

# HONOURS BSC HUMAN KINETICS - APPLIED STUDIES IN KINESIOLOGY

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

Co-operative education is available with this program.

The French immersion stream is available with this program.

Requirements for this program have been modified. Please consult the 2023-2024 calendars (<http://catalogue.uottawa.ca/en/archives/>) for the previous requirements.

### 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 and Molecular 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
NUT 1304	Introduction to Nutrition	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 <sup>1</sup>	6 Units
APA 4313	Exercise and Disease Prevention	3 Units

### Optional courses

3 course units from:	3 Units
ENG 1100	Workshop in Essay Writing

*This is a copy of the 2024-2025 catalog.*

ENG 1112	Technical Report Writing	
6 course units from:		6 Units
APA 1122	Physical Activity in a Global Health Perspective	
APA 1302	Sociology of Sport and Physical Activity in Canada	
LSR 1100	Introduction to Leisure Studies	
APA 2134	Administration of Leisure, Sport and Physical Activity Services	
APA 2302	History of Sport and Physical Activity in Canada	
3 course units from:		3 Units
ANP 1107	Human Anatomy and Physiology III	
BIO 2110	Environmental Physiology	
BIO 2133	Genetics	
CHM 2120	Organic Chemistry II	
3 course units from:		3 Units
APA 3130	Motor Performance and Aging	
APA 4120	Sport and Physical Activity in Aging Populations	
<b>Elective courses</b>		
6 elective course units		6 Units
<b>Total:</b>		<b>120 Units</b>

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Students admitted to co-operative education may replace these 6 course units with 6 optional course units in human kinetics (APA) at the 3000 or 4000 level.