

Food Microbiology and Food Safety Focus Area

The food microbiology and food safety focus area emphasizes understanding production, processing, preservation, and storage to control biological, chemical and physical hazards and assure the safety of foods.

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

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

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 related to Food Microbiology and Food Safety. This master's degree program broadens expertise and expands professional versatility to produce the next generation of innovative leaders in Food Safety or related fields.



Martin Wiedmann, Gellert Family Professor in Food Safety (right), with student

#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 a range of fields of study at Cornell.</p> <p>With the guidance of a faculty advisor, students work on solving a real-world problem, gaining 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 CALS Career Services.</p>



Admissions Requirements

Careers

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

MFS graduates develop in-demand skills that are valued across multiple career paths and sectors. Alumni are hired by a range of employers, including:

IMS Health

Chew LLC

WhiteWave Foods

MARS

Sam's Club

Alumni Spotlight



Sophia Elie, Food Safety Processing Specialist, MFS '19

I hold a bachelor's degree in chemical engineering from the University of Michigan-Ann Arbor and while I've worked in food manufacturing for almost eight years, I needed formal food microbiology skills for the food safety side of my job as a food safety processing specialist. The MFS degree allowed me to craft my master's degree based on the skills I need, providing customized flexibility.

I came into the program with no formal microbiology training and limited knowledge of other types of processing other than thermal processing for beverages. The courses in the MFS program provided intense hands-on skills training that allowed me to master a plethora of standard methods used in the food industry in a short period of time.

Food Microbiology and Food Safety



This area of study focuses on understanding the factors influencing the growth of microorganisms in food systems and the means of controlling them. Students gain food safety and quality assurance experience in Cornell University's food processing and development laboratory and state-of-the-art dairy processing plant. Opportunities also exist to participate in a student product development team and help to develop a HACCP plan for new food products.

Sample Curriculum

COURSE	TITLE
FDSC 5940	Applied and Food Microbiology
FDSC 5230	Unit Operations and Food Packaging
FDSC 6000	Seminar in Food Science
FDSC 6010	Food Science and Technology Graduate Boot Camp
FDSC 6950	Current Readings in Food Science
ALS 5900	Project Development

FALL

COURSE	TITLE
FDSC 5010	Concepts of Food Product Development
FDSC 6170	Food Chemistry
FDSC 6310	The Science and Technology of Beer Laboratory
FDSC 5960	Food Safety Assurance
FDSC 6000	Seminar in Food Science
ALS 5900	Project Development
ALS 5910	Project Completion

SPRING