KINESIOLOGY AND HEALTH SCIENCE (KNES)

KNES 101 - Health and Wellness Credit 1
The course provides students from diverse backgrounds with opportunities to consider their own health and wellness. Through a range of different learning experiences, the class considers issues from contemporary society that confront their health, well-being and quality of life. Core Curriculum: Approved for Core - Kinesiology and Health Science. Restriction(s): Outdoor exercise required, outside of class time. Grade Mode: A. Restriction(s): Must be Undergraduate Level.

KNES 107 - Lifetime Wellness Credit 1
Students in this course will have the opportunity to gain knowledge about the broad spectrum of human health components as related to personal wellness for life, and participate in activities to support that goal. Through a diverse set of learning experiences, students will gain insight into how they can implement physical activity and exercise into their daily lives. Students will also learn techniques to enhance nutritional, behavioral, emotional, and spiritual wellness, thereby positively impacting their overall quality of life. Structured independent physical activity outside of class hours is required throughout the semester. Core Curriculum: Approved for Core - Kinesiology and Health Science. Grade Mode: A. Restriction(s): Must be Undergraduate Level. Course Fee: $20.

KNES 110 - Lifetime Wellness Activity Credit 1
Fundamental techniques of individual skills, basic strategy and rules. Aerobics, archery, badminton, basketball, bowling, conditioning/jogging, lacrosse, fitness walking/jogging, flag football, first aid/CPR**, flexibility and core training, golf, disc golf, snowboarding/skiing, soccer, softball, swimming, tennis, karate, self defense, Rape Aggression Defense Systems (RADS), volleyball, water polo and weight training. Core Curriculum: Approved for Core - Kinesiology and Health Science. Note(s): Other activities may be offered upon sufficient demand; recreation classes offered are backpacking, mountain biking, road cycling and rock climbing; only one recreation class may be counted as activity credit; **First Aid/CPR does not count as activity credit. Grade Mode: A, C. Restriction(s): Must be Undergraduate Level. Repeat Limit (after first attempt): 9. Course Fee: $15. Additional Fee(s): Exceptions to the standard course fee are archery, $35; bowling, $50; golf, $45; backpacking, and rock climbing, $85; snowboarding/skiing $75.

KNES 118 - Varsity Athletics Credit 1
Reserved for intercollegiate athletic teams. Enrollment during the registration period necessary. Grade Mode: A. Restriction(s): Must be Undergraduate Level. Repeat Limit (after first attempt): 6.

KNES 130 - Intermediate Lifetime Wellness Activity Credit 1
Intermediate skills, individual and team strategy and rules in selected activity classes. Core Curriculum: Approved for Core - Kinesiology and Health Science. Grade Mode: A. Prerequisite(s): KNES 110. Restriction(s): Must be Undergraduate Level. Repeat Limit (after first attempt): 9. Course Fee: $15. Additional Fee(s): Exceptions to the standard course fee are: archery, $35; bowling, $50; golf, $45.

KNES 140 - Lifetime Wellness Activity: Aquatics Credit 1
Fundamental and advanced techniques of individual skills. Lifeguard training, water safety instruction (WSI), water polo. Core Curriculum: Approved for Core - Kinesiology and Health Science. Note(s): First Aid/CPR does not count as activity credit. Grade Mode: A. Prerequisite(s): Prerequisite or corequisite for Lifeguard Training: First Aid/CPR; prerequisite for WSI: Valid EWS or Lifeguard Training Certificate or equivalent. Restriction(s): Must be Undergraduate Level. Repeat Limit (after first attempt): 9. Course Fee: $15.

KNES 150 - Advanced Lifetime Wellness Activity Credit 1
Advanced skills, individual and team strategy and rules in selected activity classes. Core Curriculum: Approved for Core - Kinesiology and Health Science. Grade Mode: A. Prerequisite(s): KNES 110 or KNES 130. Restriction(s): Must be Undergraduate Level. Repeat Limit (after first attempt): 3. Course Fee: $15. Additional Fee(s): Exceptions to the standard course fee are archery, $35; bowling, $50; golf, $45.

KNES 201 - Elementary Physical Education Methods and Activities Credits 2
Understanding, planning programs and implementing a range of fundamental movement and fitness activities designed for the elementary child: preparation for the upper-division methods course. Grade Mode: A. Restriction(s): Must be Liberal Stds Multidisciplinary (LSMD), Liberal Studies Elementary Ed (LSEE), Kinesiology (KHPE) or Liberal Studies (LELS); and Undergraduate Level. Course Fee: $15.

KNES 205 - Foundations in Physical Education and Kinesiology Credits 3
A historical review of physical education and kinesiology; objectives of physical education; development of a basic philosophy and background for professional development. Grade Mode: A. Restriction(s): Must be Undergraduate Level.

KNES 213 - Scientific Principles of Health and Fitness Credits 3
Scientific principles of health and fitness related to enhancing aerobic and anaerobic, endurance, muscular strength, power, hypertrophy, endurance, flexibility, body composition, stress management and goal setting will be explored. Acute and chronic adaptations to various populations that occur as a result of various types of training will be discussed. Knowledge, skills, and abilities necessary to develop, implement, and manage a basic fitness regimen for themselves will be developed. Students will participate in practical learning opportunities designed to demonstrate, assess, and enhance parameters of fitness and health. Note(s): This course will fulfill the Core Curriculum Kinesiology and Health Science requirement for Kinesiology and Health Science majors only. Grade Mode: A. Prerequisite(s): BIOS 236 or BIOS 254. Restriction(s): Must be Undergraduate Level. Course Fee: $30.

KNES 301 - Kinesiology Credits 3
Human movement with emphasis on the structure and function of the skeletal, muscular and nervous systems, with simple mechanical principles involved in movement skills. Grade Mode: A. Prerequisite(s): KNHS majors: BIOS 236 or BIOS 254; Non-KNHS majors: BIOS 254. Restriction(s): Must be Undergraduate Level.
KNES 302 - Exercise Physiology Credits 3
Basic physiological concepts of muscular exercise with emphasis on the acute responses and chronic adaptations of the neuromuscular, circulatory and respiratory systems. **Grade Mode:** A.
**Prerequisite(s):** KNHS majors: BIOS 236; or BIOS 254 and BIOS 281; Non-KNHS majors: BIOS 254 and BIOS 281.
**Restriction(s):** Must be Undergraduate Level.

KNES 303 - Exercise Physiology Laboratory Credit 1
Laboratory and field applications of testing in exercise physiology. Theory and skills in fitness assessment will be covered, along with analyses of test results. **Grade Mode:** A.
**Prerequisite(s):** KNES 302 (may be taken concurrently).
**Restriction(s):** Must be Undergraduate Level.

**Course Fee:** $65.

KNES 307 - Measurement and Evaluation in Kinesiology Credits 3
Lecture, laboratory and field experience in the development, evaluation and application of tests in kinesiology and physical education; use and interpretation of elementary statistics. **Grade Mode:** A.
**Prerequisite(s):** MATH 210, or MATH 318, or equivalent.
**Restriction(s):** Must be Undergraduate Level.
**Course Fee:** $25.

KNES 329 - Psychology of Exercise and Health Credits 3
Psychological and behavioral factors in exercise participation, physical performance, health enhancement, and wellness promotion. Influences, barriers, and positive factors in engagement of exercise and health behaviors is examined from theoretical and practical perspectives. **Grade Mode:** A.
**Restriction(s):** Must be Undergraduate Level.

KNES 335 - Health Concepts Credits 3
Physical fitness and disease; nutrition and obesity; mental health and stress management; substance abuse (drugs, tobacco and alcohol); human sexuality. Supports the teacher certification requirement in health for physical education majors. Lecture/Lab Hour(s): Three hours lecture.
**Note(s):** The course is designed for majors in kinesiology and physical education; not for the Core Curriculum requirement in the sciences. **Grade Mode:** A.
**Restriction(s):** Must be Undergraduate Level.

KNES 337 - Exercise in Health and Disease Credits 3
Theoretical and practical examination of relationships and scientific aspects of exercise to health and disease. Influences and effects of exercise on health status, human performance, chronic diseases, and dysfunctions. **Grade Mode:** A.
**Prerequisite(s):** KNES 213.
**Restriction(s):** Must be Undergraduate Level.

KNES 343 - Techniques of Teaching and Coaching Basketball Credits 2
The theory, fundamentals, strategies, and techniques of teaching and coaching basketball. **Grade Mode:** A.
**Restriction(s):** Must be Undergraduate Level.

KNES 344 - Techniques of Teaching and Coaching Soccer Credits 2
The theory, fundamentals, strategies, and techniques of teaching and coaching soccer. **Grade Mode:** A.
**Restriction(s):** Must be Undergraduate Level.

KNES 345 - Techniques of Teaching and Coaching Tennis Credits 2
The theory, fundamentals, strategies, and techniques of teaching and coaching tennis. **Grade Mode:** A.
**Restriction(s):** Must be Undergraduate Level.

KNES 346 - Techniques of Teaching and Coaching Volleyball Credits 2
The theory, fundamentals, strategies, and techniques of teaching and coaching volleyball. **Grade Mode:** A.
**Restriction(s):** Must be Undergraduate Level.

KNES 350 - Public Health Principles and Practice Credits 3
Overview of historically fundamental and currently relevant topics/concepts that have influenced how public health is addressed on a large scale and at the community level. Topics will be presented as addressed in a contemporary manner by public health practitioners. **Grade Mode:** A.
**Restriction(s):** Must be Undergraduate Level.

KNES 351 - Strength and Conditioning Program Design Credits 3
Principles of strength and conditioning will be discussed. Program design will examine outcomes associated with different strength training regimens. Periodization and planned variation of frequency, intensity, volume and rest will be highlighted. Optimization of these variables to prevent overtraining and promote peak performance in a variety of contexts will be discussed. **Grade Mode:** A.
**Prerequisite(s):** KNES 213, KNES 302.
**Restriction(s):** Must be Undergraduate Level.

**Course Fee:** $15.

KNES 401 - Care and Prevention of Athletic Injuries Credits 3
Introduction to understanding athletic injuries, including principles, theories and practice in the disciplines of injury prevention, assessment and treatment. **Grade Mode:** A.
**Prerequisite(s):** KNHS majors: BIOS 236 or BIOS 254; Non-KNHS majors: BIOS 254.
**Restriction(s):** Must be Undergraduate Level.

**Course Fee:** $50.

KNES 402 - Assessment and Rehabilitation of Musculoskeletal Injuries Credits 3
Advanced theory and application of techniques in injury evaluation, therapeutic modalities and rehabilitative exercises currently used in the fields of athletic training and physical therapy. **Grade Mode:** A.
**Prerequisite(s):** BIOS 254.
**Restriction(s):** Must be Undergraduate Level.

KNES 405 - Adapted Physical Education Credits 3
Analysis of the principles underlying the teaching of physical education for students with disabilities; survey of specific disabilities and the implication of each for physical education. **Grade Mode:** A.
**Prerequisite(s):** KNES 201.
**Restriction(s):** Must be Undergraduate Level.

KNES 408 - Motor Learning Credits 3
Overview of significant factors that influence and determine the learning and control of motor skills. Motor learning issues are examined from a behavioral perspective, and applications are made to teaching, coaching and rehabilitation settings. **Grade Mode:** A.
**Restriction(s):** Must be Undergraduate Level.

KNES 410 - Sports Management Credits 3
The study of people, activities, businesses, and organizations involved in producing, promoting and organizing any sports related business, event, or product. **Grade Mode:** A.
**Restriction(s):** Must be Undergraduate Level.
KNES 412 - Secondary Physical Education Methods and Activities  Credits 3
Systematic analysis and refinement of teaching skills within the discipline of physical education. Planning whole school curricula; meeting needs of middle school and high school P.E. programs. Grade Mode: A.
Prerequisite(s): KNES 201, KNES 205.
Restriction(s): Must be Undergraduate Level.

KNES 420 - Sociology and Psychology in Physical Education and Sport  Credits 3
This is an introduction to sociological and psychological aspects of physical education and sport. Within these contexts, sociological considerations include issues of access, culture, gender and power in the community and society. Psychological considerations include issues of behavior, stress, goal-setting and motivation and competitive contexts. Grade Mode: A.
Restriction(s): Must be Undergraduate Level.
Course Fee: $15.

KNES 422 - Biomechanics  Credits 3
The study of biomechanics with respect to the effects of forces, structure, and motion, on and within the human body. Emphasis on both qualitative and quantitative analyses of human movement. Grade Mode: A.
Prerequisite(s): KNES 301 and PHSC 111.
Restriction(s): Must be Undergraduate Level.

KNES 434 - Leadership in Sport and Human Movement  Credits 3
A study and application of the core competencies of Transformational Leadership. Contemporary leadership settings in sport, fitness, health promotion and therapy will be given intentional focus. The objective will be to assist leaders and managers to achieve maximum effectiveness in their organizations. Students will have the opportunity to develop the knowledge and capacity to integrate their faith and to apply it to leadership in real life situations in sport and human movement. Grade Mode: A.
Restriction(s): Must be Undergraduate Level.

KNES 440 - Nutrition and Human Metabolism  Credits 3
Theoretical and practical aspects of human nutrition for health and sport. Scientific treatment of applied nutritional principles for health enhancement and successful sport performance. Grade Mode: A.
Prerequisite(s): BIOS 281 or equivalent; CHEM 105 or CHEM 120 or equivalent.
Restriction(s): Must be Undergraduate Level.

KNES 446 - Functional Assessment and the Prescription of Exercise  Credits 3
Principles and techniques used to prescribe and design exercise programs for apparently healthy and special populations, including those with medical considerations. Health risk appraisal and physical fitness assessment through the use of field and laboratory tests. Grade Mode: A.
Prerequisite(s): KNES 301, KNES 302, KNES 303.
Restriction(s): Must be Undergraduate Level.

KNES 447 - Functional Assessment and Prescription of Exercise Laboratory  Credit 1
Laboratory application of quantitative and qualitative assessments of physiological, anatomical, and psychosocial function. Practical experience will guide the development of the exercise prescription. Grade Mode: A.
Prerequisite(s): KNES 301, KNES 302, KNES 446 (may be taken concurrently).
Restriction(s): Must be Undergraduate Level.

KNES 449 - Clinical Exercise Physiology  Credits 3
This course is intended to train students in the ability to implement prescriptive exercise modalities and programs in a variety of disease and disability states in a clinical or hospital setting. Grade Mode: A.
Prerequisite(s): KNES 302, KNES 303.
Restriction(s): Must be Kinesiology (KHPE), Public Health (PBHL), or Health Science (HSCI); and Undergraduate Level.

KNES 450 - Health Behavior  Credits 3
Theoretical constructs that underlie explanations for health-positive or health-destructive behaviors and programs to address these. Behavioral theory related to health education/promotion, planning, and assessment in various communities. Health disparities, current health practices, and relevant health-related research and current topics will be covered. Grade Mode: A.
Restriction(s): Must be Undergraduate Level.

KNES 452 - Health Promotion Programming  Credits 3
Theoretical and practical elements in the assessment, planning, implementation, and evaluation cycle among various health-related fields. Grade Mode: A.
Restriction(s): Must be Undergraduate Level.

KNES 456 - Health Care Systems  Credits 3
This course is a survey of the delivery of health care in the United States with relevant comparisons to systems internationally. This course will discuss the historical growth and development of the U.S. Health Care System. Grounded in an understanding of factors determining health, a framework for understanding and assessing the health care delivery system will be reviewed including evolving challenges to the current system. Review of the American Health Care System will also include the roles of State and Federal Governments and the role of health care providers. The potential impact of health care reform on the future of the American Health Care System. Grade Mode: A.
Prerequisite(s): KNES 350.
Restriction(s): Must be Undergraduate Level.

KNES 458 - Health Science Practicum  Credit 1
Supervised, professional fieldwork in a community-based health context. Areas covered may include health care, health promotion, health education, health administration, global health, health policy, health advocacy, health research, governmental or non-governmental agency work, pastoral, missionary and/or church health, or similar areas. Grade Mode: C.
Prerequisite(s): KNES 350.
Restriction(s): Must be Senior Class; and Undergraduate Level.

KNES 460 - Topics in Kinesiology  Credits 1-3
Study of topics related to kinesiology in areas such as exercise science and allied health care. Note(s): May be taken more than once with a different topic. Grade Mode: A.
Restriction(s): Must be Undergraduate Level.
Repeat Limit (after first attempt): 10.
KNES 470 - Seminars in Kinesiology  Credits 1-3
Seminar related to specific topics in kinesiology in areas such as exercise science and allied health care. Note(s): May be taken multiple times for credit with different content. Grade Mode: A.
Prerequisite(s): BIOS 254 and BIOS 281, or BIOS 236.
Restriction(s): Must be Undergraduate Level.
Repeat Limit (after first attempt): 10.

KNES 475 - Public Health Capstone Practicum  Credit 1
Supervised, professional fieldwork in a community-based health context. Areas covered may include medicine, clinical, bench, or applied research, health care, health promotion, health education, health administration, global health, health policy, health advocacy, health research, epidemiology, community and environmental health, pharmacology, toxicology, governmental or non-governmental agency work, pastoral, missionary and/or church health, or similar areas. Grade Mode: C.
Prerequisite(s): KNES 350.
Restriction(s): Must be Senior Class; and Undergraduate Level.

KNES 480 - Directed Study  Credits 1-3
Independent work, research, readings and/or professional experiences in the field. Note(s): May be taken multiple times for credit. Grade Mode: A.
Prerequisite(s): KNES 301, KNES 302, KNES 303.
Restriction(s): Must be Kinesiology (KHPE); and Undergraduate Level.
Repeat Limit (total number of credits): 6.

KNES 485 - Internship  Credits 1-3
Professional experiences in kinesiology, health care, exercise, wellness, sport, or educational settings, with supervision. Documentation of hours and activities performed, with related assignments, must be submitted. Note(s): Special approval required. Grade Mode: C.
Restriction(s): Must be Junior Class, or Senior Class; and Undergraduate Level.

KNES 499 - Directed Research in Kinesiology and Health Science  Credits 1-3
Review of literature, study development, design, laboratory skill/technique, grant/scientific writing techniques, or off site research experience(s) in a specific Kinesiology, Public Health, or Health Science-related topic. Course is designed for advanced students to gain specific research, scientific writing, presentation, and publication-related experience(s). Note(s): Special approval required; requires the development of a tangible research project (proposal, grant, manuscript, completed data set, etc.). Grade Mode: A.
Restriction(s): Must be Kinesiology (KHPE), Public Health (PBHL), or Health Science (HSCI); Junior Class or Senior Class; and Undergraduate Level.
Repeat Limit (total number of credits): 3.
Course Fee: $95.