UNIVERSITY of GUELPH

CHANGING LIVES
IMPROVING LIFE

OAC Food Agriculture Communities Environment

Bachelor of Science – Food Science

Develop new products, innovate healthy eating options and ensure food safety. Food science truly impacts every person on earth.

WHAT IS A FOOD SCIENTIST?

Food scientists fill the gap between the production of farm goods and the year-round delivery of food to the global consumer. Food scientists apply the disciplines of chemistry, physics and microbiology to the processing and product development of safe and healthy foods. They are employed by all levels of the food-processing sector; think entrepreneurial to multinational. Whether the products are fresh fruits, vegetables or meats, frozen foods, dairy products, cereals or beer and wine, food scientists have transformed these products from raw ingredients to consumer goods. All technical aspects of food, from processing and packaging to quality and safety, are the work of food scientists.

The global population faces all sorts of challenges around the topic of food: production, nutrition, convenience and safety. This program is your opportunity to learn the skills you need to make an impact on people's everyday lives and see the direct applications of your work.

ABOUT THE PROGRAM

At the University of Guelph, Food Science is a major within the Honours B.Sc. degree program. The University of Guelph has been a leader in food science research for more than a century and offers Ontario's only accredited food science program. World-class facilities, progressive research programs and strong partnerships with government and industry ensure that our graduates are well prepared for successful careers in food science.

Core courses include:

- Chemistry
- Biochemistry
- Mathematics
- Statistics
- Food chemistry
- Food processing & engineering
- Food microbiology
- Sensory analysis of foods
- Instrumental food analysis
- Food product development

Product Development – A feature of the program is the product development courses, where students learn the underlying theory behind food product development including idea generation, prototype development and new product manufacturing, evaluation and product marketing. If you could invent a new food product, what would it be? The options are endless. Products created by students in this course include:

- Healthy French fries and ketchup
- Soy-based ravioli pasta
- Breakfast bars
- Cholesterol-lowering functional food
- Flavoured crackers
- Tex-Mex microwavable appetizers
- Breath strips containing bone-healthy ingredients

Research Opportunities – Many graduates of the B.Sc. Food Science major move on to careers in research, generally through completion of a Masters of Science in Food Science. Food research relies on a deeper understanding of the underlying science to solve problems related to food preservation and safety. Research provides the knowledge that food scientists need to develop new products and new ingredients.

Photo by Katharine Tuerke, SPARK

Sensory evaluation lab

CO-OP OPTION

The co-operative education option of this program provides students the invaluable opportunity to gain work experience while they learn. A minimum of three semesters of full-time work in the food industry enables students to experience the types of employment opportunities available to them after graduation. The Co-op option is a 5-year degree program, with one semester of work following academic year two and a full year of work following academic year three, returning to the University afterwards to complete academic year four. Companies that have recently employed food science co-op students include:

- Agriculture & Agri-Food Canada
- Canadian Food Inspection Agency
- Liberte Natural Foods Inc.
- McCain Foods Ltd.
- Mondelēz International
- Protenergy Natural Foods Corp.
- Smucker Foods of Canada Co.
- Skojdt-Barrett
- University of Guelph, Food Science Dept.
- Wing's Food Products

GRAD PROFILE: SHELBY CRYSTAL

Shelby is a 2013 graduate of the B.Sc. - Food Science - Co-op program. She now works as an Associate Scientist – Biscuit Research & Development at Mondēlez Canada Inc., which produces products such as cookies, crackers, gum, chocolate and candy. Her role in research and development includes sourcing ingredients, working in the lab producing prototypes, conducting commercial scale trials, participating in sensory studies and product tastings, and working in a cross-functional team with various departments. Shelby's favourite part about her current role is being able to see the development of a project from concept to product launch. Seeing her hard work displayed on a grocery store shelf is pretty rewarding too.

"I decided to major in Food Science because I could see a connection between my education and a future career. I knew that when I graduated from this program I would not only be able to find a job that is related to my degree, but also one that I am passionate about. I have always been interested in food and cooking so blending this with a science degree was the perfect match."

CAREERS

As a graduate of the Food Science major, you will be qualified for a variety of roles, including:

- Food Inspector
- Food Safety Research Analyst
- Food Scientist or Technologist
- Laboratory Manager
- Policy Advisor
- Product Development Scientist
- Quality Assurance Manager
- Research Scientist
- Sensory Evaluations Specialist
- Teacher/Professor

ADMISSION REQUIREMENTS

4U English; Advanced Functions; 2 courses from 4U Biology, Chemistry, and Physics; 2 additional 4U or 4M courses. Note: Biology, Chemistry, and Physics are strongly recommended.

For complete admission requirement details, please visit **admission.uoguelph.ca/admissionreqs**

For information on entrance requirements or admission, contact:

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For information on program content or course offerings, contact:

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