

KINESIOLOGY AND PHYSICAL EDUCATION (KNPE)

KNPE 125 Introduction to Human Physiology Units: 3.00

This course provides an introduction to human physiology from the cellular to the systematic level with special emphasis on the systems that adapt to exercise stress. The following areas will be covered: the cell, nervous system, skeletal muscle system, respiratory system, cardiovascular system, neuroendocrine system, and renal system.

Learning Hours: 108 (36 Lecture, 72 Private Study)

Requirements: Prerequisite Registration in a HLTH or KINE Plan. Exclusion PHGY 215/3.0; PHGY 216/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 153 Introductory Biomechanics Units: 3.00

This course will present the fundamentals of biomechanics, including forces and moments, linear kinematics and kinetics, and work, power, and energy. Biomechanical tools and techniques used to assess human movement will also be introduced.

Learning Hours: 114 (36 Lecture, 6 Tutorial, 72 Private Study)

Requirements: Prerequisite Registration in a KINE Plan.

Offering Faculty: Faculty of Arts and Science

KNPE 167 Socio-Cult Dimensions of Sport and Physical Activity Units: 3.00

An introduction to sociological thinking about sport and physical activity. Among the topics to be discussed are: an exploration of what constitutes sport and under what conditions; how social relations of class, race, gender, and sexuality shape sport experiences; the business of sport; and the relationship between the media and sport.

Learning Hours: 120 (36 Lecture, 12 Tutorial, 72 Private Study)

Requirements: Prerequisite Registration in a KINE Plan.

Offering Faculty: Faculty of Arts and Science

KNPE 203 Coaching and Leadership in Sport Units: 3.00

The course will explore the concepts of coaching and leadership in relation to sport. The course addresses topics such as theoretical models of coaching and leadership, coaching behaviours, coach education, and the role of coaches in promoting performance, participation, and personal development through sport.

Learning Hours: 108 (36 Lecture, 72 Private Study)

Requirements: Prerequisite Level 2 or above and registration in a KINE Plan and KNPE 265/3.0. Recommended KNPE 237/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 225 Advanced Human Physiology Units: 3.00

The emphasis will be placed on understanding the concept of homeostasis and the integrated control of cellular and organ responses involved in regulation to maintain homeostasis. Special emphasis will be placed on the systems that respond to exercise stress.

Learning Hours: 120 (36 Lecture, 12 Tutorial, 72 Private Study)

Requirements: Prerequisite Level 2 or above and registration in a HLTH or KINE Plan and KNPE 125/3.0. Exclusion PHGY 215/3.0; PHGY 216/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 227 Exercise Physiology Units: 3.00

An introduction to the basic components of physiology as they apply to health, fitness and exercise physiology.

Learning Hours: 108 (36 Lecture, 72 Private Study)

Requirements: Prerequisite Level 2 or above and registration in a KINE Plan and KNPE 125/3.0 and KNPE 225/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 237 Child and Adolescent Motor Development Units: 3.00

This course is an exploration of behavioural and biological research on physical activity and how it relates to the psychosocial, structural, and physiological development of children between birth and approximately age 13.

Learning Hours: 108 (36 Lecture, 72 Private Study)

Requirements: Prerequisite Level 2 or above and registration in a KINE Plan.

Offering Faculty: Faculty of Arts and Science

KNPE 251 Introduction to Statistics Units: 3.00

An introduction to the analysis of data from real life situations. Covers study design, descriptive and inferential statistics. Topics include probability, t-tests, regression, Chi-square tests, analysis of variance. Emphasis is in the foundation of statistical inference and practical application of statistical methods using statistical software.

Learning Hours: 126 (12 Lecture, 18 Laboratory, 48 Online Activity, 48 Private Study)

Requirements: Prerequisite Level 2 or above and registration in a HLTH or KINE Plan. Exclusion BIOL 243/3.0; CHEE 209/3.5; COMM 162/3.0; ECON 250/3.0; GPHY 247/3.0; NURS 323/3.0; POLS 285/3.0; POLS 385/3.0*; PSYC 202/3.0; SOCY 211/3.0; STAM 200/3.0; STAT 263/3.0.

Offering Faculty: Faculty of Arts and Science



KNPE 254 Biomechanical Analysis of Human Movement Units: 3.00

Students will use biomechanical principles that describe how forces cause movement, from whole-body motions to tissue level processes, in order to solve problems in human movement. Biomechanical techniques and tools will be discussed, with a focus on applications in clinical movement disorders and performance in sport and exercise.

Learning Hours: 117 (36 Lecture, 9 Laboratory, 72 Private Study)

Requirements: Prerequisite Level 2 or above and registration in a KINE Plan and KNPE 153/3.0. Recommended ANAT 315/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 255 Physical Activity, Fitness, and Health Units: 3.00

An introduction to the interrelationships between physical activity, fitness and health. Current techniques for the measurement of health related fitness components, evaluation of diet, weight loss principles, psychological aspects of fitness and suitable activities for fitness development. Concepts related to prescription of physical activity and exercise counseling are introduced.

Learning Hours: 108 (36 Lecture, 72 Private Study)

Requirements: Prerequisite Level 2 or above and registration in a KINE Plan and KNPE 125/3.0. Corequisite (KNPE 225/3.0 and KNPE 227/3.0). Exclusion HLTH 270/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 261 Theory of Motor Behaviour and Motor Learning Units: 3.00

Students will understand motor skill acquisition principles and procedures available to optimize learning in physical activity programs. The principles and theories outlined in this course will provide students with a basic knowledge of sensorimotor behaviour for applications in physical education, kinesiology, and rehabilitation.

Learning Hours: 123 (36 Lecture, 15 Laboratory, 72 Private Study)

Requirements: Prerequisite Level 2 or above and registration in a KINE Plan.

Offering Faculty: Faculty of Arts and Science

KNPE 265 Psychology of Sport and Exercise Units: 3.00

This course will introduce both theoretical and applied/professional aspects of human social behaviour in sport and exercise settings.

Learning Hours: 108 (36 Lecture, 72 Private Study)

Requirements: Prerequisite Level 2 or above and registration in a HLTH or KINE Plan. Corequisite PSYC 100/6.0.

Offering Faculty: Faculty of Arts and Science

KNPE 300 Community-Based Practicum Units: 3.00

A community-based practicum for Kinesiology students to apply knowledge gained in theory-based courses and develop a range of professional skills. Practicum opportunities vary year to year, subject to availability of an appropriate placement in a relevant workplace setting.

NOTE Students are expected to participate in professional development workshops offered by the SKHS Student Experience Coordinator and Career Services.

NOTE Transportation and other costs directly related to the student placement (e.g., Criminal Checks, if required) are the responsibility of the student.

Learning Hours: 126 (18 Group Learning, 84 Off-Campus Activity, 24 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and a minimum cumulative GPA of 1.90 and permission of the Coordinator and Undergraduate Chair in the School of Kinesiology and Health Studies. Exclusion HLTH 300/3.0; KNPE 330/4.5; KNPE 346/4.5.

Offering Faculty: Faculty of Arts and Science

KNPE 327 Exercise Physiology Laboratory Units: 3.00

A laboratory experience designed to establish understanding of, and technical skills in, the measurement of human physiological responses and performance capacity in exercise. Students will develop familiarity with tests of physiological function during rest and exercise in preparation for work in human performance, clinical and medical settings.

Learning Hours: 126 (24 Lecture, 36 Laboratory, 6 Individual Instruction, 12 Online Activity, 48 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and KNPE 125/3.0, KNPE 225/3.0, and KNPE 227/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 330 Athletic Therapy Field Placement Units: 4.50

Under the tutelage of the Coordinator of Athletic Therapy Services, students will complete a field placement that involves assignment to a varsity team as a student trainer. Student trainers are responsible for onsite coverage of the team during competition and possibly during practices. The student trainers are also responsible for the taping needs of athletes on the team, and assisting with assessment and rehabilitation.

NOTE Students must hold valid First Aid/CPR certification and proof of completion of Athletic Therapy experience (36 hours) in second year.

Learning Hours: 177 (165 Practicum, 12 Private Study)

Requirements: Prerequisite Level 3 or above and registration in the KINE Specialization Plan and ANAT 315/3.0 and KNPE 331/3.0 and a cumulative GPA of 2.70 or higher and permission of the Course Coordinator and the Undergraduate Chair in the School of Kinesiology and Health Studies. Exclusion HLTH 300/3.0; KNPE 300/3.0; KNPE 346/4.5.

Offering Faculty: Faculty of Arts and Science

KNPE 331 Care and Prevention of Athletic Injuries Units: 3.00

The care and prevention of common athletic injuries with emphasis placed on the practical portion of taping and wrapping of athletic trauma.

NOTE Lab Materials: estimated cost \$15.

Learning Hours: 120 (24 Lecture, 24 Laboratory, 72 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and ANAT 315/3.0 and ANAT 316/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 335 Healthy Aging Units: 3.00

This course looks at what happens to the body as we age, including an examination of the physiological, psychological and emotional changes that occur during the aging process. The role of a healthy lifestyle in achieving quality of life as we age is a key perspective.

NOTE Also offered at Bader College, UK (Learning Hours may vary).

Learning Hours: 120 (36 Lecture, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a HLTH, KINE, or DIPA Plan.

Offering Faculty: Faculty of Arts and Science

KNPE 336 Community Field Placement in Disability and Physical Activity Units: 3.00

Students gain experience assisting adults with a disability to engage in exercise. Students develop an understanding of the nature of disability, the benefits of exercise, factors that promote exercise participation, and appropriate exercise prescription.

NOTE Students must hold valid First Aid/CPR certification and CPIC.

NOTE Field Placement Uniform: estimated cost \$25.

Learning Hours: 138 (18 Seminar, 84 Practicum, 12 Online Activity, 24 Private Study)

Requirements: Prerequisite Level 3 or above and (HLTH 200 or KNPE 255) or registration in the Certificate in Disability and Physical Activity. Corequisite HLTH 332.

Offering Faculty: Faculty of Arts and Science

KNPE 337 Physical Activity Promotion for Children and Youth Units: 3.00

This course explores topics such as theoretical models of motivation, interest, and interpersonal behaviours, and the design, implementation, and provision of inclusive physical activity environments for children/youth. This course emphasizes the application of theory through activity-based classroom sessions and community placements.

NOTE Transportation and other costs directly related to the student (e.g. required Criminal Checks) are the responsibility of the student.

Learning Hours: 120 (18 Lecture, 18 Laboratory, 24 Online Activity, 60 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE or HLTH Plan and (KNPE 237 or HLTH 270).

Exclusion PACT 237.

Offering Faculty: Faculty of Arts and Science



KNPE 338 Field Course in Kinesiology and Health Studies Units: 3.00

This course will provide an intensive experiential learning opportunity for students. The emphasis is on hands-on application of various current topics in the fields of Kinesiology and Health Studies including but not limited to outdoor recreation, active living, health and the built environment, food systems, parasport, sport participation, fitness assessment and/or movement behaviours. Students will participate in field excursions and participate in a range of skill building activities to expose them to professional and community environments.

NOTE Field Excursions: maximum cost \$75. Please contact the School of Kinesiology and Health Studies for details.

NOTE This course is repeatable for credit under different topic titles.

Learning Hours: 114 (36 Group Learning, 30 Off-Campus Activity, 48 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a HLTH Major, Joint Honours, or KINE Plan. Equivalency PACT 338/3.0*.

Offering Faculty: Faculty of Arts and Science

KNPE 339 Advanced Exercise Metabolism Units: 3.00

This course focuses on aspects of skeletal muscle energy metabolism related to exercise, with a particular emphasis on the regulation of carbohydrate and fat metabolism and the mechanisms regulating their use as substrates for muscle during rest and exercise.

Learning Hours: 120 (36 Lecture, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and KNPE 225/3.0 and KNPE 227/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 345 The Science and Methodology of Sport Training Conditioning Programs Units: 3.00

This course focuses on the development of sport conditioning programs from periodization concepts to specific training components and how the components can be integrated to create a comprehensive and balanced athlete training plan. Laboratory sessions will work on skill development applicable to conducting training and conditioning programs.

Learning Hours: 126 (36 Lecture, 18 Practicum, 72 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and KNPE 227/3.0. Corequisite KNPE 254/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 346 Strength and Conditioning Field Placement Units: 4.50

Under the tutelage of the Strength and Conditioning Coordinator, students will complete a field placement that involves a range of practical experiences in the area of strength and conditioning programs for elite athletes. Practical sessions will be rotated weekly in order to provide students with a variety of experiences in program delivery, training sessions, and testing.

NOTE Students must hold valid First Aid/CPR certification.

Learning Hours: 168 (120 Practicum, 24 Group Learning, 24 Private Study)

Requirements: Prerequisite Level 3 or above and registration in the KINE Specialization Plan and ANAT 315/3.0 and KNPE 345/3.0 and a cumulative GPA of 2.70 or higher and permission of the Course Coordinator and the Undergraduate Chair in the School of Kinesiology and Health Studies. Exclusion HLTH 300/3.0; KNPE 300/3.0; KNPE 330/4.5.

Offering Faculty: Faculty of Arts and Science

KNPE 349 Sports Nutrition Units: 3.00

This course will provide foundational knowledge of the basic physiological pathways that support energy production during endurance-type and resistance-type exercise.

Students will investigate, evaluate and develop nutritional interventions to potentiate energy systems and promote post-exercise recovery.

NOTE Nutrition Software: estimated cost \$75.

Learning Hours: 126 (36 Lecture, 6 Laboratory, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and KNPE 227 and KNPE 255.

Offering Faculty: Faculty of Arts and Science

KNPE 352 Research Skills Development Practicum Units: 3.00

A practicum for students in Kinesiology and Physical Education working in the research labs and on research projects of SKHS faculty members. Includes a seminar series covering research topics and methodologies in: Applied Exercise Science, Epidemiology, Health Promotion, Psychology of Sport and Physical Activity, and Sociology of Sport and Health.

NOTE Students will apply for a research-based practicum at the end of their second year. Recommended for students who intend to complete KNPE 595.

Learning Hours: 140 (12 Seminar, 80 Practicum, 48 Private Study)

Requirements: Prerequisite Level 3 or above and registration in the KINE Specialization Plan and KNPE 251/3.0 and permission of the Course Coordinator or the Undergraduate Chair in the School of Kinesiology and Health Studies. Corequisite HLTH 252/3.0. Exclusion HLTH 352/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 353 Experiments in Neuromechanical Kinesiology Units: 3.00

This laboratory course will focus on advanced principles and techniques used in experiments in Neuromechanical Kinesiology, including applications in biomechanics, motor control, and neurophysiology. The objective of the course is to provide students with hands-on experience in scientific study design, human instrumentation and data collection, signal processing and data analysis, and scientific report writing. These skills are intended to prepare students interested in pursuing careers involving the collection and/or interpretation of human data, be it research, clinical, or industry settings.

Learning Hours: 120 (36 Laboratory, 84 Private Study)

Requirements: Prerequisite KNPE 153/3.0 and KNPE 254/3.0 and KNPE 261/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 354 Occupational Biomechanics and Physical Ergonomics Units: 3.00

An introduction to occupational biomechanics and physical ergonomics. The course will apply principles of biomechanics to describe relationships between job demands, functional/tissue capacities and work-related injury. Demand, capacity and injury risk evaluation tools will also be presented.

Learning Hours: 120 (36 Lecture, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and KNPE 254/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 355 Lifestyle and Cardiometabolic Assessment Laboratory Units: 3.00

A lecture/laboratory experience designed to help prepare students to participate in a variety of multidisciplinary clinical and/or professional environments. Concept and skill development pertaining to exercise/lifestyle for general as well as selected special populations will prepare students for experiences in clinical and medical settings.

Learning Hours: 120 (12 Lecture, 36 Laboratory, 72 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and KNPE 125/3.0, KNPE 225/3.0, KNPE 227/3.0, and KNPE 255/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 356 Exercise Prescription Units: 3.00

Students will apply their foundational knowledge of human and exercise physiology to develop skills in patient/client interactions, exercise assessments, and exercise prescriptions. Topics include communication skills, documentation, health screening and assessments, clinical exercise testing, and exercise prescription for healthy adults and specific patient populations. Through an experiential learning, case-based approach, by the end of this course, students will be able to conduct physical assessments and interpret clinical findings to create patient/client-centered exercise interventions aimed at improving health and well-being.

Learning Hours: 120 (12 Lecture, 24 Laboratory, 12 Group Learning, 72 Private Study)

Requirements: Prerequisite KNPE 355/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 363 Team Dynamics in Sport: Theory and Practice Units: 3.00

This course explores group dynamics in sport and involves the integration of theory, research, and practice. Topics include team structure (e.g., roles), processes (e.g., communication), and emergent states (e.g., cohesion). Students will be encouraged to critically analyze the body of research and discuss relevant practical implications.

Learning Hours: 120 (36 Lecture, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and KNPE 265/3.0.

Offering Faculty: Faculty of Arts and Science



KNPE 365 Motivational Interviewing for Physical Activity Behaviour Change Units: 3.00

Study of strategies to enhance intrinsic motivation and self-regulation for physical activity and health behaviour change in clinical settings. Students will learn and practice motivational interviewing skills for behaviour change in intensive weekly tutorial sessions.

Learning Hours: 126 (18 Lecture, 24 Tutorial, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a HLTH or KINE Plan and PSYC 100/6.0 and (KNPE 265/3.0 or HLTH 315/3.0).

Offering Faculty: Faculty of Arts and Science

KNPE 366 Race, Sport and Physical Activity Units: 3.00

This course offers a critical exploration into how the social construction of race affects sport, health, and physical activity cultures, how sport may influence our understanding of race in society. We discuss how racism exists in these sporting spaces. The end goal is to understand how sport and health practitioners can incorporate anti-racism work.

Learning Hours: 120 (36 Lecture, 12 Online Activity, 72 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a HLTH or KINE Plan and (KNPE 167 or HLTH 101). Exclusion KNPE 397 (Topic Title: Race, Sport and Physical Cultures - Fall 2018; Fall 2020).

Offering Faculty: Faculty of Arts and Science

KNPE 367 Fitness, the Body, and Culture Units: 3.00

This course looks at the ways that notions of fitness are tied to historically specific ideas about the body. The course focuses on ideas about race, class, gender, ability and sexuality while addressing the politics of fitness and exercise and their relationship to social, economic, and cultural institutions.

Learning Hours: 129 (36 Lecture, 9 Laboratory, 84 Private Study)

Requirements: Prerequisite KNPE 167/3.0 or SOCY 221/6.0 or (SOCY 226/3.0 and SOCY 227/3.0).

Offering Faculty: Faculty of Arts and Science

KNPE 397 Special Topics in Kinesiology Units: 3.00

Intensive coverage of topics that are current and/or of special interest in the area of Kinesiology. Offered periodically. NOTE This course is repeatable for credit under different topic titles.

Learning Hours: 120 (36 Lecture, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan.

Offering Faculty: Faculty of Arts and Science

KNPE 400 Professional Issues in Allied Health Units: 3.00

Through problem-based learning, students will gain an understanding of what it means to be an applied health care professional. Students will work collaboratively on case studies and develop critical thinking skills to prepare them as they transition to their careers as health care practitioners.

Learning Hours: 120 (24 Lecture, 12 Tutorial, 84 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the HLTH Major or KINE Specialization Plan.

Offering Faculty: Faculty of Arts and Science

KNPE 425 Physiology of Stress Units: 3.00

An in-depth exploration of physiological responses to primarily psychological sources of stress. An emphasis is placed on understanding the interaction between stress responses and function/health and the action of selected stress management techniques.

Learning Hours: 120 (36null, 84 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and KNPE 225/3.0 and KNPE 227/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 429 Skeletal Muscle Oxygen Delivery: Demand Matching in Exercise Units: 3.00

The focus of this course is to develop an advanced understanding of cardiovascular and respiratory responses in meeting oxygen demand of exercising skeletal muscle. Topics: oxygen delivery in exercising skeletal muscle metabolism/contraction; compromised exercise performance in selected diseases; mechanisms of enhancement of exercise tolerance.

Learning Hours: 132 (36 Lecture, 12 Tutorial, 12 Online Activity, 72 Private Study)

Requirements: Prerequisite Level 3 or above and registration in the KINE Specialization Plan and KNPE 125/3.0 and KNPE 225/3.0 and KNPE 227/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 430 Athletic Therapy Internship Units: 4.50

Working with the Coordinator of Athletic Therapy (AT), and building on the practical skills and knowledge acquired in KNPE 330, students will complete an Athletic Therapy internship. AT interns will be responsible for serving as a mentor to student trainers and onsite trainers in the Athletic Therapy clinic and at varsity events. They will also serve as teaching assistants in the laboratory component of KNPE 331. NOTE Valid First Aid/CPR Certification required.

Learning Hours: 189 (165 Practicum, 24 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and KNPE 330/4.5 and a cumulative GPA of 2.70 or higher and permission of the Course Coordinator and the Undergraduate Chair in the School of Kinesiology and Health Studies.

Offering Faculty: Faculty of Arts and Science

KNPE 433 Global Sport and Disability Units: 3.00

The UN recognizes the important role of sport participation in promoting physical and mental health as well as fundamental human rights. This course will critique the use of sport and recreation on a global level as a tool for improving the lives of people with disabilities with the goal of removing barriers and enabling participation for all.

NOTE Also offered at Bader College, UK (Learning Hours may vary).

Learning Hours: 120 (36 Seminar, 84 Private Study)

Requirements: Prerequisite Level 4 or above and ([registration in a HLTH Major, Joint Honours, or KINE Specialization Plan] or [registration in the Certificate in Disability and Physical Activity and HLTH 332/3.0] or [registration at the Bader College]).

Offering Faculty: Faculty of Arts and Science

KNPE 436 Advanced Placement in Disability and Physical Activity Units: 3.00

Students gain leadership experience in an exercise program for adults with a disability. Students develop an understanding of the operational considerations to run an adapted exercise program including the necessary human and financial resources, and the skills to develop, implement, and evaluate exercise opportunities for persons with a disability.

NOTE Students must hold valid First Aid/CPR certification and CPIC.

NOTE Field Placement Uniform: estimated cost \$25.

Learning Hours: 138 (18 Seminar, 84 Practicum, 12 Online Activity, 24 Private Study)

Requirements: Prerequisite Level 4 and or above and a minimum grade of a B on the practical assessment in KNPE 336. Registration in the Certificate in Disability and Physical Activity and permission of the Course Coordinator and the Undergraduate Chair in the School of Kinesiology and Health Studies is required.

Offering Faculty: Faculty of Arts and Science

KNPE 439 Critical Appraisal and Translation of Muscle Physiology Research Units: 3.00

In this course students will read, evaluate and discuss recent scientific literature in the areas of exercise metabolism, exercise nutrition, and performance. Students will develop a systematic approach to scientific writing and write translational literature that accurately communicates recent scientific findings to the general population.

Learning Hours: 120 (36 Seminar, 84 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and KNPE 339/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 446 Strength and Conditioning Internship Units: 4.50

Building on the skills and knowledge acquired in KNPE 346, students will complete a Strength and Conditioning (SC) internship with a varsity team. SC interns will be responsible for the design and implementation of training programs, functional screening, and athlete injury management. They will also assist with the Complete Athlete program and contribute to the laboratory component of KNPE 345 as TA's. NOTE Valid First Aid/CPR Certification required.

Learning Hours: 168 (120 Practicum, 24 Group Learning, 24 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and KNPE 346/4.5 and a cumulative GPA of 2.70 or higher and permission of the Course Coordinator and the Undergraduate Chair in the School of Kinesiology and Health Studies.

Offering Faculty: Faculty of Arts and Science



KNPE 447 Advanced Exercise Physiology

Laboratory Units: 3.00

The physiological systems involved in exercise will be explored in weekly laboratory experiments by imposing experimental disturbances during exercise. Students will develop skills in reading and interpreting research, predicting the effects of experiment disturbances, and testing, analyzing and interpreting physiological responses in their experiments. The course format is intended to prepare students for knowledge consumption, application, and creation in the field of exercise physiology.

Learning Hours: 120 (24 Lecture, 36 Laboratory, 12 Online Activity, 48 Private Study)

Requirements: Prerequisite KNPE 225/3.0 and KNPE 227/3.0 and KNPE 327/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 449 Advanced Protein Metabolism Units: 3.00

This course will provide an understanding of the factors that regulate the size of human skeletal muscle. Emphasis will be on how nutrition and exercise affect skeletal muscle growth/loss and insight into the use of isotopic labeling and other contemporary laboratory-based techniques used to study human skeletal muscle protein turnover.

NOTE Nutrition software package: estimated cost \$75.

Learning Hours: 120 (36 Seminar, 84 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and (HLTH 331 or KNPE 349). Exclusion KNPE 493 (Topic Title: Advanced Protein Metabolism - Winter 2020; Winter 2021).

Offering Faculty: Faculty of Arts and Science

KNPE 450 Ergonomics Units: 3.00

This is an interdisciplinary lecture/seminar course designed to provide a comprehensive overview of ergonomics emphasizing applications to product design and prevention of musculoskeletal injuries. The focus includes anthropometry, workplace design, and biomechanical and other human factors. Ergonomic assessment methodologies will be used to assess design features and possible musculoskeletal problems.

Learning Hours: 132 (36 Lecture, 24 Laboratory, 72 Private Study)

Requirements: Prerequisite Level 4 or above and registration in a HLTH Plan or the KINE Specialization Plan and (ANAT 101/3.0 or ANAT 315/3.0) and (KNPE 254/3.0 or 6.0 units in PHYS at the 100-level). Exclusion MECH 495/3.5.

Offering Faculty: Faculty of Arts and Science

KNPE 453 Locomotor Neuromechanics Units: 3.00

The purpose of this course is to provide you with a comprehensive understanding of the mechanics, energetics, and control of human locomotion. We will explore current theories in biomechanics and motor control, as well as the foundational behavioral and sensorimotor evidence that underpin these theories. A focus will be placed on applying this understanding to the rehabilitation of movement disorders and the design and control of robotic assistive devices.

Learning Hours: 120 (36 Seminar, 84 Private Study)

Requirements: Prerequisite KNPE 254/3.0 and KNPE 261/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 454 Clinical Biomechanics Units: 3.00

This advanced course will present the general biomechanical techniques used in clinical evaluation. This will be followed by assessment techniques, how assessment is done, and how the results of assessment can be used to evaluate performance and the effectiveness of treatment.

Learning Hours: 132 (18 Lecture, 18 Seminar, 12 Laboratory, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in the KINE Specialization Plan and KNPE 254/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 455 Advanced Physical Activity and Health Units: 3.00

Provides advanced understanding of concepts related to the use of physical activity/lifestyle as a strategy for reducing morbidity and mortality in general and selected special populations in preparation to participate in a variety of multidisciplinary clinical and/or professional health care environments.

Learning Hours: 120 (36 Lecture, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and KNPE 125/3.0 and KNPE 225/3.0 and KNPE 227/3.0 and KNPE 255/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 456 Survey of Research and Literature in Kinesiology and Physical Education Units: 3.00

Independent study involving a critical review of the literature on an approved topic of specialization in health enhancement, disease prevention and human performance. Students must arrange for a faculty adviser approved by the School of Kinesiology and Health Studies.

Learning Hours: 126 (6 Individual Instruction, 120 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and permission of the supervisor and the Undergraduate Chair in the School of Kinesiology and Health Studies.

Offering Faculty: Faculty of Arts and Science

KNPE 459 Clinical Exercise Physiology Units: 3.00

An in-depth coverage of principles of health screening, exercise testing and exercise prescription for individuals with cardiovascular, metabolic and pulmonary diseases.

An emphasis is placed on understanding disease pathophysiology and how this interacts with the acute response to exercise and the adaptation to training.

Learning Hours: 120 (36 Lecture, 84 Private Study)

Requirements: Prerequisite Level 3 or above and registration in a KINE Plan and KNPE 125/3.0 and KNPE 225/3.0 and KNPE 227/3.0. Recommended KNPE 255/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 463 Community-Based Physical Activity Promotion Units: 6.00

Program planning and evaluation for the promotion of physical activity in the community, workplace, school, and health care settings. Using a combination of lecture, group discussions, and a community-based placement, students will acquire the skills and understand the philosophies used in promoting physical activity involvement in the community.

Learning Hours: 244 (72 Seminar, 72 Practicum, 100 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and KNPE 265/3.0 and a minimum GPA of 2.90 in all KNPE courses. Recommended HLTH 315/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 465 Sport Participation and Performance Units: 3.00

An exploration of the theoretical and empirical work in the development of sport participation and performance. Specific discussion of the developmental aspects and learning conditions that allow individuals to maintain participation and reach high levels of excellence in sport will be included.

Learning Hours: 120 (36 Seminar, 84 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and a minimum grade of B in KNPE 265/3.0. Recommended KNPE 237/3.0.

Offering Faculty: Faculty of Arts and Science

KNPE 473 Sport and Culture Units: 3.00

This course draws on critical theories to look at sport in Western cultures. It examines sport's contribution to systems of gender, race, class, sexuality and ability. Topics include sport's relationship to nationalism, media, commodification, globalization, and the environment.

Learning Hours: 120 (36 Seminar, 84 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan.

Offering Faculty: Faculty of Arts and Science

KNPE 491 Special Project in Kinesiology Units: 3.00

This is an independent project in an area of specialization in health enhancement, disease prevention and human performance. Students must arrange for a faculty advisor approved by the School of Kinesiology and Health Studies to oversee their project.

Learning Hours: 126 (6 Individual Instruction, 120 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and permission of the supervisor and the Undergraduate Chair in the School of Kinesiology and Health Studies.

Offering Faculty: Faculty of Arts and Science

KNPE 493 Special Topics in Kinesiology Units: 3.00

Intensive coverage of advanced topics that are current and/or of special interest in Kinesiology. Offered periodically by visiting professors or members of faculty. Students should check with the School regarding availability of this course. NOTE This course is repeatable for credit under different topic titles.

Learning Hours: 120 (36 Seminar, 84 Private Study)

Requirements: Prerequisite Level 4 or above and registration in a KINE Plan.

Offering Faculty: Faculty of Arts and Science



KNPE 595 Honours Thesis in Kinesiology Units: 6.00

An independent study involving a research proposal and project on an approved topic in the area of health enhancement, disease prevention, and human performance. The research proposal will be completed in the Fall Term and research project in the Winter Term. Students must arrange for a full-time faculty advisor in the School of Kinesiology and Health Studies.

Learning Hours: 252 (12 Individual Instruction, 240 Private Study)

Requirements: Prerequisite Level 4 or above and registration in the KINE Specialization Plan and a cumulative GPA of 3.50 or higher and permission of the Course Coordinator and the Undergraduate Chair in the School of Kinesiology and Health Studies. Recommended HLTH 252/3.0.

Offering Faculty: Faculty of Arts and Science