Courses taught by Professor Hazzaa M. Al-Hazzaa

§ Graduate Courses

- ***PHED 550 Laboratory procedures and experiments in exercise Physiology (3 credit hours):***

  Theoretical and practical aspects of physiological testing and evaluation of athletes. Includes testing body composition, aerobic and anaerobic power, muscular strength and endurance, flexibility, work efficiency, energy expenditure, oxygen deficit and post-exercise excess O2 consumption, reaction time, anaerobic threshold, lactate, hematology, exercise ECG and blood pressure. Specific emphases are also placed on experimental procedures and reports writing and presentation.

- ***PHED 553 Cardiovascular and Pulmonary Systems and Exercise (3 credit hours):***

  Cardiovascular and pulmonary responses and adaptations to exercise and physical activity. Includes topics as respiratory mechanics, pulmonary gas exchange during exercise, ventilatory control during exercise, pulmonary diffusion, gas transport, lung as a buffering system, ventilatory limitation in exercise, hyperbaric physiology, cardiac electrophysiology, cardiac cycle, cardiovascular control during exercise, cardiac output and stroke volume during rest and exercise, ejection fraction, venous return, pre-load and after-load, blood flow during exercise, Vo2 max, o2 pulse, coronary circulation, blood volume, myocardial adaptation to training, sudden cardiac death during exercise, and physiological effects of detraining.

- ***PHED 556 Exercise Testing and prescription (2 credit hours):***

  Principles of exercise testing and prescription in health and disease. Major topics include health and medical screening prior to exercise, conducting an ECG stress test and cardiopulmonary exercise testing, indications and contra-indication for exercise testing, exercise prescription for the following reasons: cardio-respiratory fitness, muscular fitness, cardiovascular disease, pulmonary disease, diabetes, obesity, osteoporoses, and osteoarthritis. Energy calculation during physical activity and practical case studies are also covered in this course.

- ***PHED 560 Seminar in Health and Fitness (3 credit hours):***

  Advanced topics in physical activity, fitness and health. Includes physical activity promotion, hypokinetic diseases, inactivity and societal health, benefits of active lifestyle, exercise dose-response and health benefits, physical activity pyramid, global physical activity policies, assessment of physical activity and fitness, youth fitness, and military & low enforcement fitness.

§ Undergraduate Courses

- ***PHED 245 Exercise Physiology (4 credit hours):***

  The responses and adaptations of human organism to exercise and physical activity. Includes topics as exercise bioenergetics, neuromuscular responses and adaptations to exercise and training, pulmonary and respiratory function and exercise, cardiovascular responses and adaptations to exercise and training, metabolic function during exercise and energy expenditure calculations, thermoregulatory responses and adaptations to exercise in hot and cold environments, and physiological responses and adaptations to altitude training,

- ***PHED 336 Sports Nutrition & Body Composition (2 credit hours):***

  Topics include nutritional needs of the athlete during exercise training, nutritional evaluation of the athlete, pre-game meal, nutritional supplementations, anthropometric characteristics and body composition profile of the elite athletes, ergogenic aids and human performance.