

## Food Safety Expertise- A National Need

Food safety is a global concern, and an area in which shortages of expertise are evident. An area of need is to educate more individuals with expertise in food safety.



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### NDSU Food Safety Education

**Food Safety Minor** - provides students from a variety of majors with an opportunity to enhance their undergraduate education.

**Food Safety B.S.** - provides students with an interdisciplinary education with experiences in chemistry, biochemistry, biology, microbiology, and food processing with the focus on the single issue of food safety. This program is designed as a primary major, or secondary major for students.

**Food Safety M.S.** – prepares students for supervisory roles in the food industry, with regulatory agencies or in public health.

**Food Safety Ph.D.** – educates students to be independent researchers, providing them with opportunities to become principal investigators of food safety research in various arena, including business, academia, and government.

**Food Safety Graduate Certificate** – is designed for professionals and others returning to college to enhance their food safety skills. Certificate programs are an affordable alternative to full-advance degree programs.

## Steps to take if you are considering starting a food safety career:

- Earn a certificate if you work in the food industry, and want the training necessary to advance to food safety management positions.
- Obtain a Master's degree or Ph.D. if you want to apply for upper management positions.

### Here's what some students have to say about food safety education and careers:

*"We can go into a processing department, quality assurance, research and development. We can actually pick what we want, what we're interested in."* Jaclyn Bong



*"Right now, everyone is looking for safe foods. So, it's very important to know."* Yoke Goh

*"It's definitely a field that will always have opportunity."* Joseph Kallenbach



Information in this brochure is subject to change.

## Choosing a Career in Food Safety



We all need to eat, and everyone expects safe food. Keeping food safe from the farm to the table requires attention at every step of the process. Many professionals are involved in keeping food safe, and each of us plays a critical role as we prepare food for ourselves and others.

### What does it take to get into a university's food safety program?

- **Application Process** - Submit an application to the graduate school office if you intend to earn a degree or certificate in food safety. To learn more about the application process, go to: [www.ndsu.edu.gradschool/prospective\\_students](http://www.ndsu.edu.gradschool/prospective_students)
- **Selection Process** - A 4.0 GPA is not required. For M.S. or Ph.D. options, GRE test scores are required for evaluation purposes. The non-thesis M.S. option and the graduate certificate program option do not require the GRE.

Having a background in food safety can help launch you into a successful career! Become a food safety expert whose work impacts the safety of our food system, from the farm to the table. Here's what some experts have to say:

*"The reason I've been here for 20 years, is the variety. Here, it's a different thing every day. I like it a lot. Our main focus is to educate. There's quite a demand right now*



*in the field for this type of employment. There are not a lot of people going to school for this. It's an open field, and there's a lot of potential out there."*  
*Miles Schacher, Health Inspector*



*"I work hands-on with with USDA Inspectors. When you are dealing with food products, it's nice to have a say in those products. It's kind of a sense of responsibility for the*

*product you're putting out. It's nice to have my own lab, where I'm my own boss. With a bachelor's in food safety or a Master's in food safety, I think you'd be pretty marketable anywhere you go."*  
*Heather Rolla, Quality Control Manager*

*"I get to know my participants really well, which is one thing I love about my job."*  
*Anne Gregoire, Extension Agent*



### **What are some food-safety career options?**

As a food safety graduate, you have a vast range of career opportunities. Food safety experts work in many industries, and have a variety of responsibilities. The following is a partial list of roles you might have:

**Epidemiologist** – Epidemiologists study health events in a population, including food-borne illness outbreaks. These experts gather and use information to control and prevent health problems, such as food-borne illnesses.

**Food Economist** – Food Economists study patterns or trends related to production and consumption of food in society. These experts help companies look at trends in what people eat, and help them decide on the products to focus on.

**Food Law Specialist** – Food Law Specialists study the legal implications of food production. These experts might work at a food company to be sure that the company is following government regulations related to food safety and food labeling.

**Food Microbiologist** – Food microbiologists study living organisms and infectious agents, of which many are too small to be seen with the naked eye. These scientists explore, examine, and discover how microbes exist and interact with food, and affect human lives.

### **Hazard Analysis Critical Control Points**

**(HACCP) Program Manager** – HACCP program managers monitor food production. These experts make sure all steps of a predetermined HACCP plan are followed to ensure the safety of food.

**Foodservice Managers** – Foodservice Managers run and operate food establishments. These experts are needed in restaurants, hospitals, nursing homes, schools, and childcare facilities.

**Food Toxicologist** – Toxicologists study the properties of (toxic) food substances in food. These experts examine food additives, mycotoxins (mold-based toxins) and pesticides.

**Extension Agent** – Extension agents teach the public about a variety of food safety topics, including correct food-cooking temperatures, the importance of keeping raw foods separate from ready-to-eat food, and proper hand-washing techniques. These experts provide food safety education to the public, in an effort to prevent the development of food-borne illnesses.

**Plant pathologist** – Plant pathologists study the symptoms, causes, damage, and spread and control of plant diseases. These experts might study how fungal infections in grain might affect the safety of the food for humans or animals.

**Public Health Inspector** - Public health inspectors visit restaurants to determine if regulations are being followed. These experts need to understand regulations so they can provide guidance to restaurants and other foodservice establishments, helping to maintain public health.

**Quality Control Specialist** – Quality control specialists are concerned with the procedural process used to ensure quality of goods produced. These experts make sure that the goods are up to specific food-safety standards.

**Risk Communication Specialist** – Risk communication specialists help develop and implement effective communication strategies to help prevent foodborne illness, or respond after outbreaks happen. These experts might be called upon to be the "spokesperson" after a foodborne illness outbreak.

**Food and Drug Administration Agent (FDA)** – FDA agents supervise and regulate food safety. These experts are responsible for protecting and promoting health through the regulation of food products, medications, supplements, and medical devices.

**United States Department of Agriculture Meat Inspection Agent** - USDA meat inspectors make sure that meat products are fit for human consumption. These oversee the process of safe meat production, including inspection of meat carcasses, to ensure that sanitary standards are followed in meat processing plants.