Bachelor of Science
Degree Program in
Fermentation Science

Departments of
Nutrition and Food Science
Plant Science and Landscape Architecture

Who are we and what do we do?

The Fermentation Science program is a collaboration between the Department of Nutrition and Food Science and the Department of Plant Science and Landscape Architecture at the University of Maryland, College Park (UMD). Administered through UMD’s College of Agriculture and Natural Resources (AGNR), this major will prepare students for workforce demand in a broad array of fermentation industries that include beverages (beer, wine, distilled spirits, and kombucha), vegetable foods (kimchi, tempeh and miso), dairy foods (cheese and yogurt), and biotechnology industries (biofuels and pharmaceuticals).

In addition to general education courses, students will take core required courses in fermentation science and participate in internships for practical and experiential learning with fermentation industry partners.

What will you learn?

Graduates in fermentation science will enjoy an exciting, scientifically rigorous curriculum, preparing them for professional pursuits in traditional industries, such as breweries, wineries, and distilleries, and also for growing niche industries, such as kombucha, kefir, tempeh, and kimchi.

Graduates of this program will be prepared for careers in:

- Agritourism
- Artisan cheese shops maker, monger, owner/operator
- Brewing, Distilling, and Wine making
- Entrepreneur
- Environmental Engineering
- Government Research Labs
- Industry Research Labs
- Microbiology
- State, federal, and municipal government management and policy

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“This is very much a STEM major, with quite a bit of chemistry, microbiology, and math in it,” said Frank Coale, AGNR professor and assistant dean for strategic initiatives who led the development of the new track. “It will give students a very good background in the biological sciences and will even prepare them to apply for medical school, if that’s what they want.”

**Sample Coursework:**
- Brewing and Distilling
- Cheese and Fermented Dairy Products
- Fermented Food, Feed, and Pharmaceuticals
- Food Microbiology
- Viticulture and Enology

**What resources are currently available and how can I find them?**

This program is launching Fall 2023 at The Universities at Shady Grove (USG).

USG website: [go/umd.edu/FERM](go/umd.edu/FERM)

UMD’s Bachelor of Science degree program in Fermentation Science at USG is designed specifically for third- and fourth-year undergraduate students who have completed their first two years of study at a community college, or other university.

**Contacts**

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