

# Occupational Endorsement Certificate in Fermentation Science

The Occupational Endorsement Certificate in Fermentation Science prepares students for careers in the commercial production of fermented foods and beverages. Students gain the skills and knowledge necessary for successful entry-level employment in the industry through hands-on training and coursework.

## Admission Requirements

- Complete the Admission Requirements for Occupational Endorsement Certificates (<http://catalog.uaa.alaska.edu/academicpoliciesprocesses/admissions/undergraduate/>).

## Special Considerations

- Students should be aware that BIOL A395 is required, which is a supervised internship.
- Requires students to be 21 years or older in order to complete the required internship and enroll in certain required courses.

## Graduation Requirements

- Complete the General University Requirements for Occupational Endorsement Certificates (<http://catalog.uaa.alaska.edu/undergraduateprograms/oecrequirements/>).
- Complete the following major requirements:

Code	Title	Credits
BIOL A102	Introductory Biology	3
BIOL A103	Introductory Biology Laboratory	1
BIOL A110	Survey of Brewing and Fermentation Science	2
BIOL A395	Internship in Fermentation Sciences <sup>1</sup>	3
CA A104	Sanitation	2
CA A114	Beverage Management <sup>1</sup>	3
MBIO A200	Experiential Learning in Fermentation Science	2
MBIO A251	Microbiology of Fermented Foods and Beverages	2
Complete 9 credits from the following: <sup>2</sup>		9
BA A151	Business Foundations	
BA A166	Entrepreneurship and Small Business Management	
BA A231	Fundamentals of Supervision	
BA A241	Business Law I	
BA A280	Managerial Communications	
BA A300	Organizational Theory and Behavior	
BADA A110	Computer Concepts in Business	

CA A490	Current Topics in Food and Hospitality <sup>3</sup>
CHEM A103	Introduction to General Chemistry
CHEM A103L	Introduction to General Chemistry Laboratory
CHEM A104	Introduction to Organic and Biochemistry
CHEM A104L	Introduction to Organic and Biochemistry Laboratory
COMM A111	Fundamentals of Oral Communication
HA A105	Introduction to Hospitality Administration
HA A405	Hospitality Leadership and Ethics
JPC A362	Principles of Strategic Communications
MATH A121	Applied College Algebra
MATH A151	College Algebra for Calculus
PHYS A123	College Physics I
PHYS A123L	College Physics I Laboratory
RH A101	Refrigeration and Air Conditioning I
RH A122	Refrigeration and Air Conditioning II
WRTG A111	Writing Across Contexts
<b>Total</b>	<b>27</b>

<sup>1</sup> Must be aged 21 years or older by first day of class.

<sup>2</sup> Some electives have prerequisites that must be satisfied before a student can register while other electives do not.

<sup>3</sup> A maximum of 3 credits in CA A490 may be applied toward this certificate.

**A minimum of 27 credits is required for the degree.**

## Program Student Learning Outcomes

Students graduating with an Occupational Endorsement Certificate in Fermentation Science will be able to:

- Define the quality attributes of fermented foods and beverages and connect these key contributors to specific examples.
- Summarize and explain the chemistry and microbiology of fermentation and brewing.
- Identify and practice the technical aspects of commercial brewing.
- Communicate effectively in a variety of contexts and formats.