

FOOD PROCESSING UNIT OPERATIONS CERTIFICATE

Program Description

Want to build a career in the food industry? In this certificate program, you will explore the fundamental operations that the food industry relies on, ranging from mechanical processes like mixing to cutting-edge advancements such as irradiation and cold plasma.

Throughout the program, you'll identify the mechanisms behind these food processing unit operations and the specialized equipment required for each. You will also gain insight into the processing parameters that guarantee safe and consistent food products. As the courses progress, you'll discover the overarching principles that support optimal food processing strategy and design across many kinds of food operations to ensure product safety and consumer acceptance. Along with mastering the conceptual foundations, you'll have the opportunity to engage in practical exercises and calculations that guide the work of industry professionals and contribute to efficient, reliable food processing systems.

To be successful in this program you should have general familiarity with chemistry, microbiology, physics and calculus.

The courses in this certificate program are required to be completed in the order that they appear.

Key Takeaways

- Describe the fundamental principles of mechanical, thermal, mass transfer, and nonthermal unit operations in the food processing industry
- Identify and differentiate equipment design and optimal industrial conditions for each unit operation
- Compare the advantages and disadvantages of each processing system for specific food products
- Perform basic calculations of relevant unit operations
- Evaluate emerging and commercial technology in the contexts of consumer perception and demand

What You'll Earn

- Food Processing Unit Operations Certificate from Cornell's College of Agriculture and Life Sciences
- 80 Professional Development Hours (8 CEUs)

Who Should Enroll

- Aspiring food scientists and engineers
- Food research and development specialists
- Food packaging and manufacturing professionals
- Food plant managers and production workers
- Maintenance technicians and managers
- Sanitation specialists
- Biologists, microbiologists, chemists, and engineers

Courses

Code	Title	Hours
eCornell CALS271	Mechanical Food Processes	0
eCornell CALS272	Thermal Food Processes	0
eCornell CALS273	Food Processes Based on Mass Transfer	0
eCornell CALS274	Nonthermal Food Processes	0
eCornell CALS275	Food Processing Fundamentals	0