

MAJOR IN FERMENTATION SCIENCE AND TECHNOLOGY

Fermentation Science and Technology is a multidisciplinary major focusing on the science of fermented foods and beverages. The curriculum focuses on the science of the processes and methods involved with using microorganisms in the commercial production of fermented products. Courses in the major also emphasize the safety, culinary, and nutritional aspects of fermented foods and beverages. This major prepares students for employment in the fermented food and beverage industries in such roles as product development, processing, quality assurance and control, sensory evaluation, packaging, distribution, and plant management. Students enrolled in this major have the opportunity to participate in industry activities and professional organizations to increase their practical understanding of fermented food and beverage production, processing methods, and specific techniques.

Learning Outcomes

Students will demonstrate:

- Ability to integrate biological and chemical processes related to quality and stability of fermented foods, and to critique and effectively communicate the relationships among the processing of fermented foods, nutrition, and food safety.
- Discipline-specific knowledge of the skills and competencies needed in fermentation science and technology. Examples include knowledge of food chemistry, sensory evaluation of fermented products, brewing processes, refining and packaging technology, food production management, and fermentation microbiology.
- Understanding of classification, production, financial aspects, consumption, and service of controlled beverages, including effective management of facilities and people with an emphasis on safe service training and management.
- Competent application of science, history, culture, safety, health, and nutrition dimensions of fermented foods and beverages.

Potential Occupations

Partnerships with industry help provide field experience and internships for majors in Fermentation Science and Technology. The food industry is the largest in the world and fermentation science is a rapidly emerging area, so the future is promising. Examples of careers include fermentation scientist, food scientist, food technologist, food health inspector, food safety specialist, brewer, biotechnologist, quality control analyst, sensory analyst, food microbiologist, and entrepreneur.

Learn more about the Fermentation Science and Technology major on the Department of Food Science and Human Nutrition website (<https://www.chhs.colostate.edu/fshn/programs-and-degrees/b-s-in-fermentation-science-and-technology/>).