education majors.

## HES 4003 Senior Seminar

Prerequisite: Completion of all 1000- and 2000-level Health and Exercise Science required classes; level 2 courses require completion of the following with a grade of C or better: PE 1201, HES 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and COMM 2173; 90 earned hours.

This course provides the advanced wellness/fitness major with a setting in which research and contemporary topics critical to the profession may be explored. The student will perform literature research, data gathering, and professional writing/presentation throughout the class.

Note: A grade of C or better is required for Health and Physical Education majors.

**HES 4012 Health and Exercise Science Internship**

Prerequisite: Admission to internship program and 2.00 grade point average; level 3 requires completion of all HES, PE, and HLED content area courses with a grade of C or better and a cumulative GPA of 2.00 or better.

Twelve hour course. Intensive on-campus classroom exploration of professional principles and procedures used in the areas of health and fitness promotion for the first three weeks of the semester. The remaining portion of the semester is spent in a supervised full-time internship at a designated site.

Note: A grade of C or better is required for Health and Physical Education majors.

**HES 4013 Health and Exercise Science Practicum**

Prerequisite: WS 2031 and HES 2043 and 3003.

This program is designed to expose majors to training in a community or corporate wellness setting. Students will organize, develop, market, and implement wellness programming for Arkansas Tech University students and employees.

Note: A grade of C or better is required for Health and Physical Education majors.

**HES 4023 Principles of Strength and Conditioning**

Offered: Fall.

Prerequisite: PE 2653, 3661, and 4033.

This course is designed to provide a comprehensive overview of strength and conditioning. Emphasis is placed on the exercise sciences (including anatomy, exercise physiology, and biomechanics) and nutrition, exercise technique, program design, organization and administration, and testing and evaluation. Additionally, this course is designed to prepare students for the nationally accredited Certified Strength and Conditioning Specialist (CSCS) certification exam.

Note: A grade of C or better is required for Health and Physical Education majors.

**HES 4043 Exercise Physiology Lab**

Prerequisite: PE 4033 This course will involve the study, calculation, and understanding of how exercise physiology is tested, assessed, and applies to training, athletics, and physical activity.

Laboratory experiences will apply to the concepts bioenergetics, fatigue, oxygen consumption, muscular performance, and cardiovascular functions. \$20 course fee.

**HES 4053 Biomechanics**

Prerequisite: PE 4033.

This course will involve the study, calculation, and understanding of the biomechanical principles that contribute to human movements, exercise, and athletics. Laboratory experiences of biomechanical principles through kinematic and kinetic analysis will facilitate advancement of the students understanding of human/athletic performance. \$20 course fee.

**HES 4063 Wellness and Fitness Programming**

Prerequisite: Level 2 courses require completion of the following with a grade of C or better: PE 1201, HES 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, COMM 2173, and PE 4033.

The course is designed to provide the student with the opportunity to discover various methods employed in planning and implementing wellness and fitness programs in multiple settings. Special emphasis is placed on the administration of client-specific health enhancement programs designed for persons in corporate settings, fitness center clientele, and patients in physical rehabilitation.

Note: A grade of C or better is required for Health and Physical Education majors.

**HES 4991 Special Problems in Health and Exercise Science**

Prerequisite: Level 2 courses require completion of the following with a grade of C or better: PE 1201, HES 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and COMM 2173.

Independent work on approved wellness science topics under the individual guidance of a faculty member. Admission requires the consent of the department head.

**HES 4992 Special Problems in Health and Exercise Science**

Prerequisite: Level 2 courses require completion of the following with a grade of C or better: PE 1201, HES 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and COMM 2173.

Independent work on approved wellness science topics under the individual guidance of a faculty member. Admission requires the consent of the department head.

**HES 4993 Special Problems in Health and Exercise Science**

Prerequisite: Level 2 courses require completion of the following with a grade of C or better: PE 1201, HES 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and COMM 2173.

Independent work on approved wellness science topics under the individual guidance of a faculty member. Admission requires the consent of the department head.