I am interested in studying Human Nutrition

GRADUATE PROGRAMS RELATED TO NUTRITION

The University of Guelph has an outstanding reputation for excellence in biological and social sciences, especially as they apply to human nutrition and well-being. Our faculty and facilities in these disciplines are amongst the best in the world, and provide excellent support for graduate student research. At the University of Guelph, you can choose from a variety of graduate programs that will allow you to investigate multi-disciplinary issues across the full spectrum of human nutrition and health. We encourage you to learn more about our graduate programs.

www.uoguelph.ca/graduatestudies
I am interested in studying Human Nutrition

NUTRIGENOMICS

Human Health & Nutritional Science MSc, PhD
Students explore the role of nutrition in health and disease with genetic, genomic, proteomic, and metabolomic approaches. These approaches are widely used to better understand the efficacy of dietary interventions, identify novel biomarkers that reflect molecular processes and tissue function, and determine how nutrition can influence risk factors for cardiovascular disease, diabetes, and cancer. Nutrigenomics research is conducted in a variety of experimental contexts, ranging from cell culture systems to animal models to human clinical interventions. Examples include: studying how dietary fat, phospholipid and carbohydrate/fibre metabolism affect gene expression, protein synthesis, and tissue function.

Bioinformatics MSc, MBNF, PhD
Bioinformatics is a unique interdisciplinary program that teaches the application of the latest computational and statistical techniques to nutrigenomics data including, genetics (DNA variation), epigenetics (DNA methylation), gene expression (RNA), and metabolism (metabolomics, systems biology) to solve problems at the cutting edge of human and animal health. Students in this program will be guided by an interdepartmental supervisory team to extend their undergraduate expertise into a comprehensive bioinformatics education.

Mathematics & Statistics MSc, PhD
The Department of Mathematics and Statistics offers MSc and PhD degrees that present the opportunity to specialize in a variety of areas. A number of faculty within the department are working in nutrigenomics, bioinformatics, biomathematics and biostatistics, with applications in areas such as clinical trials, the study of diseases, the modelling of ecological systems and food safety. Students have the opportunity to pursue a thesis (MSc or PhD) or a major research paper (MSc).

Toxicology* MSc, PhD
The MSc and PhD in the Collaborative Toxicology program permit students to combine Toxicology studies with training in selected academic disciplines. Participating departments include: Animal Biosciences, Biomedical Sciences, Chemistry, Integrative Biology, Environmental Science, Human Health & Nutritional Sciences, Mathematics & Statistics, Molecular and Cellular Biology, Pathobiology, and Psychology. Added to the Master’s or Doctoral departmental degree is the designation, “Toxicology”. The degrees provide extra training and flexibility for an expanding job market.

CELLULAR

Food Science MSc, PhD
Food Science research focuses on in-vitro studies on the effects of nutritional components in foods at a cellular level. Compounds found in dairy and eggs are commonly investigated.

Human Health & Nutritional Science MSc, PhD
Human Health and Nutritional Science investigates the biological roles of nutrients at a molecular and cellular level. Research programs investigate how nutrients affect processes in cellular differentiation, cell proliferation, energy metabolism, and cell death. Researchers focus on fatty acids, Vitamin D and chemotherapeutic drugs in cancer prevention and treatment, niacin and signal transduction and DNA repair and how lipids modulate membrane structure, protein function and gene expression.

METABOLIC

Food Science MSc, PhD
Manipulation, digestion and absorption of specific compounds in foods are extensively studied in Food Science research. This research is often done in collaboration with researchers in other disciplines, particularly in Human Health and Nutritional Sciences.

Integrative Biology MSc, PhD
Research in the laboratory of Dr. N. Bernier involves identifying and understanding the neuroendocrine pathways involved in the regulation of appetite and growth in fish. The goal of this research is to elucidate the basic neural circuits and endocrine signals that regulate appetite and growth in response to different diets, feeding regimes and various environmental and anthropogenic stressors.

Toxicology* MSc, PhD

HUMAN MODELS

Family Relations & Applied Nutrition MSc, PhD
Faculty and graduate students in Applied Human Nutrition are involved in a diversity of research projects including randomized controlled trials related to family-based obesity prevention; developing interventions to reduce TV's in young children's bedrooms; and determining why young Canadian adults consume insufficient dietary calcium.

Food Science MSc, PhD
Food Scientists use clinical trials to study the impact of foods and ingredients on human health and well being. Research spans the study of specific compounds in foods and their effect on health through to identifying new foods and ingredients that may be beneficial for health.

Human Health & Nutritional Science MSc, PhD
Humans are studied to examine the individual or combined effects of diet and exercise in mediating metabolic processes in health and chronic disease such as, cardiovascular disease, obesity, metabolic syndrome, diabetes and cancer. Human Health & Nutritional Science studies how fats and carbohydrates are used as fuels, the regulation of adipose and the impact of caffeine or coffee ingestion on carbohydrate metabolism and insulin sensitivity. We also study the role of specific foods (e.g. functional foods) and food constituents (e.g. nutraceuticals) in the reduction of chronic disease risk.

Toxicology* MSc, PhD

FUNCTIONAL FOODS & NUTRACEUTICALS

Animal Biosciences, MSc, PhD
Researchers in Animal Biosciences use animal models to explore a wide area of nutritional research. Specific projects include, using pigs as a model for a variety of human inflammatory bowel diseases in order to explore dietary interventions to improve gut health, and using mice as a model for gene expression studies in mammary tissue to explore nutritional influences on milk composition.

Food Science MSc, PhD
Using animal models, Food Science researchers are involved in studies investigating allergens in foods. Food safety research into the progress of food borne illnesses through the gut is also investigated.

Human Health & Nutritional Science MSc, PhD
The faculty of Human Health and Nutritional Science use animal models to study a wide range of nutritional related topics studying the effects of diet and exercise on health and performance. These topics include: the effects of exercise and diet on adipose tissue function and metabolism, how fats and carbohydrates are used as fuels in contracting skeletal muscle, endurance training, obesity and diabetes, the study dietary fatty acids in breast cancer, bone development, Alzheimer’s disease and the effect of niacin deficiency and pharmacological supplementation on the development of memory and learning.

Integrative Biology MSc, PhD
Research in the laboratory of Dr. N. Bernier involves identifying and understanding the neuroendocrine pathways involved in the regulation of appetite and growth in fish. The goal of this research is to elucidate the basic neural circuits and endocrine signals that regulate appetite and growth in response to different diets, feeding regimes and various environmental and anthropogenic stressors.

Plant Agriculture MSc, PhD
Members of the Plant Agriculture department, in collaboration with faculty in other departments evaluate the nutritional content and value of fruits, vegetables and cereals to support human and animal health.

Toxicology* MSc, PhD

Biophysics is a unique interdisciplinary program that seeks to further our understanding of biological processes through the application of concepts and techniques of the physical sciences. Biophysics research at Guelph relevant to functional foods and nutraceuticals includes experimental and computational work on
biological self-assembly, nano encapsulation systems for the delivery of bioactives, and high resolution structure measurements (AFM, NMR, X-ray) of proteins and biomaterials on the nanoscale.

**Family Relations & Applied Nutrition**

MSc, PhD

Faculty and graduate students in Applied Human Nutrition conduct research on topics related to consumer health outcomes and implications of consumer health behaviors. These behaviors range from dietary intake and food choices to social and environmental influences. The program offers a range of specializations in consumer behavior and health outcomes.

**Food Science**

MSc, PhD

Food Science research at Guelph focuses on the production, processing, and safety of food products. Areas of research include food chemistry, food microbiology, food processing, and food quality. The program offers specializations in food safety, food chemistry, and food microbiology.

**Human Health & Nutritional Science**

MSc, PhD

The Department of Human Health and Nutritional Science conducts research on the role of nutrition in health and disease. The program offers a range of specializations in nutrition research, including clinical nutrition, public health nutrition, and sports nutrition.

**Integrative Biology**

MSc, PhD

The Centre for Biodiversity Genomics (CBG) is a leading innovator in DNA-based methods used for species identification. The program offers a range of specializations in biodiversity, genomics, and bioinformatics.

**Plant Agriculture**

MSc, PhD

Faculty and students in Plant Agriculture conduct research on breeding crops for improved human nutrition and health. The program offers specializations in crop improvement, Agri-Business, and Agri-Applications.

**Toxicology**

MSc, PhD

The MSc and PhD in the Collaborative Toxicology program permit students to combine Toxicology studies with training in selected academic disciplines. Participating departments include: Animal Biosciences, Biomedical Sciences, Chemistry, Integrative Biology, Environmental Science, Human Health & Nutritional Sciences, Mathematics & Statistics, Molecular and Cellular Biology, Pathobiology, and Psychology. Added to the Master's or Doctoral departmental degree is the designation, "Toxicology". The degrees provide extra training and flexibility for an expanding job market.

**Physical Activity & Exercise**

Family Relations & Applied Nutrition

MSc, PhD

The Family Relations & Applied Nutrition program offers a range of specializations in physical activity and exercise science, including exercise science, sport and recreation management, and health promotion.

**Human Health & Nutritional Science**

MSc, PhD

The Department of Human Health and Nutritional Science focuses on the role of nutrition in health and disease. The program offers a range of specializations in nutrition research, including clinical nutrition, public health nutrition, and sports nutrition.

**CLINICAL**

Family Relations & Applied Nutrition

MSc, PhD

The Family Relations & Applied Nutrition program offers a range of specializations in clinical nutrition, including dietetics, nutrition education, and clinical nutrition.

**COMMUNITY**

Family Relations & Applied Nutrition

MSc, PhD

The Family Relations & Applied Nutrition program offers a range of specializations in community nutrition, including community nutrition education, community nutrition program development, and community nutrition program evaluation.

**Business Administration MBA**

Guelph’s MBA is offered in three fields of specialization: Sustainable Commerce, Food and Agribusiness, and Hospitality and Tourism. Learn, collaborate and grow from industry experts industry at the University of Guelph. Explore topics in policy and economics, marketing and strategy. Offered online, you’ll be able to complete your MBA without interrupting your career.

**Capacity Development & Extension MSc**

Capacity Development and Extension explores the opportunity for facilitating learning, communicating and building capacity that supports food systems at different levels of society including the household, nationally and internationally. Our program is learner-oriented in order to accommodate student research in a wide range of possible topics involving the human and social side of food issues such as, local food systems, ethnocultural crops and interactions that share knowledge and engage the wider society in how food is produced, processed, marketed and consumed in Canada and around the world.

**Geography MA, MSc, PhD**

A number of researchers in the Department of Geography, including a Canada Research Chair in Global Food Security, have active research programs focused on contemporary food production systems. The department of Geography offers an ideal home for those who are interested in understanding and overcoming challenges faced by the global food system to deliver appropriate nutrition for 9 billion people in a way that does not compromise vital ecosystem services including biodiversity conservation and carbon sequestration.

**History MA, PhD**

Understanding nutrition in a historical perspective is fundamental to understanding nutrition itself. The science of nutrition and nutritional advice has changed over time and is influenced by contemporary political, social, and cultural values. Students in the Tri-University History program examine not only the science of nutrition, but also focus on how the rhetoric of nutrition is used by food manufacturers, advertisers, and consumers.

**Management MA, PhD**

The MA Management emphasizes evidence-based decision making. The PhD in Management is a thesis-based program aimed at people who wish to develop a long range research program in a topic of interest offered through the College of Business and Economics at the University of Guelph. Our small program encourages interactions which enable students to expand their horizons beyond what is currently known. The explicit focus on food-related research by some of the faculty and the interaction with the Food Institute provide an ideal opportunity for PhD students to work on the business and marketing aspects of the food and nutrition industry.

**Rural Planning & Development MSc**

Rural Planning and Development students learn how to assess nutrition needs and levels, determine programming needs, design and evaluate community nutrition programs and assess the community impact of presence or absence of nutrition programming.

**Sociology MA, PhD**

Sociology seeks to understand and change our social world. The Department of Sociology and Anthropology offers MA and PhD degrees in Sociology. Different areas of specialization offer opportunities to conduct research and analysis on a broad range of topics related to policy and social change. A number of faculty are actively involved in research focusing on the social and sociological dimensions of food and nutrition issues.

**POPULATION**

Family Relations & Applied Nutrition

MSc, PhD

Faculty and graduate students in Applied Human Nutrition conduct research at the population level, including health and physical activity promotion, nutrition surveillance, analysis of national health surveys, and policies related to the promotion of vegetables.

**Nutrition programs take into account how local food production systems. The department of Geography offers an ideal home for those who are interested in understanding and overcoming challenges faced by the global food system to deliver appropriate nutrition for 9 billion people in a way that does not compromise vital ecosystem services including biodiversity conservation and carbon sequestration.**

*Indicates a collaborative specialization that must be taken in conjunction with another program.*
I want to become a Dietitian in Ontario

Dietetics is a regulated health profession like other health professions such as, nursing and pharmacy. Students must complete an accredited dietetics program. The most direct route to becoming a dietitian (for English-speaking students in Ontario) is to complete the undergraduate degree from one of the three Dietitians of Canada (DC) accredited programs (Ryerson, Brescia or Guelph), followed by a post-baccalaureate accredited dietetic internship. After successful completion of the internship, applicants are eligible to write the Canadian Dietetic Registration Examination administered by the College of Dietitians of Ontario (www.cdo.on.ca).

You can learn more online

Applied Human Nutrition Program requirements:
http://www.uoguelph.ca/undergrad_calendar/10basc-ahn.shtml

Admissions:
https://admission.uoguelph.ca/home.aspx

University/College Transfer:
https://admission.uoguelph.ca/exttransfer

Advanced Standing Admission:
http://www.uoguelph.ca/undergrad_calendar/04-advdstand.shtml

Graduate Studies Preview Day – Saturday, October 22nd, 2016

Join us for Graduate Studies Preview Day between 10:00am – 1:00pm and meet with faculty, staff and current graduate students in your program of interest.

Sign up for a reminder email online at:
www.uoguelph.ca/graduatestudies

Campus Tours

Learn more about what the University of Guelph has to offer by visiting us. We offer campus tours Mon-Fri at 10:00am and 1:30pm and Saturday at 1:30pm. Please visit: admission.uoguelph.ca/tours to reserve your spot with the date and time you would like to visit and we will arrange your tour.

Meet our Graduate Faculty & Graduate Students

Interested in learning more about the research interests of faculty members and what our graduate students have to say about the University of Guelph? Visit us online at: www.uoguelph.ca/graduatestudies

Looking for an Advisor?

Check out the department website and contact the faculty members you are interested in working with directly. They are interested in knowing more about what research you want to do, why you want to work with them and if you have applied to or received any scholarships.

Contact Us

Thank you for taking the time to research the University of Guelph. If you have any questions please do not hesitate to contact us.

University of Guelph
50 Stone Road East,
Guelph, Ontario, Canada N1G 2W1
519-824-4120 ext. 56833
www.uoguelph.ca/graduatestudies

Have questions? Email our office: gradapps@uoguelph.ca