

Food Chemistry and Product Development Specialization

The food chemistry and product development specialization emphasizes understanding the analytical, chemical, physical, nutritional, and toxicological aspects of foods and food ingredients.

One-year, course-based master's degree program

Offered by Cornell University's #1 ranked Food Science and Technology program, the MPS graduate degree program offers customized coursework and experiential projects to advance technical knowledge and career potential.

The 30-credit master's degree program can be completed in as little as two semesters of full-time study and prepares individuals for the contemporary workplace through knowledge development, refinement of analytical tools, and advanced training in the latest theory and methodology. This master's degree program broadens expertise and expands professional versatility to produce the next generation of innovative leaders.



Alireza Abbaspourrad, Assistant Professor of Food Science and Technology

#1 Ranked Food Science and Technology Program	Flexible, Interdisciplinary Program	Dedicated Career Support
<p>Internationally recognized faculty with global reach expertise in all facets of food science.</p> <p>Excellent selection of courses in basic and applied sciences.</p> <p>Modern, well-equipped research laboratories and pilot plant facilities.</p> <p>Established relationships with major national food companies.</p>	<p>Students work with world-renowned faculty and dedicated program staff to develop an individualized course of study based on their area of interest.</p> <p>The majority of courses (20 credits) will be within CALS; however, students have the opportunity to take courses across Cornell.</p> <p>With the guidance of a faculty advisor, students work on solving a real-world problem, providing valuable insights and skills for career next steps.</p>	<p>Network of supportive Cornell alumni and professionals, such as the Food Science Advisory Council.</p> <p>Information sessions and networking events with food industry employers.</p> <p>Assistance with interview skills, résumé writing, and identifying career opportunities through Cornell's Office of Professional Programs and Extended Learning.</p>



Admissions Requirements

Bachelor's degree in scientific field, such as microbiology, chemistry, biology

For non-science background, at least 15 credits of introductory college-level science courses, including general chemistry, organic chemistry, general biology, and corresponding labs. Coursework in microbiology and biochemistry is recommended.

GRE

TOEFL/IELTS for international applicants

Additional requirements and application can be found at: gradschool.cornell.edu

Careers

100% of Food Science MPS graduates find placement within six months of completing the program. Alumni have held a range of titles, including:

Product Development Scientist

Quality Control Specialist

Associate Research Scientist

Food Scientist

Regulatory Food Data Analyst

Research and Development Technologist

Alumni Spotlight



Meghan Marchuk, MPS '18, Operations/Product Associate

I have an undergraduate degree in chemistry from Queen's University in Canada. Although I enjoyed my undergraduate program and felt I left with a solid science education, I wanted to work on other skills and gain practical experience in a professional environment. The Cornell MPS program stood out as a unique opportunity to gain fundamental Food Science knowledge and transition into the food industry in a short period of time and without taking too much time away from my career.

The greatest strengths of the MPS program are the resources and professional support. From the amazing supportive faculty and staff, to the career guidance, and interview practice. I definitely feel I got my money's worth and the tools I need to be successful.

Food Chemistry and Product Development



This area of study focuses on the relationships between the structure and functional properties of food molecules to improve the nutritional, safety and sensorial aspects of food. Students take courses covering the general principles that govern the behavior of food materials, and the chemical reactions and changes that take place during processing and storage, as well their effects on the quality and nutritional characteristics of these foods.

Sample Curriculum

COURSE	TITLE
FDSC 4100	Sensory Evaluation of Food
FDSC 4210	Food Engineering Principles
FDSC 4230	Physical Principles of Food Preservation and Manufacturing
FDSC 5000	MPS Project
FDSC 6000	Seminar in Food Science
FDSC 6010	Principles and Applications of Food Science and Technology
FDSC 6950	Current Readings in Food Science

COURSE	TITLE
FDSC 4010	Concepts of Product Development
FDSC 4040	Chemistry and Functional Properties of Food Ingredients
FDSC 4170	Food Chemistry
FDSC 4190	Food Chemistry Laboratory
FDSC 5000	MPS Project
FDSC 6000	Seminar in Food Science
FDSC 6060	Graduate Student Research Hour
FDSC 6220	Functional Foods and Dietary Supplements for Health