

# HONOURS BSC HUMAN KINETICS

The Honours Bachelor of Science in Human Kinetics emphasizes the biophysical sciences of human kinetics, with a focus on the role that biological, anatomical, musculoskeletal, and neuro-motor systems have on motor performance, and the impact of sport and physical activity on the body. It provides the knowledge, skills and techniques required for you to play a leading role in developing and implementing evidence-based approaches that maintain and improve human movement, and lead to positive health outcomes for different populations in a variety of settings. While the program focuses on disciplines such as anatomy, biomechanics, exercise physiology, motor control and psychomotor behaviour, it also provides an understanding of how the social sciences contribute to human movement and performance. Students have the opportunity to do experiential education internships in a community venue, or do a research project supervised by faculty. This degree can lead to admission to graduate studies in human kinetics and advanced degrees in allied health and rehabilitation sciences such as physiotherapy and occupational therapy, medicine, or chiropractic studies. Potential additional certifications: College of Kinesiologists of Ontario (Registered Kinesiologist), Canadian Society for Exercise Physiology (Certified Personal Trainer, Certified Exercise Physiologist).

This program is offered in English and in French.

## 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 2022-2023 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 |
| PHY 1321 | Principles of Physics I                    | 3 Units |

### Compulsory Courses at the 2000 level

|          |   |         |
|----------|---|---------|
| 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 3120 | Psychomotor Behavior Laboratory                 | 3 Units |
| APA 3381 | Measurement and Data Analysis in Human Kinetics | 3 Units |

### Optional courses

3 course units from: 3 Units

ENG 1100 Workshop in Essay Writing

ENG 1112 Technical Report Writing

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

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

6 course units from: <sup>1</sup> 6 Units

APA 4200 Research Project

APA 4211 Internship/Clinical Experience

21 optional course units at the 3000 or 4000 level from the list of optional courses 21 Units

### Elective courses

33 elective course units 33 Units

or 3 elective course units and a minor

**Total:** 120 Units

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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 from the list of optional courses.

## List of Optional Courses

|          |   |         |
|----------|---|---------|
| APA 3111 | Physical Education Methods: Intervention, Observation and Experimentation | 3 Units |
| APA 3113 | Management of Sporting Events and Festivals                               | 3 Units |
| APA 3114 | Exercise Physiology II  | 3 Units |
| APA 3118 | Recreation, Sport and Community Development                               | 3 Units |
| APA 3119 | Coaching Training Methods   | 3 Units |
| APA 3121 | Human Motor Skill Development   | 3 Units |
| APA 3122 | Physical Activity and Health  | 3 Units |
| APA 3123 | Hockey and Canadian Culture   | 3 Units |
| APA 3124 | Diet and Physical Activity  | 3 Units |
| APA 3125 | Prevention and Care of Athletic Injuries                                  | 3 Units |
| APA 3130 | Motor Performance and Aging   | 3 Units |
| APA 3131 | Physical Ergonomics   | 3 Units |
| APA 3142 | Sociology of Health and Physical Activity in Canada                       | 3 Units |
| APA 3146 | Sport and Recreation Marketing  | 3 Units |
| APA 3150 | Neural Control of Human Movement  | 3 Units |

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

|          |  |         |
|----------|--|---------|
| APA 3301 | Ethics in Sport, Physical Activity and Health in Canada          | 3 Units |
| APA 3311 | Musculoskeletal Biomechanics                                     | 3 Units |
| APA 3324 | Techniques and Strategies in Sport                               | 3 Units |
| APA 3325 | Fitness Training Principles                                      | 3 Units |
| APA 4101 | Anthropology of Sport and Leisure                                | 3 Units |
| APA 4112 | Political Economy of Sport and Physical Activity                 | 3 Units |
| APA 4115 | Sport and Identities   | 3 Units |
| APA 4116 | Applied Sport and Performance Psychology                         | 3 Units |
| APA 4117 | Quality of Life: Theory, Research and Application                | 3 Units |
| APA 4118 | Biomechanical Basis of Injury                                    | 3 Units |
| APA 4119 | International Sport Management Perspectives                      | 3 Units |
| APA 4120 | Sport and Physical Activity in Aging Populations                 | 3 Units |
| APA 4123 | Physical Activity Counselling                                    | 3 Units |
| APA 4124 | Interdisciplinary Cases and Professional Practice in Kinesiology | 3 Units |
| APA 4125 | Molecular Exercise Physiology                                    | 3 Units |
| APA 4131 | Psychomotor Behavior: Current Trends                             | 3 Units |
| APA 4150 | Principles in Psychomotor Rehabilitation                         | 3 Units |
| APA 4160 | Fitness Testing and Exercise Prescription                        | 3 Units |
| APA 4313 | Exercise and Disease Prevention                                  | 3 Units |
| APA 4315 | External Influences and Physical Activity                        | 3 Units |
| APA 4320 | Advanced Coaching: Global Preparation in a Sport                 | 3 Units |
| APA 4323 | Selected Topics in Human Kinetics                                | 3 Units |
| APA 4900 | Directed Studies   | 3 Units |