

**FACULTY OF HEALTH
SCHOOL OF KINESIOLOGY AND HEALTH SCIENCE**

Course: HH/KINE 4400 6.0 – Advanced Fitness/Lifestyle Assessment and Counselling

Term: Fall/Winter 2016-2017

Course Instructor(s):

Course Director: N. Geldhill PhD, Rm 356 Norman Bethune College

Practicum supervisor: Veronica (Roni) Jamnik, PhD Room 358 Norman Bethune College

Location: Room 120 Norman Bethune College

For the 2016-2017 academic year HH/ KINE 4400 6.0 formal classes will be held on the following dates and times:

Fall Term class schedule (full attendance is mandatory): August 29-September 2, Tuesday September 6, Sunday September 25, Sunday October 23, and Sunday November 20

1. Monday August 29 2016, 8:30 am - 5:00 pm
2. Tuesday August 30, 2016, 8:30 am - 5:00 pm
3. Wednesday August 31, 2016, 8:30 am - 5:00 pm
4. Thursday September 1 2016, 8:30 am - 5:00 pm
5. Friday September 2 2016, 8:30 am - 5:00 pm
6. Tuesday September 6, 8:30 am - 5:00 pm

You will be split into groups (the group will be assigned specific dates times) for the following “standing mandatory” top down mentoring commitment:

Cycle One:

September 15 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm
September 22 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm

Cycle Two:

September 29 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm
October 6 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm

Cycle Three:

October 13 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm
October 20 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm

Cycle Four:

November 3 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm
November 10 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm

Cycle Five:

November 17 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm
November 24 2016 10:30 am – 12:30 pm; 12:30 pm-2:30 pm; 2:30 pm-4:30 pm; 4:30 pm-6:30 pm

Fall Term **MANDATORY** 80 hour HH/KINE 4400 6.0 Practicum Requirement: Dates and times of practicum opportunities will be announced.

Winter Term class schedule: Classes will be held on Tuesday and Thursday mornings from 8:00 am - 9:50 am

Winter Term **MANDATORY 80** hour HH/KINE 4400 6.0 Practicum Requirement: Dates and times of practicum opportunities will be announced. Again, you will be split into four groups for the HH/KINE 3400 “standing mandatory” top down mentoring commitment On Thursdays between 10:30 am and 6:30 pm.

Course Web Page: None

Expanded Course Description:

Organization of the course: The course involves lectures and complimentary experiential sessions. The lectures and experiential sessions will be supplemented by guest lecturers and videos. The required readings are central to the course. The lectures and experiential session will serve to enhance, clarify, and illustrate crucial issues from the assigned readings

Scope of the course: Students will receive theoretical background in applied exercise science as it relates to advanced fitness appraisal, lifestyle assessment, physical activity/exercise management and counselling for both apparently healthy individuals and special populations such as high performance athletes, workers in physically demanding occupations and persons with clinical conditions associated with chronic diseases. Students will also receive supervised practical experience which will prepare them to meet the competency requirements for a number of nationally recognized certifications.

Overview of Course Content:

The following information is covered from an *applied perspective* as it pertains to fitness applications including: appraisal, interpretation, physical activity/exercise management plus design and counselling for both health-related fitness and performance-related fitness:

- applied physiology of health-related fitness and performance-related fitness
- cardio-respiratory exercise physiology and the energy systems with emphasis on physical activity/exercise training guidelines and adaptations
- evidence-based vs non-evidence-based physical activity practises
- risk stratification for physical activity participation in the general population and low risk pregnancy
- issues related to legal liability, scope of practice, professional conduct, medical delegation for blood work use of informed consent, waivers, 2015-16 PAR-Q+, ePARmed-X+ (www.eparmedx.com) and other related screening tools
- Aerobic Fitness, VO_2 max versus VO_2 peak, work accomplished, estimated aerobic fitness
- indirect calorimetry
- indirect assessment of body composition
- risk stratification for obesity
- Anaerobic fitness
- understanding the efficacy of established physical activity/exercise training guidelines and training monitoring techniques
- how body composition is or is not affected by physical activity/exercise and lifestyle modifications, fat oxidation rates
- understanding the efficacy of the variant methods used to evaluate body composition
- cardiovascular-respiratory dynamics
- the electrocardiogram, leads, the normal EKG, time and speed of the EKG, summary of the EKG intervals, normal EKG variations, EKG abnormalities
- musculoskeletal fitness: assessment compliance of muscle(s) in movement execution, biomechanics of resistance training
- ergonomics; occupation-specific assessments, workplace fitness programs, developing job-specific physical fitness protocols for safety related occupations

- psycho-social aspects of physical activity/exercise and physical activity/exercise management plus design
- the role of other professionals (eg physicians, physiotherapists, kinesiologists, nurse practitioners etc) concerning contraindications to exercise/functional capacity testing and physical activity/exercise participation
- safety, injuries and emergency procedures for exercise/functional capacity evaluation and physical activity/exercise participation
- assessment considerations plus physical activity/exercise strategies for special populations
- equipment considerations
- physical activity/exercise: demonstration, modification, monitoring with and without equipment
- physiological responses and adaptations of variant physical activity/exercise training tactics plus strategies
- efficacy of workplace fitness programs, commercial fitness programs, community based recreation centres, home based programs plus clinically based programs
- developing, monitoring and modifying physical activity/exercise training/functional training/conditioning programs
- evidence-based recommendations regarding both the benefits and the risks associated with exercise in select clinical disorders including: cardiovascular disease (excluding stroke), stroke, cancer, arthritis, low back pain, osteoporosis, respiratory disease, cognitive& psychological conditions, metabolic disorders, and spinal cord injury.
- Physical Activity/Exercise practice guidelines for persons with chronic diseases, functional limitations and disabilities associated with: Musculoskeletal Conditions, Cardiopulmonary Conditions, Metabolic Conditions, Neuromuscular Conditions and Aging Conditions
- Organization Specific Physical Activity Guidelines: CACR, Obesity, Diabetes, etc

All students must be prepared to actively participate in the:

- Physical Fitness Assessment Applications for; Health, Function and Work or Sport
- Physical Activity and Exercise Prescription Applications for; Health, Function and Work or Sport

Course Materials

- Advanced Fitness Assessment & Exercise Prescription. V. Heyward, Current edition
- Rapid Interpretation of EKG's. Dale Dubin, MD current edition

The following texts are also highly recommended as I refer to them:

- Strength Training Anatomy. Frederic Delavier, Current Edition Human Kinetics ISBN-13: 9780736092265
Prescriptive Stretching Kristian Berg Current Edition Human Kinetics ISBN-13: 978073609936-3
- Selected readings will be provided

Evaluation:

1. Method of evaluation for academic credit:

Mid-Term Examination (25 %) Written during the December Exam Period (date to be announced by the university). ***DO NOT BOOK ANY FLIGHTS UNTIL THE EXAM DATES ARE FINALIZED.***

Course Activities (45 %)

Hands-on engagement in both class and out-of-class practica plus successful demonstration of the required competencies (25 %)

Assignments, Quizzes, Presentation of Assigned Paper and Case Study (20 %)

Final Exam (30%) Written during the April Exam Period (date to be announced by the university).
DO NOT BOOK ANY FLIGHTS UNTIL THE EXAM DATES ARE FINALIZED.

2. **Additional requirements to receive the York University Fitness Certificate and the external Certified Exercise Physiologist designation**

Must achieve a minimum of 80% in each of the above listed evaluation categories

Field work requirement in the Human Performance Laboratory of 80 *hr per term* (to be completed outside of class time on evenings and weekends).

Concurrent & successful completion of PKIN 0861 Personal Training I and PKIN 0862 Personal Training 11

Assist with the top-down mentoring in the HH/KINE 3400 Laboratories

Grading and Missed Exams:

Grading: The grading scheme for the course conforms to the 9-point grading system used in undergraduate programs at York (e.g., A+ = 9, A = 8, B+ = 7, C+ = 5, etc.). (For a full description of York grading system see the York University Undergraduate Calendar-

Note: Final course grades may be adjusted to conform to program or faculty grades distribution profiles

Missed Exams: Students with a documented reason for missing a course test, such as illness, compassionate grounds, etc., which is confirmed by supporting documentation (e.g., doctor's letter) may request accommodation from the Course Instructor. A make-up exam is generally written within three weeks of the missed exam.

Important Course Information:

All students are expected to familiarize themselves with the following information, available on the Senate Committee on Curriculum & Academic Standards webpage (see Reports, Initiatives, Documents) Senate policy at <http://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/>

- York's Academic Honesty Policy and Procedures/Academic Integrity Website
- Ethics Review Process for research involving human participants
- Course requirement accommodation for students with disabilities, including physical, medical, systemic, learning and psychiatric disabilities
- Student Conduct Standards
- Religious Observance Accommodation