

School of Kinesiology

The School of Kinesiology prepares students in the following areas: exercise science; exercise, performance and health optimization; and physical education/teacher education. The mission of the Kinesiology programs at Auburn University is to promote the creation and application of knowledge about physical activity and performance, create and implement an invigorating learning environment for undergraduate and graduate students, and improve the health and wellness of society through research, outreach, and teaching. Students learn how to improve the health or performance of individuals using an intervention model and how to intervene in the lives of those who wish to become healthier or want to improve their athletic performance. Experiences run the gamut from trying to help an elderly person be well and fit to motivating the young child to be more physically active to assisting the elite athlete in optimizing sport performance.

Exercise Science

The study of Exercise Science focuses on the effects physical activity has on the human body in addition to the body's response to exercise. The undergraduate major in exercise science prepares students for graduate study in the exercise science sub-disciplines (biomechanics, exercise physiology, and motor behavior) while providing students with a foundational knowledge of research in the field. Students in Exercise Science are preparing for entry into professional programs such as physical therapy, occupational therapy, medicine or other competitive graduate programs. Advisors may make recommendations of alternative programs based on academic performance.

Exercise, Performance & Health Optimization

The undergraduate major in exercise, performance and health optimization prepares students to work in community or corporate based health and fitness programs. Students attain the knowledge, skills, and abilities to conduct exercise testing, interpret results and develop individualized exercise programs for healthy individuals and those with chronic diseases.

Physical Education/Teacher Education

The undergraduate major in physical education/teacher education prepares highly qualified K-12 educators with the capacity to create curriculum and instruction that help children achieve an active lifestyle that will continue in and through adulthood. This educator preparation program is approved by the Alabama State Department of Education (ALSDE). Auburn University's College of Education is accredited by the Council for the Accreditation of Educator Preparation (CAEP).

Information about Graduate programs is available at: Kinesiology - MS, PhD, Graduate Certificate, Minor.

Sport Coaching Minor

The sport coaching minor is a 15 semester hour commitment and is open to all students across campus. This minor is particularly attractive to students interested in the field of sport coaching.

Physical Activity and Wellness (Non-degree Program)

The physical activity and wellness non-degree program is an 8 semester hour commitment and is available to all students across campus. Particularly attractive to those students who enjoy physical activity, the program combines study of the basic principles of wellness with participation in a broad range of physical activity categories. The specific course of study is shown below.

- KINE 1100: Wellness (2 credit hours)
- 3 PHED courses from 3 different categories, e.g., fitness, team sports, aquatics (6 hours)

While completion of this program does not appear on transcripts or diplomas, students may request a certificate upon completion.

Majors

- Exercise Science (http://bulletin.auburn.edu/undergraduate/collegeofeducation/kinesiology/exercisescience_major/)
- Exercise, Performance & Health Optimization (http://bulletin.auburn.edu/undergraduate/collegeofeducation/kinesiology/exercisepformance_and_healthoptimization_major/)
- Physical Education/Teacher Education (http://bulletin.auburn.edu/undergraduate/collegeofeducation/kinesiology/physicaleducation-teachereducation_major/)

Minors

- Sport Coaching (http://bulletin.auburn.edu/undergraduate/collegeofeducation/kinesiology/sportcoaching_minor/)

Kinesiology Courses

KINE 1100 WELLNESS & PUBLIC HEALTH (3) LEC. 3. Review content and theory associated with basic health information, critical health issues, economic, political, and cultural influences on health and wellness; concepts related to improving and maintaining optimal health and wellness, and basic concepts and principles of wellness for the self-appraisal of health-related physical fitness. May count either KINE 1100 or KINE 1103.

KINE 2000 PILLARS OF HEALTH: A JOURNEY TO OPTIMAL HEALTH & WELLBEING (3) LAB. 4. Students will learn and apply Mindfulness-Based Stress Reduction (MBSR) techniques and practices that have been shown, scientifically, to reduce stress and act as an aid to many health conditions that arise or are exacerbated by stress. On-campus labs are required.

KINE 2250 MOTOR DEVELOPMENT ACROSS THE LIFESPAN (2) LEC. 2. Develops understanding and skills concerning the broad concept of motor development across the lifespan. May count either KINE 2250 or KINE 2253.

KINE 2251 MOTOR DEVELOPMENT ACROSS THE LIFESPAN LABORATORY (1) LAB. 1. SU. Pr. (P/C KINE 2250 or P/C KINE 2253). Develops understanding and skills concerning the broad concept of motor development across the lifespan.

KINE 2500 SPORT OPTIMIZATION I (3) LEC. 2. LAB. 2. Basic concepts associated with the assessment of sport performance for the purpose of optimization.

KINE 2510 SPORT OPTIMIZATION II (3) LEC. 2. LAB. 2. Pr. KINE 2500 or KINE 2503 or HLHP 2500 or HLHP 2503. Concepts associated with the assessment and interpretation of sport performance for the purpose of optimization.

KINE 2800 INTRODUCTION TO KINESIOLOGY (3) LEC. 3. People, history and programs that have led to the current status of physical education, exercise science and health promotion.

KINE 3000 MEDICAL TERMINOLOGY FOR ALLIED HEALTH PROFESSIONS (3) LEC. 3. Focus on medical terminology/abbreviations used in allied health care and application to health care documentation. Web-based delivery.

KINE 3010 INSTRUCTION AND TECHNOLOGY IN KINESIOLOGY (2) LEC. 1. LAB. 2. Communication skills, instructional strategies and technological competencies related to conveying information in the Kinesiology disciplines. May count either KINE 3010 or KINE 3013.

KINE 3030 INTRODUCTION TO PERSONAL TRAINING (3) LEC. 3. Theoretical knowledge and skills in preparation of national certification in personal training. Topics include guidelines for instructing safe, effective, and purposeful exercise, essentials of the client-trainer relationship, conducting health and fitness assessments, and designing and implementing appropriate exercise programming.

KINE 3031 INTRODUCTION TO PERSONAL TRAINING LABORATORY (3) LAB. 3. Pr. P/C KINE 3030. Theoretical knowledge and skills in preparation of national certification in personal training. Topics include guidelines for instructing safe, effective, and purposeful exercise, essentials of the client-trainer relationship, conducting health and fitness assessments, and designing and implementing appropriate exercise programming.

KINE 3040 HISTORY OF AMERICAN PHYSICAL CULTURE (3) LEC. 3. Appreciation of the historical and cultural aspects of health, exercise, fitness and sports activities in modern American society.

KINE 3050 CARE AND PREVENTION OF INJURIES (3) LEC. 3. Students will understand how to implement proper procedures in sports medicine care, create/lead emergency action plans, prevent injury/illness occurrence, care for basic injuries/illnesses, and analyze environmental conditions for safety, and provide important information to sports medicine health professionals. May count either KINE 3050 or KINE 3053.

KINE 3100 ADAPTIVE SPORTS (3) LEC. 3. An introduction to various competitive and recreational activities for persons with disabilities. May count either KINE 3100 or KINE 3103.

KINE 3110 PARALYMPIC SPORT (3) LEC. 3. An introduction to the Paralympic Games including the Games development, rules, and current issues related to media, marketing, and social rights.

KINE 3200 SKILLS AND CONCEPTS OF RHYTHMIC ACTIVITIES (3) LEC. 2. LAB. 2. Skillful performance in gymnastics and other rhythmic activities and an understanding of the basic movement concepts in those activities.

KINE 3210 SKILLS AND CONCEPTS OF SPORT (3) LEC. 2. LAB. 2. Skillful performance in games and sports and an understanding of the tactics in those activities. Admission to Teacher Education.

KINE 3230 TEACHING MOTOR SKILLS (3) LEC. 2. LAB. 2. Introduction to motor skills that students learn during their elementary school years in physical education.

KINE 3260 PHYSICAL EDUCATION FOR INDIVIDUALS WITH DISABILITIES (3) LEC. 2. LAB. 2. Pr. (KINE 2250 and KINE 2251 or KINE 2253) or (HLHP 2250 or HLHP 2251 or HLHP 2253). Program needs of individuals with disabilities in physical education and physical activity settings.

KINE 3300 INSTRUCTIONAL STRATEGIES IN PHYSICAL EDUCATION (3) LEC. 2. LAB. 2. Instructional and class management strategies appropriate to teach quality elementary and secondary physical education Admission to Teacher Education.

KINE 3400 HEALTH PROMOTION IN THE WORKPLACE (3) LEC. 3. Planning, implementation, evaluation and marketing of health promotion programs.

KINE 3410 REGISTERED YOGA TEACHER LEVEL I (3) LEC. 2. LAB. 2. Basic principles of teaching yoga. Concepts include the poses, breathing, relaxation, meditation and other yoga techniques. Completion of KINE 3410 & KINE 3420 completes a Yoga Teacher Certification.

KINE 3420 REGISTERED YOGA TEACHER LEVEL II (3) LEC. 2. LAB. 2. Pr. KINE 3413 or KINE 3410 or HLHP 3410 or HLHP 3413. Advanced principles of teaching yoga. Focus on poses, breathing, relaxation, meditation and other yoga techniques. Completion of KINE 3410 and KINE 3420 completes a Yoga Teacher Certification.

KINE 3620 BIOMECHANICAL ANALYSIS OF HUMAN MOVEMENT (3) LEC. 3. Coreq. KINE 3621. Understanding of anatomical, neuromuscular, and biomechanical principles of human movement. Application of these concepts, as well as methods of motion analysis, will enable the student to evaluate human movement in greater detail. Departmental approval is needed for non-majors to enroll.

KINE 3621 BIOMECHANICAL ANALYSIS OF HUMAN MOVEMENT LABORATORY (1) LAB. 1. Pr. P/C KINE 3620 or P/C KINE 3623. Laboratory experience focuses on application of knowledge of anatomical, neuromuscular, and biomechanical principles of human movement. Content emphasizes understanding the science of exercise, how to apply and interpret common mechanical measures, and writing about findings using basic scientific writing techniques.

KINE 3650 MOTOR LEARNING AND PERFORMANCE (3) LEC. 3. Understanding of the basic psychological and physiological involved in the learning and control of skillful human movement.

KINE 3651 MOTOR LEARNING AND PERFORMANCE LABORATORY (1) LAB. 2. Pr. P/C KINE 3650 or P/C KINE 3653. Lab experience will allow students to gain first-hand experience with modern experimental methods, data collection, and basic analysis tools in motor learning research and develop an understanding of the experience of human research participants in kinesiology research.

KINE 3680 PHYSIOLOGY OF EXERCISE (3) LEC. 3. Energetics of exercise and physiological responses and adaptations of various organ systems (muscular, circulatory, respiratory, etc.) to acute and chronic exercise in different environments.

KINE 3681 PHYSIOLOGY OF EXERCISE LAB (1) LAB. 2. Coreq. KINE 3680. Applying knowledge of basic energy, musculoskeletal, nervous, and cardiovascular systems using various testing procedures. Focus on understanding the science of exercise, interpreting common physiological fitness tests, and how to write about findings using basic scientific writing techniques.

KINE 3820 PRINCIPLES OF SPORT COACHING (3) LEC. 3. Basic principles of sport pedagogy and the conduct of sport training programs. Departmental approval. May count either KINE 3820 or KINE 3823.

KINE 3830 THEORY AND PRACTICE OF SPORTS OFFICIATING (3) LEC. 3. Instruction and practice of officiating a variety of sport activities.

KINE 3840 COACHING THE MENTAL SIDE OF SPORTS (3) LEC. 3. Understand athletes' psychology and how to provide them with mental skills to enhance their performance in athletics, academics, and life.

KINE 3870 LEGAL AND ILLEGAL SPORTS SUPPLEMENTS (3) LEC. 3. Introductory approach to the safety, efficacy, and legality of popular legal and illegal sports supplements.

KINE 4130 THE NEUROBIOLOGY OF PLAY (3) LEC. 3. This course is an introduction to psychological and neuroscientific research on play and games. We will focus on play behavior in human beings, but will incorporate comparative evidence from play in other animals. Using an interdisciplinary approach, we will draw.

KINE 4200 PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS (4) LEC. 2. LAB. 4. Pr. HLHP 3300. Understanding of the skill theme approach based on skill themes, movement concepts and levels of skill proficiency. Credit will not be given for both KINE 4200 and KINE 4360. Admission to Teacher Education.

KINE 4300 PHYSICAL EDUCATION IN SECONDARY SCHOOLS (4) LEC. 2. LAB. 4. Pr. (KINE 3300 or HLHP 3300). Constructing and implementing appropriate lifetime sports and fitness programs for middle and secondary school students. Admission to Teacher Education.

KINE 4360 HEALTH EDUCATION AND PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS (3) LEC. 2. LAB. 2. Admission to Teacher Education. Critical topics in health education and physical education for prospective elementary education teachers. Credit will not be given for both KINE 4360 and KINE 4200. Admission to Teacher Education.

KINE 4400 APPLIED ANATOMY FOR THE ALLIED HEALTH PROFESSIONAL (3) LEC. 3. Study of skeletal anatomy with an applied approach. May count either KINE 4400 or KINE 4403.

KINE 4450 PHYSICAL ACTIVITY AND PUBLIC HEALTH (3) LEC. 3. Departmental approval. Basic principles of epidemiology; health benefits of physical activity; strategies to promote physical activity at the individual and community levels.

KINE 4500 INDIVIDUAL AND GROUP FITNESS INSTRUCTION (3) LEC. 3. Principles of exercise prescription and field assessment techniques to develop, implement and evaluate individual and group exercise programs.

KINE 4560 SPORT TECHNIQUE AND MOVEMENT ANALYSIS (3) LEC. 3. Skills and knowledge for observing, evaluating, and correcting movement patterns. May count either KINE 4560 or KINE 4563.

KINE 4600 STRENGTH AND CONDITIONING DEVELOPMENT (3) LEC. 3. Basic concepts and principles of strength, endurance and speed development.

KINE 4620 EXERCISE AND SPORT PSYCHOLOGY (3) LEC. 3. Role of psychological factors in sport, exercise and physical activity.

KINE 4630 STRENGTH AND CONDITIONING PREPARATION (3) LEC. 3. Pr. (KINE 4600 or KINE 4603) and (KINE 3680 or KINE 3683). Preparation as a Certified Strength and Conditioning Specialist.

KINE 4640 PHYSICAL CONDITIONING AND SPEED (3) LEC. 3. Basic concepts and principles of physical conditioning and speed.

KINE 4690 CORRECTIVE EXERCISE SPECIALIST PREPARATION (3) LEC. 3. Pr. KINE 3620 and P/C KINE 3621. Preparation for the National Academy of Sports Medicine corrective exercise specialist examination. May count either KINE 4690 or KINE 4693.

KINE 4760 INTRODUCTION TO EXERCISE SCIENCE RESEARCH (3) LEC. 3. Research literature, experimental design and research interpretation in exercise science.

KINE 4780 EXERCISE SCIENCE RESEARCH (3) LEC. 3. Pr. (KINE 4760 or KINE 4763) and (KINE 3620 or KINE 3623) and (KINE 3650 or KINE 3653) and (KINE 3680 or KINE 3683). Development of a research proposal including the introduction, review of literature, methods, experimental design and statistics.

KINE 4860 EXERCISE PROGRAMMING FOR SPECIAL POPULATIONS (3) LEC. 3. Principles of exercise prescription, programming and field assessment techniques to develop, implement and evaluate exercise programs for special populations. May count either KINE 4860 or KINE 4863.

KINE 4880 TRAINING AND CONDITIONING PROGRAMMING (3) LEC. 3. Pr. (KINE 4600 or HLHP 4600 or HLHP 4640) and KINE 4640. Skills and knowledge related to sport specific annual training regimens.

KINE 4900 DIRECTED STUDIES (1-6) IND. SU. Departmental approval. In-depth study of specific topics. Course may be repeated for a maximum of 6 credit hours.

KINE 4910 PRACTICUM (1-6) AAB/PRA. SU. Departmental approval. Application of basic concepts to specific work environment. Course may be repeated for a maximum of 6 credit hours.

KINE 4920 CLINICAL RESIDENCY (12) LEC. 12. SU. Pr. KINE 4200 and KINE 4300. Culminating supervised work experience in school settings for K-12 Physical Education. Students must be cleared and approved for Clinical Residency by College of Education criteria.

KINE 4930 PHYSICAL ACTIVITY AND HEALTH INTERNSHIP (1-12) LEC. 1-12. SU. Pr. KINE 5400 or KINE 5403. Opportunity to explore a particular job or career path within the field, allowing students to apply theory and methodology learned in their undergraduate studies in a work environment under qualified supervision. May count either KINE 4930 or KINE 4933. Course may be repeated for a maximum of 12 credit hours.

KINE 4940 FITNESS, CONDITIONING AND PERFORMANCE INTERNSHIP (1-12) DSL/INT. SU. Pr. (KINE 4690 or KINE 4693) and (KINE 4880 or KINE 4883). Opportunity to explore a particular job or career path within the field, allowing students to apply theory and methodology learned in their undergraduate studies in a work environment under qualified supervision. Site must be approved by internship coordinator. May count either KINE 4940 or KINE 4943. Course may be repeated for a maximum of 12 credit hours.

KINE 4970 SPECIAL TOPICS (1-3) AAB. Advanced presentation of critical issues in physical education, health promotion or exercise science. Course may be repeated with change in topic. Course may be repeated for a maximum of 12 credit hours.

KINE 4980 UNDERGRADUATE RESEARCH (1-3) IND. Departmental Approval. Directed research within the area of specialty within the School. Course may be repeated for a maximum of 6 credit hours.

KINE 4997 HONORS THESIS (1-3) LEC. Pr. Honors College. Departmental approval.. Course may be repeated for a maximum of 3 credit hours.

KINE 5400 EXERCISE ASSESSMENT, PRESCRIPTION, & PROGRAMMING (3) LEC. 3. Pr. (KINE 3620 or KINE 3623) and (KINE 3680 or KINE 3683). This course is designed to develop the knowledge, skills, and abilities necessary to work with clients, performing exercise testing for health and fitness and developing exercise programs following American College of Sports Medicine (ACSM) and National Strength and Conditioning Association (NSCA) guidelines. The course will focus on the principles and guidelines for exercise testing and programming.

KINE 5500 CLINICAL EXERCISE TESTING (2) LEC. 2. Pr. KINE 3680 and KINE 3681. Coreq. KINE 5501. Concepts in physiological testing, test selection, and interpretation of assessments in normal and special populations for the purpose of exercise prescription and chronic disease risk reduction. CPR certification must be obtained prior to the end of the course. May count either KINE 5503 or KINE 6500.

KINE 5501 CLINICAL EXERCISE TESTING LABORATORY (2) LAB. 2. Pr. KINE 3680 and KINE 3681 and (P/C KINE 5500 or P/C KINE 5503). Application of concepts in physiological testing, test selection and interpretation of assessments in normal and special populations for the purpose of exercise prescription and chronic disease risk reduction.

KINE 5820 SPORT MANAGEMENT (3) LEC. 3. This course is designed to give students critical skills in understanding and analyzing a number of social issues as they relate to sport. May count either KINE 5820 or KINE 6820.

KINE 5920 INTERNSHIP (1-12) INT. SU. Pr. (KINE 4630 or KINE 4633) and (KINE 5400 or KINE 5403). Supervised work experiences in schools, fitness or rehabilitation settings. Two hours of work experience per week for each hour course credit. Course may be repeated for a maximum of 12 credit hours.

KINE 6200 RESEARCH PROJECT IN PHYSICAL EDUCATION (3) LEC. 3. Focus on action research in teaching and learning in physical education in schools. May count either KINE 5200 or KINE 6200.

KINE 6250 INSTRUCTIONAL SUPERVISION FOR PHYSICAL EDUCATION (2) LEC. 2. Development of systematic observation systems for providing feedback to teachers and strategies for monitoring progress. May count either KINE 5250 or KINE 6250.

KINE 6300 ADVOCACY IN PHYSICAL EDUCATION (2) LEC. 2. Strategies for development of advocacy programs in physical education. May count either KINE 5300 or KINE 6300.

KINE 6350 ASSESSMENT IN PHYSICAL EDUCATION (3) LEC. 3. Pr. P/C KINE 7920 or P/C HLHP 7920 or P/C HLHP 7926.

KINE 6400 EXERCISE ASSESSMENT, PRESCRIPTION, & PROGRAMMING (3) LEC. 3. This course is designed to develop the knowledge, skills, and abilities necessary to work with clients, performing exercise testing for health and fitness and developing exercise programs following American College of Sports Medicine (ACSM) and National Strength and Conditioning Association (NSCA) guidelines. The course will focus on the principles and guidelines for exercise testing and programming.

KINE 6500 CLINICAL EXERCISE TESTING (2) LEC. 2. Pr. KINE 3680. Concepts in physiological testing, test selection, and interpretation of assessments in normal and special populations for the purpose of exercise prescription and chronic disease risk reduction. CPR certification must be obtained prior to the end of the course. May count either KINE 5500 or KINE 6500.

KINE 6501 CLINICAL EXERCISE TESTING LABORATORY (2) LAB. 2. Pr. KINE 3680. Coreq. KINE 6500. Learn and practice the skills to perform clinical exercise testing for health and fitness in accordance with American College of Sports Medicine (ACSM).

KINE 6600 PHYSIOLOGICAL BASIS OF TRAINING AND CONDITIONING (3) LEC. 2. LAB. 2. Physiological adaptations to training and conditioning for sport performance. May count either KINE 5600 or KINE 6600.

KINE 6820 SPORT MANAGEMENT (3) LEC. 3. This course is designed to give students critical skills in understanding and analyzing a number of social issues as they relate to sport. May count either KINE 5820 or KINE 6820.

KINE 6920 INTERNSHIP (1-12) INT. SU. Pr. (KINE 7630 and KINE 6400) or KINE 6406. Departmental approval. Supervised work experiences in schools, fitness or rehabilitation settings. Course may be repeated for a maximum of 12 credit hours.

KINE 7010 RESEARCH METHODS IN PHYSICAL ACTIVITY (3) LEC. 3. Study of research methods and analysis of current research in physical education, health promotion, and exercise science.

KINE 7180 APPLIED SOCIOLOGICAL ASPECTS OF SPORT AND EXERCISE (3) LEC. 3. Critical examination and application of sociological aspects of sport and exercise in a variety of settings. May count either KINE 7180 or KINE 7186.

KINE 7200 CURRICULUM AND TEACHING IN PHYSICAL EDUCATION (3) LEC. 3. Issues in developing and critiquing curricula in physical education.

KINE 7250 EVALUATION OF PROGRAMS IN PHYSICAL EDUCATION (3) LEC. 3. Development of tools for assessment of student learning and evaluation of physical education programs.

KINE 7260 INDIVIDUALS WITH DISABILITIES IN PHYSICAL EDUCATION (3) LEC. 3. Developing inclusive physical activity programs for children and adolescents with disabilities in physical education.

KINE 7280 NATURALISTIC INQUIRY IN PHYSICAL ACTIVITY SETTINGS (3) LEC. 3. Exploration of naturalistic inquiry in physical activity and educational settings.

KINE 7300 CONTENT AND PEDAGOGY IN PHYSICAL EDUCATION (3) LEC. 3. Instructional strategies and content for elementary and secondary physical education.

KINE 7350 ORGANIZATION AND ANALYSIS OF INSTRUCTION IN PHYSICAL EDUCATION (3) LEC. 3. Focus on the teaching-learning process in physical education.

KINE 7380 INTEGRATING CLASSROOM CONCEPTS (3) LEC. 3. Relationship of developmental foundations of young children and programming of physical activities.

KINE 7400 ADVANCED ANATOMICAL PRINCIPLES (3) LEC. 3. Clinically oriented human anatomy experience, designed to provide the student with an applied methodology to interact and utilize anatomical knowledge. May count either KINE 7400 or KINE 7406.

KINE 7420 BIOMECHANICS OF SKILL ANALYSIS: DARTFISH I (3) LEC. 3. Introductory approach to skill analysis as well as the use of the software program Dartifish. May count either KINE 7420 or KINE 7426.

KINE 7430 BIOMECHANICS OF SKILL ANALYSIS: DARTFISH II (3) LEC. 3. Pr. KINE 7420 or HLHP 7420 or HLHP 7426 or KINE 7426. Advanced approach to skill analysis as well as the use of the software program Dartifish. May count either KINE 7430 or KINE 7436.

KINE 7550 EFFICIENT MOVEMENT STRATEGIES (3) DSL. 3. A review of the material and tools necessary to become a National Academy of Sports Medicine Corrective Exercise Specialist.

KINE 7570 EXERCISE ELECTROCARDIOGRAPHY (3) LEC. 3. Electrocardiography from an exercise scientist's perspective; recognition of normal and abnormal electrocardiographic patterns at rest and during exercise.

KINE 7620 PRINCIPLES OF BIOMECHANICS IN HUMAN MOVEMENT (3) LEC. 3. Biomechanical principles and laws with applications to human movement in sport, exercise and daily activities. Departmental approval. May count either KINE 7620 or KINE 7626.

- KINE 7630 STRENGTH & CONDITIONING PREPARATION (3)** LEC. Preparation as a Certified Strength and Conditioning Specialist.
- KINE 7650 ADVANCED MOTOR LEARNING AND PERFORMANCE (3)** LEC. 3. Departmental approval. Theories, experimental studies, and current issues in the acquisition, performance, and retention of motor skills.
- KINE 7660 BIOMECHANICS OF SPORT INJURY AND REHABILITATION (3)** LEC. 3. Pr. (HLHP 7620 or HLHP 7626 or KINE 7620 or HLHP 7626). Biomechanical properties of the human body as related to injuries and rehabilitation in sport and daily activities.
- KINE 7670 LAB TECHNIQUES IN BIOMECHANICS (3)** LEC. 1. LAB. 2. Pr. (HLHP 7620 or HLHP 7626 or KINE 7620 or KINE 7626). Study of equipment and standing practices utilized by a biomechanist in measuring and analyzing motion.
- KINE 7680 ADVANCED PHYSIOLOGY OF EXERCISE I (3)** LEC. 3. Departmental approval. Physiological responses to exercise and control of metabolism, the cardiovascular system, and the respiratory system during acute exercise and training.
- KINE 7700 ADVANCED PHYSIOLOGY OF EXERCISE II (3)** LEC. 3. Temperature regulation and endocrine response to exercise; physiological responses and adaptations to aerobic training, strength training, and environmental extremes; limiting factors and fatigue in exercise.
- KINE 7710 LAB TECHNIQUES IN EXERCISE PHYSIOLOGY (3)** LEC. 1. LAB. 4. Pr. (HLHP 7680 or HLHP 7686 or KINE 7680). Techniques for measuring and evaluating physical performance.
- KINE 7730 NEUROMOTOR CONTROL (3)** LEC. 3. Departmental approval. Structure and function of the central and peripheral systems underlying human motor control.
- KINE 7740 ADVANCED MOTOR DEVELOPMENT (3)** LEC. 3. Departmental approval. Examination of theoretical and empirical issues in motor development across the life span.
- KINE 7750 ADVANCED SPORT PSYCHOLOGY (3)** LEC. 3. Departmental approval. Examination of psychological factors that influence athletic performance. Or equivalent,
- KINE 7780 EXERCISE MOTIVATION AND ADHERENCE (3)** LEC. 3. Theoretical foundations and recent research in exercise motivation and adherence. Or equivalent.
- KINE 7790 MOTOR BEHAVIOR OF INDIVIDUALS WITH DISABILITIES (3)** LEC. 3. Pr. (HLHP 7650 or HLHP 7656 or KINE 7650). Examination of motor behavior characteristics of individuals with disabilities.
- KINE 7820 CLINICAL/NON-CLINICAL INTERNSHIP IN KINESIOLOGY (1-10)** DSL/INT. SU. Supervised work experience in physical activity, health, fitness, conditioning, performance and rehabilitation settings. This course is for non-teacher education students. May count either KINE 7820 or KINE 7826. Course may be repeated for a maximum of 10 credit hours.
- KINE 7900 DIRECTED STUDIES (1-3)** IND. SU. Departmental approval. In-depth study of specific topics. Course may be repeated for a maximum of 9 credit hours.
- KINE 7910 PRACTICUM (1-3)** PRA. Departmental approval. Application of concepts to specific work environment. Course may be repeated for a maximum of 6 credit hours.
- KINE 7920 INTERNSHIP (1-10)** INT. SU. Departmental approval. Supervised work experiences in schools, fitness or rehabilitation settings. Course may be repeated for a maximum of 10 credit hours.
- KINE 7930 NON-THESIS RESEARCH PROJECT (1-6)** IND. SU. Pr. KINE 7010 or HLHP 7010 or HLHP 7016. Departmental approval. Continuation/completion of a scientific research project that culminates into a written and oral presentation. Course may be repeated for a maximum of 6 credit hours.
- KINE 7950 SEMINAR (1-3)** SEM. SU. Course may be repeated for a maximum of 3 credit hours.
- KINE 7960 SPECIAL PROBLEMS (1-3)** IND. SU. Departmental approval. Critical analysis of current and classical research and writings. Course may be repeated for a maximum of 3 credit hours.
- KINE 7970 SPECIAL TOPICS (1-3)** LEC. Advanced presentation of critical issues in physical education, health promotion, or exercise science. Course may be repeated with change in topic.

KINE 7980 RESEARCH PROJECT IN KINESIOLOGY (1-6) IND. SU. Pr. KINE 7010 or HLHP 7010 or HLHP 7016. Departmental approval. Completion of a scientific research project in Kinesiology that culminates into a written and oral presentation. Course may be repeated for a maximum of 6 credit hours.

KINE 7990 RESEARCH AND THESIS (1-10) IND. Course may be repeated with change in topics.

KINE 8270 EXERCISE GENETICS (3) LEC. 3. This course will describe advanced concepts related to exercise genetics. Examples include how skeletal muscle responds to exercise at the epigenetic, transcriptomic, and proteomic level. Additionally, cutting-edge research topics (e.g., miRNA and retrotransposons) will be discussed in the context of exercise science.

KINE 8300 RESEARCH IN KINESIOLOGY (3) LEC. 3. Examination and evaluation of current research trends within the field of kinesiology.

KINE 8310 SUPERVISION/ADMINISTRATION OF LABS IN KINESIOLOGY (3) LEC. 3. Skills and techniques of the daily management of kinesiology labs. Topics include budgeting, outreach, entrepreneurship, grants, and personnel management.

KINE 8320 RESEARCH MENTORSHIP (3) LEC. 3. Skills and experience in the mentorship of novice researchers in the field of Kinesiology.

KINE 8710 SCIENTIFIC COMMUNICATION IN EXERCISE SCIENCE (3) LEC. 3. In-depth analysis of the major formats for scientific communication and the peer-review process in exercise science. Or equivalent.

KINE 8730 NUTRIENT TIMING FOR PERFORMANCE OPTIMIZATION (3) LEC. 3. This course will discuss how Nutrient Timing is important for optimizing endurance- or resistance training adaptations in athletes.

KINE 8750 THREE-DIMENSIONAL ANALYSIS OF HUMAN MOVEMENT (3) LEC. 3. Pr. (HLHP 7620 or HLHP 7620) or KINE 7620 or KINE 7620. Three-dimensional nature of body segments in human movement, with emphasis on data processing and modeling techniques.

KINE 8770 NEUROMUSCULAR ASPECTS OF EXERCISE AND TRAINING (3) LEC. 3. Pr. KINE 7680 or HLHP 7680 or HLHP 7686 or departmental approval. Examination of neuromuscular mechanisms that allow humans to perform work, including energy output, neural integration, energy metabolism and adaptations to training.

KINE 8780 BIOCHEMISTRY OF EXERCISE (3) LEC. 3. Pr. (HLHP 7680 or KINE 7680) or HLHP 7686 or departmental approval. Regulation of the metabolic pathways of energy metabolism with emphasis on the energetic response to acute exercise and exercise training.

KINE 8900 DIRECTED STUDIES (1-3) IND. SU. Departmental approval. In-depth study of specific topics. Course may be repeated for a maximum of 9 credit hours.

KINE 8910 PRACTICUM (1-3) PRA. SU. Departmental approval. Application of basic concepts to specific work environments. Course may be repeated for a maximum of 9 credit hours.

KINE 8920 INTERNSHIP (1-10) INT. SU. Departmental approval. Supervised work experiences in schools, fitness and rehabilitation settings. Course may be repeated for a maximum of 10 credit hours.

KINE 8930 DIRECTED FIELD EXPERIENCES (1-10) FLD. SU. Departmental approval. Field studies away from campus. Course may be repeated for a maximum of 10 credit hours.

KINE 8950 SEMINAR (1-3) SEM. SU. Course may be repeated for a maximum of 3 credit hours.

KINE 8960 SPECIAL PROBLEMS (1-3) IND. SU. Course may be repeated for a maximum of 3 credit hours.

KINE 8970 SPECIAL TOPICS (1-3) LEC. Advanced presentation of critical issues in physical education, health promotion, or exercise science. Course be repeated with change in topic. Course may be repeated with change in topics.

KINE 8980 FIELD PROJECT (1-6) FLD.

KINE 8990 RESEARCH AND DISSERTATION (1-10) DSR. Departmental approval. Field project away from campus. Course may be repeated for a maximum of 9 credit hours. Course may be repeated with change in topics.

Physical Education Courses

PHED 1000 ACTIVE AUBURN (2) LEC. 2. Basic concepts associated with physical activity and the opportunities on campus to engage in health-promoting and wellness activities. Course may be repeated for a maximum of 4 credit hours.

PHED 1200 CARDIO RESPIRATORY: FITNESS (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of cardio-respiratory functioning. Activities may include, but are not limited to running (jogging) swimming, cycling and aerobic dance. Course may be repeated with a change in topic. Course may be repeated with change in topics.

PHED 1210 CARDIO RESPIRATORY: AEROBIC DANCE (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of cardio-respiratory functioning in aerobic dance.

PHED 1220 CARDIO RESPIRATORY: CIRCUIT TRAINING (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of cardio-respiratory functioning in circuit training.

PHED 1230 CARDIO RESPIRATORY: JOGGING (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of cardio-respiratory functioning in jogging.

PHED 1240 CARDIO RESPIRATORY: SWIM FOR FITNESS (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of cardio-respiratory functioning in swim for fitness.

PHED 1250 CARDIO RESPIRATORY: WATER AEROBICS (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of cardio-respiratory functioning in water aerobics.

PHED 1260 MILITARY FITNESS FOR EVERYONE (2) LEC. 2. Basics of military-type physical activity training, goal-setting, and fitness principles.

PHED 1300 FITNESS AND CONDITIONING (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of general physical fitness. Activities may include, but are not limited to calisthenics and weight training. Course may be repeated with a change in topic. Course may be repeated with change in topics.

PHED 1310 FITNESS: BODYBUILDING (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of general physical fitness in bodybuilding.

PHED 1320 FITNESS: LIFETIME ACTIVITY (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of general physical fitness in lifetime activity.

PHED 1330 FITNESS: WEIGHT CONTROL (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of general physical fitness in weight control.

PHED 1340 FITNESS: WEIGHT TRAINING (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of general physical fitness in weight training.

PHED 1350 FITNESS WEIGHT TRAINING WOMEN (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of general physical fitness for weight training for women.

PHED 1360 FITNESS: WEIGHT TRAINING II (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with the development and maintenance of general physical fitness in weight training II.

PHED 1380 KETTLEBELL TRAINING (2) LEC. 1. LAB. 1. Introductory approach to kettlebell techniques and kettlebell program development.

PHED 1390 WEIGHT MANAGEMENT (2) LAB. 2. Nutrition and exercise concepts associated with maintaining healthy weight.

PHED 1400 TEAM SPORTS (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific team sport. Team sports may include, but are not limited to, volleyball, basketball and softball. Course may be repeated with change in topic.

PHED 1410 TEAM SPORTS: BASKETBALL (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific team sport.

PHED 1420 TEAM SPORTS: FLAG FOOTBALL (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific team sport.

PHED 1430 TEAM SPORTS: SOCCER (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific team sport.

PHED 1440 TEAM SPORTS: SOFTBALL (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific team sport.

PHED 1450 TEAM SPORTS: VOLLEYBALL (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific team sport.

PHED 1500 INDIVIDUAL SPORTS (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific individual sport. Sports may include, but are not limited to tennis, golf and racquetball. Course may be repeated with a change in topic. Course may be repeated with change in topics.

PHED 1510 INDIVIDUAL SPORTS: BOWLING (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific individual sport.

PHED 1520 INDIVIDUAL SPORTS: GOLF (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific individual sport.

PHED 1530 INDIVIDUAL SPORTS: GOLF II (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific individual sport.

PHED 1550 INDIVIDUAL SPORTS: TENNIS (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific individual sport.

PHED 1600 PERFORMANCE ACTIVITIES (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific performance activity. Activities may include, but are not limited to, dance and gymnastics. Course may be repeated with a change in topic. Course may be repeated with change in topics.

PHED 1610 PERFORM ACTIVITY - PILATES (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific performance activity.

PHED 1620 PERFORMANCE ACTIVITY: KARATE (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific performance activity. Course may be repeated for a maximum of 6 credit hours.

PHED 1630 PERFORMANCE ACTIVITY: TAE KWON DO (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific performance activity.

PHED 1640 PERFORMANCE ACTIVITY: YOGA (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with a specific performance activity.

PHED 1700 AQUATICS: OTHER (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with specific aquatic skills. Activities may include, but are not limited to, swimming skills instruction, lifeguard training, and scuba diving. When appropriate, successful completion of the course will lead to Red Cross certification or certification by other agencies. Course may be repeated for a maximum of 4 credit hours.

PHED 1710 AQUATICS: WHITEWATER KAYAKING I (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with specific aquatic skills.

PHED 1720 AQUATICS: WHITEWATER KAYAKING II (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with specific aquatic skills.

PHED 1740 AQUATICS: LIFEGUARD TRAINING (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with specific aquatic skills.

PHED 1750 AQUATICS: BEGINNING SWIMMING (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with specific aquatic skills.

PHED 1760 AQUATICS: SCUBA (2) LEC. 1. LAB. 2. Basic concepts and physical activities associated with specific aquatic skills.

PHED 1800 VARSITY SPORTS: STRENGTH AND CONDITION (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topic.

PHED 1810 VARSITY MEN'S SPORTS: FOOTBALL (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1820 VARSITY MEN'S SPORTS: BASKETBALL (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1830 VARSITY MEN'S SPORTS: TRACK (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1840 VARSITY MEN'S SPORTS: CROSS COUNTRY (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1850 VARSITY MEN'S SPORTS: SWIMMING AND DIVING (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1860 VARSITY MEN'S SPORTS: GOLF (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1870 VARSITY MEN'S SPORTS: TENNIS (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1880 VARSITY MEN'S SPORTS: BASEBALL (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1900 VARSITY WOMEN'S SPORTS: SOCCER (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1910 VARSITY WOMEN'S SPORTS: GYMNASTICS (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1920 VARSITY WOMEN'S SPORTS: BASKETBALL (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1930 VARSITY WOMEN'S SPORTS: TRACK (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1940 VARSITY WOMEN'S SPORTS: CROSS COUNTRY (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1950 VARSITY WOMEN'S SPORTS: SWIMMING AND DIVING (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1960 VARSITY WOMEN'S SPORTS: GOLF (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1970 VARSITY WOMEN'S SPORTS: TENNIS (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1980 VARSITY WOMEN'S SPORTS: SOFTBALL (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 1990 VARSITY WOMEN'S SPORTS: VOLLEYBALL (1) LEC. 1. SU. Skills and training associated with participation in varsity sports. Course may be repeated with change in topics.

PHED 2100 WHEELCHAIR SPORTS FOR EVERYONE (2) LEC. 2. LAB. 1. A physical education class which introduces students to various wheelchair sports.

PHED 2200 SELF DEFENSE FOR WOMEN (1) LEC. 1. The Rape Aggression Defense (RAD) System is a comprehensive program of realistic self-defense tactics and techniques for women that promotes awareness, prevention, risk reduction and risk avoidance with a progression to hands-on training and simulation exercises.

Physical Therapy Courses

KNPT 9000 ANATOMY FOR PHYSICAL THERAPY I (4) LEC. 3. LAB. 2. The study of the structure and function of the neuromusculoskeletal system: muscles, nerves and joints of the lower extremity and spine. Develop an understanding of structure, function, and biomechanics of gait as well as clinical neurodynamics. Lecture and laboratory experiences will be utilized. Laboratory will include the use of virtual and/or cadaver dissection. Goal is to provide the student with a three-dimensional understanding of the function of the lower quarter and spine.

KNPT 9010 ANATOMY FOR PHYSICAL THERAPY II (4) LEC. 3. LAB. 2. This course studies the structure and function of the neuromusculoskeletal system: muscles, nerves and joints of the upper extremity and spine. Develop an understanding of clinical neurodynamics. Lecture and laboratory experiences will be utilized. Laboratory will include the use of cadaver dissection and/or virtual lab. Goal of the course is to provide the student with a three-dimensional understanding of the function of the upper quarter and spine.

KNPT 9020 PHYSICAL THERAPY BIOMECHANICS I (3) LEC. 2. LAB. 2. Structures of the musculoskeletal system and individual functional regions. Forces sustained in normal and pathological conditions. Application of mechanical/physiological principles to the human movement system. Mechanical properties of biological tissue, kinematics, kinetics, muscle actions, and joint structure and function are examined. Detailed analyses of normal and abnormal movement and alignment of the spine and extremities. Gait and postural analyses, with emphasis on individual joint motion and muscle activity during swing and stance phases of gait.

KNPT 9030 PHYSICAL THERAPY BIOMECHANICS II (3) LEC. 2. LAB. 2. Structures of the musculoskeletal system and individual functional regions. Forces sustained in normal and pathological conditions. Kinesiology emphasizes the application of mechanical and physiological principles to the human movement system. Mechanical properties of biological tissue, kinematics, kinetics, muscle actions, and joint structure and function are examined. Students will perform detailed analyses of normal and abnormal movement and alignment of the spine and extremities.

KNPT 9040 PHYSICAL THERAPY NEUROSCIENCE (4) LEC. 4. This course focuses on the anatomy and physiology of the central nervous system, with emphasis on the substrates and processes involved in movement. The course will provide the student physical therapist with a framework for developing knowledge of the normal structure and function of the human central nervous system; an understanding of various pathological conditions and their clinical manifestations; the skills necessary to perform and interpret a clinical neurological assessment.

KNPT 9050 PHYSICAL THERAPY FOUNDATIONS, THERAPEUTIC EXERCISE I (3) LEC. 2. LAB. 2. Introduction to general physical therapy evaluation including communication skills, and documentation. Understanding of the fundamentals and principles of movement observation and analysis. Concepts, procedures, and techniques required to provide safe and effective patient care. Psychomotor skills including assessment of bony and soft tissue structures (palpation), whole body movement, posture, gait, vital signs. Patient care skills including infection control, patient positioning and draping, transfer activities. Emphasis is placed on appropriate body mechanics for therapist and patient.

KNPT 9060 PHYSICAL THERAPY FOUNDATIONS, THERAPEUTIC EXERCISE II (3) LEC. 2. LAB. 2. Foundations and principles of Therapeutic Exercise for clinical practice of PT. Discuss theories on how variety of therapeutic exercises produce beneficial physiological outcomes. Outline the process clinicians utilize to design appropriate therapeutic exercise programs. Interpret findings of a PT examination, identify impairments, functional limitations and/or disabilities. Methods to efficiently prescribe therapeutic exercise based on the exam findings will be addressed. Apply knowledge of various systems (musculoskeletal, cardiopulmonary, neurological) and discuss their relationship to these interventions.

KNPT 9100 PHYSIOLOGY, PATHOPHYSIOLOGY, & PHARMACOLOGY (3) LEC. 3. Pathophysiology is the study of the biological and physical manifestations of disease as they correlate with the underlying abnormalities and physiological disturbances. It explains the processes within the body that result in the signs and symptoms of a disease. A review of the normal physiology of each system will occur to allow students to compare and contrast "diseased" vs. normal functioning. Lastly, pharmacological interventions commonly used to treat diseases will be discussed.

KNPT 9110 MUSCULOSKELETAL PHYSICAL THERAPY I (3) LEC. 2. LAB. 2. Common disorders of the musculoskeletal system emphasizing the five steps of patient management: examination, evaluation, diagnosis, prognosis, selection and application of interventions, and outcomes measurement for nonsurgical and surgical orthopedic conditions. Utilization of clinical reasoning during comprehensive examination, interpretation, development and implementation of plan of care, and communicating findings with interdisciplinary health care team will be practiced. Emphasis on progression of patient evaluation and management skills.

KNPT 9120 MUSCULOSKELETAL PHYSICAL THERAPY II (3) LEC. 2. LAB. 2. Clinical principles and concepts for management of more complex orthopedic, sports, and industrial injuries. Emphasis on the progression of skills of joint and soft tissue mobilization. Skills that will be added to the student's foundational knowledge will include high velocity low amplitude thrust techniques, movement assessment techniques, advanced therapeutic exercise implementation and progression, and post-operative rehabilitation following common orthopedic surgery procedures.

KNPT 9130 MUSCULOSKELETAL PHYSICAL THERAPY III (2) LEC. 1. LAB. 2. Analysis of interventions used to treat musculoskeletal system dysfunctions. Present assessment and management/intervention principles to various musculoskeletal-related areas typically seen in outpatient orthopedic/sports population. Review McKenzie method for assessment and treatment of lumbar and cervical spine disorders; running biomechanics and analysis, and treatment of common running injuries including use of pre-fabricated or custom foot orthoses; sports massage; treatment techniques for Anterior Cruciate Ligament injury and concussion; women's health issues, including a pilates pre-partum program.

KNPT 9140 NEUROLOGICAL PHYSICAL THERAPY I (3) LEC. 2. LAB. 2. This course addresses the physical therapy examination, evaluation, diagnosis, prognosis and plan of care (including introduction to interventions) for adults with movement problems stemming from dysfunction of the central nervous system (supraspinal and spinal structures), presenting with common neurologic impairments and including altered consciousness or cognitive function as well as vestibular involvement. Emphasis will be on diagnoses such as stroke, Parkinson's disease, multiple sclerosis, amyotrophic lateral sclerosis, post-polio, brain injury, and spinal cord injury.

KNPT 9150 NEUROLOGICAL PHYSICAL THERAPY II (3) LEC. 2. LAB. 2. Build upon evaluative skills to include designing and implementing comprehensive plans of care and specific interventions pertaining to impairments in adults with neuromuscular disorders. Emphasis will be placed on specific diagnoses such as stroke, spinal cord injury, traumatic brain injury; neuromuscular diseases such as multiple sclerosis, Guillain-Barré Syndrome, chronic inflammatory demyelinating polyneuropathy, amyotrophic lateral sclerosis, polio/post-polio syndrome, and vestibular involvement. Emphasis will be placed on handling skills, concepts of PNF, NDT, and motor learning/control.

KNPT 9160 CARDIOPULMONARY PHYSICAL THERAPY (4) LEC. 3. LAB. 2. Fundamental principles of patient/client screening, evaluation/examination, exercise testing (including resting and exercise electrocardiography [EKG]), and exercise prescription for patient/client populations suffering from acute or chronic cardiovascular, pulmonary illness, and other related conditions are covered. Knowledge and skills of patient screening/evaluation/examination, assessment, and the role of exercise interventions across a wide spectrum of clinical cardiopulmonary conditions are developed. These topics are discussed in conjunction with case studies, problem solving approaches, and current research.

KNPT 9170 ACUTE CARE PHYSICAL THERAPY (3) LEC. 2. LAB. 2. Familiarize the student with several areas in physical therapy assessment and interventions, including wound care and practice in acute care setting. In wound care section, the student will be introduced to the appropriate use of topical agents and dressings as well as sharp debridement. The physical therapist's role in acute care will cover the physical therapy management of the medically complex patient, as well as general physical therapy assessment and management in acute care setting.

KNPT 9200 LIFESPAN PHYSICAL THERAPY I- GERIATRICS (3) LEC. 3. This course is designed to afford the learner an introduction to aging, unique aspects of individuals at later stages in the life span, specifically those which have an impact on physical therapy management. Explore concepts surrounding aging: personal/societal attitudes, misconceptions/myths, physical/psychosocial aspects, demographics, medically complex patients, community resources, caregiver concerns and family involvement, balance screening and fall prevention. Students build upon and apply skills already acquired in other courses while considering geriatric population.

KNPT 9210 LIFESPAN PHYSICAL THERAPY II - PEDIATRICS (3) LEC. 2. LAB. 2. This course addresses normal and delayed maturation processes from conception through adulthood; nervous, cardiovascular and musculoskeletal systems. Typical human motor development from conception through adolescence. Discuss common pathologies seen and role of the physical therapist in pediatric populations. Didactic information is reinforced with observational experiences within the community and application of general physical therapy evaluation and problem-solving skills with mock patients. Introduce and explore useful treatment strategies and equipment used in multiple pediatric settings.

KNPT 9220 PSYCHOSOCIAL ASPECTS IN PHYSICAL THERAPY (3) LEC. 3. This course examines adjustment to physical disability, terminal illness, and ethical decision making. Students will discuss multiple psychosocial aspects of patient care, including the delivery of physical therapy services for patients with chronic health conditions and psychological comorbidities; adjustment to chronic illness and disability; communication strategies to facilitate a positive therapeutic alliance and health behavior change; delivery of psychologically informed and culturally competent care for diverse populations; and abuse and neglect of vulnerable populations.

KNPT 9310 THERAPEUTIC MODALITIES (3) LEC. 2. LAB. 2. Theory and practice of treating injury and pathology of various tissues of human body. Explore tissues that make integument: skin, muscle, bone, cartilage, tendon, ligament, nerve, and joint capsule. Understand how they can be influenced by pathology and therapeutic modes. Introduce physiology of pain and explore treatments for pain. Explore physical agents (heat, cold, sound and electricity) and their adjunctive application, mechanism of action. Explore therapeutic modes of soft-tissue mobilization, neural tension, and other techniques.

KNPT 9320 DIFFERENTIAL DIAGNOSIS (3) LEC. 3. Differentiate: 1) Less common musculoskeletal pathology that might require referral to a physician. These musculoskeletal conditions may be disorders of acquired, genetic, developmental, metabolic, infectious and neoplastic nature; 2) Systemic medical conditions that can mimic and /or complicate common musculoskeletal conditions. How to screen for and differentially diagnose overlaps between common musculoskeletal conditions and other medical problems and/or co-morbidities that can affect clinical decision-making. Basic interpretation of imaging studies, electroneuromyography and selected laboratory test results.

KNPT 9340 ORTHOTICS & PROSTHETICS (3) LEC. 2. LAB. 2. Introduce the entry-level doctor of physical therapy student to the theory, design, function, and application of prosthetic and orthotic devices for the extremities and spine. Discuss evolution of prosthetics and orthotics, with exposure to recent advancements including state-of-the-art devices, which allow optimal function for patients. Discuss indications for devices, a physical therapist's role in management and inter-professional collaboration, and applicable interventions. Information regarding the education and responsibilities of a certified prosthetist/orthotist will be presented.

KNPT 9500 PROFESSIONAL DEVELOPMENT IN PHYSICAL THERAPY (2) LEC. 2. Critical examination of responsibilities, challenges, and opportunities inherent in physical therapy practice. Develop practitioners engaged in professionalism, commitment to the demonstration of attributes to enhance practice of physical therapy at individual and societal levels. Develop expert reasoning and psychomotor skills to allow highest quality of patient care. Understand ramifications and influence of cost-related factors in current healthcare system. Students must be willing to assume an active role in identifying emerging problems and seek appropriate solutions.

KNPT 9510 PHYSICAL THERAPY ADMINISTRATION, SUPERVISION & MANAGEMENT (3) LEC. 3. This course intends to introduce students to managerial and organizational skills, practice settings, and business models as they relate to the physical therapy profession. Review federal and Alabama rules on physical therapy assistant supervision. Students will also explore the various ethical and legal factors which impact patient care in the current physical therapy environment. Additionally, students will have the opportunity to practice these skills through group work and the development of group business plan.

KNPT 9600 EVIDENCE BASED PRACTICE FOR PHYSICAL THERAPY I (4) LEC. 4. This course introduces students to evidence-based practice and prepares the students to be consumers of professional literature in physical therapy. Students will identify, interpret, and distinguish between a wide variety of research relevant to the practice of physical therapy while also considering the roles of clinical expertise and patient values in applying the evidence, clinically. Course participation exposes the student to various research methodological principles and analytical concepts in preparation for their grand rounds.

KNPT 9610 EVIDENCE BASED PRACTICE FOR PHYSICAL THERAPY II (3) LEC. 3. Students will develop and demonstrate skills of evidence-based practice and patient/client management through completion of a written case study and oral presentation based on their clinical experience. This project includes a written summation of a patient's case, analyzing evidence and addressing clinical questions which arose during student's interactions. Students must develop and deliver an oral presentation and provide critical feedback on peer presentations.

KNPT 9620 EVIDENCE BASED PRACTICE FOR PHYSICAL THERAPY III (3) LEC. 3. Integrate evidence, patient values, and clinical expertise to critically analyze clinical decision making for complex cases across a range of practice settings. Identify and answer questions regarding physical therapy examination, prognosis, and intervention through empirical evidence. Use International Classification of Functioning, Disability, and Health (ICF) model of clinical reasoning to synthesize evidence, patient values and clinical expertise to make patient-centered decisions. Collaborative problem solving and professional communication skills are developed through group interactions with peers.

KNPT 9800 CLINICAL PLACEMENT I (4) FLD. 35. SU. This six-week clinical placement course is designed to introduce the physical therapy student to the clinical environment and to apply knowledge and basic skills developed up to this point in the curriculum in a real-world clinical setting.

KNPT 9810 CLINICAL PLACEMENT II (14) FLD. 40. SU. Pr. KNPT 9800. This course is designed to incorporate knowledge and skills obtained during the first short term placement, and synthesize information and skills developed in the final didactic portion of the curriculum, and apply them in real-world physical therapy practice setting that they are assigned to, under direct supervision of the clinical instructor (licensed physical therapist at the assigned placement site).

KNPT 9820 CLINICAL PLACEMENT III (14) FLD. 40. SU. Pr. KNPT 9800 and KNPT 9810. This course is designed to incorporate knowledge and skills obtained during the first short term placement as well as the intermediate placement, and synthesize information and skills developed in the final didactic portion of the curriculum, and apply them in real-life physical therapy practice setting that the student is assigned to, under direct supervision of the clinical instructor (licensed physical therapist at the assigned clinical site).

KNPT 9900 GRAND ROUNDS I (1) LEC. 1. SU. Grand Rounds I serves as a platform where students, faculty, and guest speakers converge to elevate their diagnostic, clinical, and treatment proficiencies through case presentations and discussions. Clinicians and faculty specializing in physical therapy and related health professions are welcomed as presenters. Beyond the dissemination of physical therapy best practices, the overarching objective is to foster an interactive dialogue involving diverse healthcare professions, thus enriching the discourse on optimal patient care. Course may be repeated for a maximum of 2 credit hours.

KNPT 9910 GRAND ROUNDS II (1) LEC. 1. SU. Students will demonstrate advanced skills such as deductive reasoning, clinical decision-making, formulation of evidence-based interventional strategies, professional presentation proficiency, and independent critical thinking, all rooted in their own clinical experiences, through interactive case presentations and discussions. Beyond the transmission of physical therapy best practices, the primary aim is to foster a robust and participatory dialogue that actively engage participants in shaping optimal approaches to patient care. Course may be repeated for a maximum of 3 credit hours.