HONOURS BACHELOR OF SCIENCE IN FOOD SCIENCES AND MASTER OF SCIENCE NUTRITION AND FOOD BIOSCIENCES

Overview

Honours Bachelor of Science in Food Sciences

The foods we eat are essential to maintaining the health of individuals and populations. Students in the Honours Bachelor of Science in Food Sciences will have an in-depth knowledge of the sciences underlying the production, consumption and metabolism of food, as well as their effects on health, disease prevention and management.

This program focuses on the acquisition of knowledge in physico-chemical and sensory properties of food, microbiology and food safety, preparing graduates for careers in the agri-food sector such as agri-food industries, businesses, food science research centres and government departments. As the only food science training offered in the context of a faculty of health sciences in Canada, this option places greater emphasis on the health impact of food.

It offers multiple educational opportunities to actively participate in experiential learning projects. Several optional courses on currently relevant subjects, as well as internship opportunities in research, public institutions and industrial settings, and through the Cooperative Education Program, are integrated into the curriculum.

The Honours Bachelor of Science in Food Sciences is offered in French and English.

Dietetics training is offered in French. Please visit the French website (https://catalogue.uottawa.ca/fr/premier-cycle/bsc-specialise-nutrition-dietetique/) for more details.

Master of Science Nutrition and Food Biosciences

The language of instruction is English.

The Master of Science Nutrition and Food Biosciences focuses on developing advanced research competencies to address current challenges in the areas of Nutrition and Food Biosciences in Canada and globally. The scope of this fundamental and applied sciences program covers the continuum from food processing to health and wellness. This interdisciplinary program offers advanced education in three main areas of expertise (clinical and public health nutrition, food sciences and cellular and molecular nutrition), which allow students to investigate the role of nutrition and food in promoting health and preventing and treating nutrition related illness. Students will gain a comprehensive understanding of the chemical composition and physical characteristics of foods, which determine their nutritive value and sensory properties. The cellular and molecular mechanisms underlying the metabolic responses to different foods and diets and be able to communicate the importance of good nutrition for maintaining health and managing diet-related diseases will be studied. This program addresses the continuum of research from food formulation to metabolism, focusing on the intersection between healthy food and healthier lives.

Admission and Retention Requirements

- Admission to a dual fast-track degree program does not guarantee entry into the master's program.
- The minimum cumulative grade point average required for good academic standing is 8.5.
- Have written confirmation from at least one faculty member willing to supervise your research and thesis.
  - We recommend that you contact potential thesis supervisors as soon as possible.
- By the end of January of the 3rd year of study:
  - Have passed a language proficiency test in English, if you have not successfully completed an undergraduate course in English.[1]

1

Candidates are responsible for any fees associated with the language test.

Program Requirements

Honours Bachelor of Science in Food Sciences

For the most accurate and up to date information on admission requirements, please visit the program prerequisites (https://www2.uottawa.ca/study/undergraduate-studies/program-prerequisites/) webpage.

The minimum C.G.P.A. required for good academic standing is 8.5.

Compulsory courses at the 1000 level		
ANP 1111	Essentials of Human Anatomy and Physiology I	3 Units
ANP 1115	Essentials of Human Anatomy and Physiology II	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
NUT 1104	Food Sciences I	3 Units
NUT 1124	Food Sciences II	3 Units
NUT 1150	Food Psychology	3 Units
NUT 1304	Introduction to Nutrition	3 Units
Compulsory courses at the 2000 level		
HSS 2381	Quantitative Methods in Health Sciences: Continuous Variables	3 Units
HSS 2382	Quantitative Methods in Health Sciences: Categorical Variables	3 Units
NUT 2103	Laboratory Techniques in Food Sciences	3 Units
NUT 2110	Principles of Management in Nutrition	3 Units
NUT 2304	Introduction to Research Methods in Food and Nutrition	3 Units
NUT 2331	Food Carbohydrates	3 Units
NUT 2333	Nutritional Biochemistry	3 Units
Compulsory courses at the 3000 level		
NUT 3107	Food Microbiology	3 Units

NUT 3130	Micronutrients and Phytochemicals	3 Units
NUT 3131	Food Lipids	3 Units
NUT 3132	Food Proteins	3 Units
NUT 3140	Food Analysis	3 Units
NUT 3141	Food Transformation	3 Units
Compulsory courses at the 4000 level		
NUT 4141	Food Biophysics	3 Units
NUT 4183	Food Safety and Regulatory Affairs	3 Units
NUT 4184	Global Food Systems, Security and Sustainability	3 Units
NUT 4185	Food Toxicology	3 Units
NUT 4242	Advanced Research Project	6 Units
6 optional course units from the list of optional courses		6 Units
Total:		**90 Units**

List of Optional Courses

ADM 1100	Introduction to Business	3 Units
AHL 1120	Food Studies: A Humanities Perspective	3 Units
EMC 1100	Building an Entrepreneurial Mindset	3 Units
PSY 1101	Introduction to Psychology: Foundations	3 Units
PSY 1102	Introduction to Psychology: Applications	3 Units
ADM 2313	The Entrepreneurial Society	3 Units
AHL 2140	A Transdisciplinary Exploration of Food Studies	3 Units
NUT 2125	Management of Food Services	3 Units
NUT 2301	Nutrition Through the Life Stages	3 Units
NUT 2321	Nutrition and Metabolism	3 Units
PHI 2396	Bioethics	3 Units
SOC 2102	Sociology of Food and Eating	3 Units
ADM 3313	New Venture Creation	3 Units
AHL 3300	Creativity and Innovation	3 Units
NUT 3506	Alimentation des collectivités	3 Units
NUT 3110	Selected Topics in Food Sciences	3 Units
NUT 3705	Introduction à la génomique nutritionnelle	3 Units
NUT 4107	Functional Foods and Nutraceuticals	3 Units
NUT 4130	Nutrition, Behaviour and Mental Health	3 Units
NUT 4132	Diet, Microbiota and Intestinal Health	3 Units
NUT 4186	Food Business, Marketing and Communication	3 Units
NUT 4243	Food Industry Placement	6 Units
NUT 4244	Food Product Development	6 Units

Master of Science Nutrition and Food Biosciences

Master's with Thesis

Compulsory courses [1]		
NUT 5101	Research and Communications in Nutrition and Food Biosciences	1.5 Units
NUT 5102	Knowledge Translation and Transfer for Nutrition and Food Biosciences	1.5 Units
1 course unit from Clinical and Public Health Nutrition: [2]		1 Unit
NUT 5111	Nutritional Epidemiology: Methods and Applications	
NUT 5112	Social Nutrition and Vulnerable Populations	
NUT 5113	Advances in Clinical Nutrition	
NUT 5114	Impact of Nutrition in Health and Disease	
NUT 5115	Indigenous Nutrition and Food Culture	
1 course unit from Food Sciences: [2]		1 Unit
NUT 5121	Food Composition	
NUT 5122	Dependence of Food Properties on Structural Organization of Biomaterials	
NUT 5123	Bioaccessibility of Bioactive Components	
NUT 5124	Bioavailability of Bioactive Components	
1 course unit from Cellular and Molecular Nutrition: [2]		1 Unit
NUT 5131	Nutrition and Intestinal Health	
NUT 5132	Composition and Function of Microbiome	
NUT 5133	Nutrition and Neuroscience	
NUT 5134	Food Function and Chronic Disease	
3 optional course units from: [2]		3 Units
NUT 5111	Nutritional Epidemiology: Methods and Applications	
NUT 5112	Social Nutrition and Vulnerable Populations	
NUT 5113	Advances in Clinical Nutrition	
NUT 5114	Impact of Nutrition in Health and Disease	
NUT 5115	Indigenous Nutrition and Food Culture	
NUT 5121	Food Composition	
NUT 5122	Dependence of Food Properties on Structural Organization of Biomaterials	
NUT 5123	Bioaccessibility of Bioactive Components	
NUT 5124	Bioavailability of Bioactive Components	
NUT 5131	Nutrition and Intestinal Health	
NUT 5132	Composition and Function of Microbiome	
NUT 5133	Nutrition and Neuroscience	
NUT 5134	Food Function and Chronic Disease	
Research Experience		
SSP 6009	Research Experience	21 Units
THM 7999	Master's Thesis [3, 4]	

1

The School may require additional courses, depending on your backgrounds.

2

The list of specialized modules being offered in each field in any given year will be indicated on the program website. You are allowed to take 3 optional course units in another discipline with approval of the Department and the assistant director at graduate studies.

3

Presentation and defense of a thesis based on original research carried out under the direct supervision of a faculty member of the School.

4

You are responsible for fulfilling all the thesis requirements.

Specific requirements for the master's program

Minimum Requirements

The passing grade in all courses is C+.

Two failures in courses (either 1-unit module or 1.5 units course) or the research experience, or two unsatisfactory research progress reports will result in withdrawal from the program.