HONOURS BSC IN HUMAN KINETICS - APPLIED STUDIES IN KINESIOLOGY OPTION

Students will acquire knowledge and have opportunities to apply what they learn in the various capacities of a kinesiologist. Kinesiology involves the application of principles from biomechanics, physiology, and motor behaviour to improve peoples’ functional movement, motor performance, and to manage and prevent injury and disease. Students will be offered courses oriented towards the core competencies required by the College of Kinesiologists of Ontario to pursue a professional career as a Registered Kinesiologist (R Kin). Students will gain theoretical and practical training, and will acquire skills to critically examine literature in the biophysical sciences of human movement.

Students will acquire knowledge, competencies and techniques for assessing and promoting performance and functional capacity, and for preventing and managing injury and chronic disease. They will obtain practical skills in exercise prescription to enhance performance and health, and for the treatment of individuals with compromised function. Students will have opportunities to gain training in how to use exercise in the management of injury, chronic disease, and in rehabilitation. They will have opportunities to gain training in ergonomics to critically assess and design equipment and workplaces to optimize performance and minimize musculoskeletal injury risk. They will gain applied counselling skills in principles of behaviour change to help individuals become more physically active and to help them enhance their health and well-being. Students will acquire knowledge in class settings and in laboratory-based and field practicum. In these rich practical experiences, they will learn to interact with different populations, from either different age groups (preschoolers, youth, young adults, the aged) or from groups of varying functional levels (e.g., athletes, sedentary people, persons with chronic disease, people in rehabilitation). Our students will gain practical experiences that better prepare them to pursue a career as a kinesiologist.

Our graduates are eligible to challenge the professional licensing examination for the College of Kinesiologists of Ontario, the external regulatory body for the profession of kinesiology and the R Kin designation. Applied Studies in Kinesiology enable graduates to pursue various career-paths in different occupational roles. For example, our graduates can become strength and conditioning coaches in high-performance training facilities and professional sport organizations. They can work among allied health professionals in community health centres and outpatient hospital programs, prescribing exercise treatments to help people manage chronic conditions. Our graduates can also find roles in rehabilitation clinics prescribing exercise and mobility protocol to facilitate injured persons’ return to work. They can work for occupational health and safety companies, conducting ergonomic assessments and re-designing spaces to enhance how people move in the workplace. They can become physical activity counsellors in family health teams or community health centres. Our graduates can initiate start-up enterprises in private kinesiology services. They can also work toward employment as certified ergonomists and pursue post-graduate certification in advanced ergonomics studies. Many of our graduates receive certification as Certified Exercise Physiologists from the Canadian Society for Exercise Physiology (CSEP-CEP) and others pursue accredited membership with La Fédération des Kinésiologues du Québec. Our graduates can also pursue advanced degrees in allied health and rehabilitation fields (e.g., physiotherapy, occupational therapy).

Program Requirements

The French immersion stream is available with this program.

Compulsory Courses at the 1000 level

ANP 1105 Human Anatomy and Physiology I 3 Units
APA 1313 Musculoskeletal Anatomy 3 Units
BIO 1130 Introduction to Organismal Biology 3 Units
BIO 1140 Introduction to Cell Biology 3 Units
CHM 1311 Principles of Chemistry 3 Units
CHM 1321 Organic Chemistry I 3 Units
MAT 1330 Calculus for the Life Sciences I 3 Units
PHY 1321 Principles of Physics I 3 Units

Compulsory Courses at the 2000 level

APA 2111 Intervention Theories 3 Units
APA 2114 Biomechanical Analysis of Human Movement 3 Units
APA 2120 Motor Control and Learning 3 Units
APA 2140 Introduction to Sport and Exercise Psychology 3 Units
APA 2180 Research Methods in Human Kinetics 3 Units
APA 2301 Exercise Physiology I 3 Units
APA 2314 Laboratory Techniques in Exercise Physiology and Biomechanics 3 Units

Compulsory Courses at the 3000 level

APA 3114 Exercise Physiology II 3 Units
APA 3120 Psychomotor Behavior Laboratory 3 Units
APA 3121 Human Motor Skill Development 3 Units
APA 3122 Physical Activity and Health 3 Units
APA 3125 Prevention and Care of Athletic Injuries 3 Units
APA 3131 Physical Ergonomics 3 Units
APA 3150 Neural Control of Human Movement 3 Units
APA 3311 Musculoskeletal Biomechanics 3 Units
APA 3325 Fitness Training Principles 3 Units
APA 3381 Measurement and Data Analysis in Human Kinetics 3 Units

Compulsory Courses at the 4000 level

APA 4118 Biomechanical Basis of Injury 3 Units
APA 4123 Physical Activity Counselling 3 Units
APA 4124 Interdisciplinary Cases and Professional Practice in Kinesiology 3 Units
APA 4160 Fitness Testing and Exercise Prescription 3 Units
APA 4211 Internship/Clinical Experience 6 Units
APA 4313 Exercise and Disease Prevention 3 Units

Optional courses

3 course units from:

ENG 1100 Workshop in Essay Writing 3 Units
ENG 1112 Technical Report Writing 3 Units

6 course units from:

APA 1122 Physical Activity in a Global Health Perspective 6 Units
APA 1302 Sociology of Sport and Physical Activity in Canada 6 Units

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<th>Course Code</th>
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<tr>
<td>LSR 1100</td>
<td>Introduction to Leisure Studies</td>
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<td>APA 2134</td>
<td>Administration of Leisure, Sport and Physical Activity Services</td>
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<td>APA 2302</td>
<td>History of Sport and Physical Activity in Canada</td>
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3 course units from: 3 Units

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<tr>
<td>ANP 1107</td>
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<td>BIO 2110</td>
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<td>BIO 2133</td>
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<td>CHM 2120</td>
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3 course units from: 3 Units

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<td>Motor Performance and Aging</td>
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<td>APA 4120</td>
<td>Sport and Physical Activity in Aging Populations</td>
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**Elective courses**

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<tbody>
<tr>
<td>Elective course units</td>
<td>9 Units</td>
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**Total:** 120 Units