

# Culinary and Food Science Bachelor's Degree (CFS.BAS)

## Culinary and Food Science Bachelor's Degree (CFS.BAS)

The Bachelor of Applied Science degree in Culinary and Food Science prepares students to join the food industry as entry-level food scientists and technologists, or to enter related occupational areas including product research and development, quality control and food safety, regulatory compliance, food production supervision, and specialty ingredient sales.

During the first two years of the bachelor's program students focus on fundamentals of culinary arts. Students develop their skills in the Midwest Culinary Institute's state-of-the-art culinary and baking laboratories, under the supervision of faculty members with professional expertise.

In the third and fourth years students expand their culinary and food science skills. Upper-level coursework includes food ingredient functionality, food product design and development, sensory evaluation and testing, food microbiology, and other preparation for professional careers.

Students participate in experiential learning through cooperative education in each year of the bachelor's degree program.

Students who wish to transfer credit to Cincinnati State for previous coursework completed at another institution must meet with the Program Chair. Course transfer credit may be limited, based on program accreditation and student success in the previous coursework.

For more information, please contact the Business Technologies Division at (513) 569-1620.

To apply for this program at Cincinnati State, visit the Admissions (<http://www.cincinnati.edu/academics/admission/>) section of the College website.

## Culinary and Food Science (CFS)

### First Year

Semester 1		Lec	Lab	Credits
FYE XXX	First Year Experience Elective	1	0	1
CUL 100	Culinary Demonstration	2	0	2
CUL 101	Culinary 1	0	6	3
CUL 115	Food Service Sanitation	1	0	1
ENG 101	English Composition 1	3	0	3
IM 111	Computer Applications	2	3	3
Semester 2				
ACC 101	Financial Accounting	2	2	3
BUS 190	Professional Practices	1	0	1

CUL 102	Culinary 2	0	6	3
CUL 105	Culinary Baking	0	6	3
ENG 10X	English Composition Elective	3	0	3
MAT 151	College Algebra	3	2	4
Semester 3				
CUL X9X	Cooperative Education	1	40	2
Elective 1: Culinary Arts				
Second Year				
Semester 1				
CUL 110	Culinary Nutrition	0	6	3
CUL 200	Garde Manger	0	8	4
CUL 205	Culinary Production	0	6	3
HRM 110	Food and Beverage Cost Control	3	0	3
CHE 115	General, Organic, and Biological Chemistry	3	3	4
Semester 2				
CUL X9X	Cooperative Education	1	40	2
Elective 2: Culinary Arts				
Semester 3				
CUL 210	International Cuisine	0	6	3
CUL 290	Culinary Capstone	0	6	3
XXX XXX	Social and Behavioral Sciences Elective 1	3	0	3
LAW 101	Business Law	3	0	3
MGT XXX	Management Elective	3	0	3
Third Year				
Semester 1				
CHE 311	Chemistry and Analysis of Food 1	3	3	4
CFS 311	Food Product Development 1	1	4	3
CFS 320	Formulation and Ingredient Functionality	2	2	3
MAT 131	Statistics 1	2	2	3
Semester 2				
BIO 310	Food Microbiology	2	3	3
CFS 340	Colloquium on Current Food Topics	3	0	3
XXX XXX	Arts/ Humanities Elective 1	3	0	3

CHE 312	Chemistry and Analysis of Food 2	3	3	4
<b>Semester 3</b>				
CFS XXX	Cooperative Education 1: Culinary and Food Science	1	40	2
<b>Fourth Year</b>				
<b>Semester 1</b>				
CFS 412	Sensory Evaluation and Product Design	3	2	4
CFS 420	Food Safety and Quality	3	0	3
XXX XXX	Arts/ Humanities Elective 2	3	0	3
XXX XXX	Social and Behavioral Sciences Elective 2	3	0	3
<b>Semester 2</b>				
COMM 110	Public Speaking	3	0	3
CFS 430	Food Processing	3	2	4
CFS 440	Food Policy, Regulations and Compliance	3	0	3
CFS 490	Culinary and Food Science Capstone	1	4	3
<b>Semester 3</b>				
CFS XXX	Cooperative Education 2: Culinary and Food Science	1	40	2
<b>Total</b>		<b>78</b>	<b>245</b>	<b>122</b>
<b>Credits:</b>				

## Electives

### First Year Experience Elective

FYE 100	College Success Strategies: Overview	1
FYE 105	College Success Strategies: Overview and Application	2
FYE 110	College Success Strategies: Practice and Application	3

### English Composition Elective

ENG 102	English Composition 2: Contemporary Issues	3
ENG 104	English Composition 2: Technical Communication	3
ENG 105	English Composition 2: Business Communication	3

### Management Elective

MGT 101	Principles of Management	3
MGT 105	Human Resource Management	3
MGT 120	Entrepreneurship	3

MGT 125	Business Ethics	3
MGT 130	Project Management	3

### Arts/Humanities Electives (Must take 2 courses)

ART 110	Introduction to Art	3
ART 111	Art History: Ancient to Medieval Periods	3
ART 112	Art History: Renaissance to the Present	3
COMM 130	Introduction to Film Studies	3
LIT 200	Introduction to Literature	3
LIT 210	The Short Story	3
LIT 220	Poetry	3
LIT 230	Drama	3
LIT 240	The Novel	3
LIT 251	American Literature to 1865	3
LIT 252	American Literature since 1865	3
LIT 255	African American Literature	3
LIT 261	British Literature: Medieval Period to 1800	3
LIT 262	British Literature: 1800 to Present	3
LIT 265	Shakespeare	3
LIT 270	Children's Literature	3
LIT 280	Science Fiction	3
LIT 285	Women Writers	3
MUS 101	Music History: Middle Ages to Late 19th Century	3
MUS 102	Music History: 20th Century	3
MUS 105	Music History: African-American Music	3
MUS 110	Jazz Appreciation	3
MUS 115	Rock and Pop Music	3
MUS 120	World Music	3
PHI 105	Introduction to Philosophy	3
PHI 110	Ethics	3
REL 105	World Religions	3
THE 105	Theater Appreciation	3
THE 110	History of Theater	3
SPN 101	Elementary Spanish 1	4
SPN 102	Elementary Spanish 2	4
FRN 101	Elementary French 1	4
FRN 102	Elementary French 2	4

### Social/Behavioral Science Electives (Must take 2 courses)

ECO 105	Principles of Microeconomics	3
ECO 110	Principles of Macroeconomics	3
GEO 105	World Regional Geography: the Americas, Europe, and Australia	3
GEO 110	World Regional Geography: Asia, Africa, and the Middle East	3
GEO 115	Cultural Geography	3
HST 101	World History: First Civilizations to 1500	3
HST 102	World History: 1500 to Present	3
HST 111	American History: Early Settlers to 1877	3
HST 112	American History: 1877 to Present	3
HST 121	African American History: Origins to 1877	3
HST 122	African American History: 1877 to Present	3
HST 130	History of Africa	3
LBR 105	Introduction to Labor and Employee Relations	3

POL 101	Introduction to American Government	3
PSY 110	Introduction to Psychology	3
PSY 200	Abnormal Psychology	3
PSY 205	Child Development	3
PSY 210	Adolescent Development	3
PSY 215	Adult Development	3
PSY 220	Social Psychology	3
PSY 225	Lifespan Development	3
SOC 105	Introduction to Sociology	3
SOC 115	Marriage and the Family	3
SOC 130	Sociology of Aging	3
SOC 140	Sociology of Gender	3

**Cooperative Education Elective: Culinary Arts (4 credit hours required)**

CUL 191	Part-Time Cooperative Education 1: Culinary Arts	1
CUL 192	Part-Time Cooperative Education 2: Culinary Arts	1
CUL 193	Part-Time Cooperative Education 3: Culinary Arts	1
CUL 194	Part-Time Cooperative Education 4: Culinary Arts	1
CUL 291	Full-Time Cooperative Education 1: Culinary Arts	2
CUL 292	Full-Time Cooperative Education 2: Culinary Arts	2

**Cooperative Education Elective: Culinary and Food Science (4 credit hours required)**

CFS 391	Part-Time Cooperative Education 1: Culinary and Food Science	1
CFS 392	Part-Time Cooperative Education 2: Culinary and Food Science	1
CFS 393	Part-Time Cooperative Education 3: Culinary and Food Science	1
CFS 394	Part-Time Cooperative Education 4: Culinary and Food Science	1
CFS 491	Full-Time Cooperative Education 1: Culinary and Food Science	2
CFS 492	Full-Time Cooperative Education 2: Culinary and Food Science	2

Some courses are offered in alternative versions identified with a letter after the course number-- for example, ENG 101 and ENG 101A.

- This curriculum displays only course numbers without the added letter.
- The alternative version, when available, meets the requirements of the course version without the added letter.

## Culinary and Food Science Bachelor's Degree (CFS.BAS)

Graduates of the program are prepared to:

- Use culinary arts, chemistry, microbiology, and other sciences to study the principles underlying the processing and deterioration of foods.
- Apply food science knowledge to determine the best ways to process, package, preserve, store, and distribute food.

- Apply technical communication skills related to food science.
- Apply food safety practices in a food production kitchen and in a food manufacturing facility and evaluate effectiveness.
- Create food products that meet the needs of the consumer and describe the product development process from ideation through commercialization.
- Analyze food content to establish levels of vitamins, fat, sugar, and protein.
- Conduct research on ways to make processed foods safe, palatable, and healthy.

## Faculty

### Program Chair / Advisor

Sien (Grace) Yek, MS, CCC  
grace.yek@cincinnatiastate.edu

### Co-op Coordinator

Scott Holubetz, MBA, AAB, AOS  
scott.holubetz@cincinnatiastate.edu

### Business Division Advising

Call (513) 569-1620 or Text (513) 569-1600  
BTDadvisors@cincinnatiastate.edu

## CFS Courses

### CFS 311 Food Product Development 1 3 Credits. 1 Lecture Hour. 4 Lab Hours.

A course that integrates culinary skills, food science knowledge, and effective use of functional ingredients to create high-quality and innovative food products. Topics include: general practices for food formulation, equipment use, and documentation.

Prerequisites: CHE 115 (minimum grade C) and CUL 290 and MAT 151, and instructor consent  
Instructor Consent Required

### CFS 320 Formulation and Ingredient Functionality 3 Credits. 2 Lecture Hours. 2 Lab Hours.

A course on food formulation practices including analysis of ingredient functionality and the role of current food products in the delivery of a new value proposition. Topics include: product attributes and appeal, and nutrition and safety.

Prerequisites: CHE 115 (minimum grade C) and CUL 290 and MAT 151

### CFS 340 Colloquium on Current Food Topics 3 Credits. 3 Lecture Hours. 0 Lab Hour.

Subject-matter experts from the food industry present information on current industry concerns from varied specialized areas, such as beverages, dairy, cultured foods, flavors, preservation, and baking science.

Prerequisites: CFS 320

**CFS 391 Part-Time Cooperative Education 1: Culinary and Food Science****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking a bachelor's degree participate in their first part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CFS 311 and CFS 320 and co-op coordinator consent  
Instructor Consent Required

**CFS 392 Part-Time Cooperative Education 2: Culinary and Food Science****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking a bachelor's degree participate in their second part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CFS 391 and co-op coordinator consent  
Instructor Consent Required

**CFS 393 Part-Time Cooperative Education 3: Culinary and Food Science****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking a bachelor's degree participate in their third part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CFS 392 and co-op coordinator consent  
Instructor Consent Required

**CFS 394 Part-Time Cooperative Education 4: Culinary and Food Science****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking a bachelor's degree participate in their fourth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CFS 393 and co-op coordinator consent  
Instructor Consent Required

**CFS 412 Food Product Development 2****4 Credits. 3 Lecture Hours. 2 Lab Hours.**

A continuation of CFS 311, covering business and scientific aspects of new food product development from ideation to commercialization. Topics include: consumer research, trend analysis, competitive product analysis, and integration of market research and sensory analysis in product development.

Prerequisites: CFS 311 (minimum grade C)

**CFS 420 Food Safety and Quality****3 Credits. 3 Lecture Hours. 0 Lab Hour.**

A course on food production practices that assure quality and safety. Topics include: sanitation practices; control of pathogenic and spoilage microorganisms in food; and prevention, control, and mitigation of threats to the quality and safety of the food system.

Prerequisites: BIO 310 (minimum grade C)

**CFS 430 Food Processing****4 Credits. 3 Lecture Hours. 2 Lab Hours.**

A course on food production systems, including principles of scale-up and large-scale production systems, and packaging technologies.

Prerequisites: CFS 412 and CFS 420

**CFS 440 Food Policy, Regulations and Compliance****3 Credits. 3 Lecture Hours. 0 Lab Hour.**

A course on regulatory policies that affect food production. Topics include: the Code of Federal Regulations, regulatory agencies and their responsibilities, food labeling guidelines for dietary and health-related claims such as organic and natural, and permissible use of functional and enrichment additives.

Prerequisites: CFS 412 (minimum grade C)  
Instructor Consent Required

**CFS 490 Culinary and Food Science Capstone****3 Credits. 1 Lecture Hour. 4 Lab Hours.**

Students synthesize and apply knowledge and proficiency gained throughout the baccalaureate degree program to complete a project that demonstrates skills in problem-solving, communication, and project management, as well as professional competence.

Prerequisites: CFS 412 and CFS 420 (minimum grade C for both)

**CFS 491 Full-Time Cooperative Education 1: Culinary and Food Science****2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking a bachelor's degree participate in their first full-time field learning experience related to their Culinary and Food Science degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CFS 311 and CFS 320 and co-op coordinator consent  
Instructor Consent Required

**CFS 492 Full-Time Cooperative Education 2: Culinary and Food Science****2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking a bachelor's degree participate in their second full-time field learning experience related to their Culinary and Food Science degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CFS 491 and co-op coordinator consent  
Instructor Consent Required

**CUL Courses****CUL 100 Culinary Demonstration****2 Credits. 2 Lecture Hours. 0 Lab Hour.**

A course that uses culinary demonstrations and problem solving to prepare students for activities in CUL 101. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: Placement into ENG 101A, and MAT 093 or MAT 105A (minimum grade C for both) or appropriate Math placement  
Corequisites: CUL 101: Culinary 1  
Instructor Consent Required

**CUL 101 Culinary 1****3 Credits. 0 Lecture Hour. 6 Lab Hours.**

A course on fundamental culinary skills. Topics include: kitchen orientation, knife skills, cooking methods, and preparation of stocks, sauces, and soups.

Prerequisites: Placement into ENG 101A, and MAT 093 or MAT 105A (minimum grade C for both) or appropriate Math placement

Corequisites: CUL 100: Culinary Demonstration

Instructor Consent Required

**CUL 102 Culinary 2****3 Credits. 0 Lecture Hour. 6 Lab Hours.**

A continuation of CUL 101. Topics include: advanced cooking methods; meat, fish, and poultry cookery; and platter presentation.

Prerequisites: CUL 100 and CUL 101 and CUL 115 (minimum grade C for all)

Instructor Consent Required

**CUL 105 Culinary Baking****3 Credits. 0 Lecture Hour. 6 Lab Hours.**

A course on concepts and techniques of baking and pastries. Topics include: product identification, use of baking equipment, production of flour confectionery items, and preparation of desserts.

Prerequisites: CUL 100 and CUL 101 (minimum grade C for both)

Instructor Consent Required

**CUL 110 Culinary Nutrition****3 Credits. 0 Lecture Hour. 6 Lab Hours.**

A course on concepts and techniques for combining nutrition science with the art of preparing food that is wholesome and nutritionally balanced. Topics include: practical applications of nutrition theory, modifying recipes, and developing menus.

Prerequisites: CUL 102 (minimum grade C)

Instructor Consent Required

**CUL 115 Food Service Sanitation****1 Credit. 1 Lecture Hour. 0 Lab Hour.**

A course on sanitation and safety in the food service industry, which includes the National Restaurant Association Education Foundation's ServSafe Manager Certification in Food Protection Exam. Students must pass the exam with a minimum score of 75%. Successful completion earns the designations of ServSafe Food Protection Manager and Ohio Department of Health Manager Certification in Food Protection.

Prerequisites: FYE 120 or placement into ENG 101

**CUL 150 Culinary Management ATS: Advanced Stand****30 Credits. 30 Lecture Hours. 0 Lab Hour.**

Students complete industry training specific to culinary education, such as Cincinnati Cooks.

Prerequisites: Program Chair consent

Instructor Consent Required

**CUL 191 Part-Time Cooperative Education 1: Culinary Arts****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their first part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: BUS 190 (minimum grade C) and co-op coordinator consent

Instructor Consent Required

**CUL 192 Part-Time Cooperative Education 2: Culinary Arts****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their second part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CUL 191

**CUL 193 Part-Time Cooperative Education 3: Culinary Arts****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their third part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CUL 192

**CUL 194 Part-Time Cooperative Education 4: Culinary Arts****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their fourth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CUL 193

**CUL 195 Part-Time Cooperative Education 5: Culinary Arts****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their fifth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CUL 194

**CUL 196 Part-Time Cooperative Education 6: Culinary Arts****1 Credit. 1 Lecture Hour. 20 Lab Hours.**

Students seeking an associate's degree participate in their sixth part-time field learning experience related to their degree. Students are expected to register for academic courses during the same semester. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CUL 195

**CUL 200 Garde Manger****4 Credits. 0 Lecture Hour. 8 Lab Hours.**

A course on concepts and techniques for contemporary practice of garde manger. Topics include: basic meat fabrication, knowledge of the cold kitchen, and platter and buffet presentation.

Prerequisites: CUL 102 and CUL 105 (minimum grade C for both)

Instructor Consent Required

**CUL 205 Culinary Production****3 Credits. 0 Lecture Hour. 6 Lab Hours.**

A course on concepts of food service production and service techniques. Topics include: buffet, banquet, and a la carte production.

Prerequisites: CUL 102 (minimum grade C) and BUS 190

Instructor Consent Required

**CUL 210 International Cuisine**

**3 Credits. 0 Lecture Hour. 6 Lab Hours.**

A study of world cuisines. Topics include: regional products, cultural influences on food, differentiated cooking techniques, and international menus.

Prerequisites: CUL 200 (minimum grade C)

Instructor Consent Required

**CUL 220 Culinary Butchery**

**3 Credits. 0 Lecture Hour. 6 Lab Hours.**

A course on basic butchery and fish fabrication. Topics include: fabrication techniques including retail, production, value added products, wholesale, and personal use; and discussion of cooking methods, flavors, and textures of the cuts.

Prerequisites: CUL 101 and CUL 102 and CUL 200 (minimum grade C for all)

Instructor Consent Required

**CUL 290 Culinary Capstone**

**3 Credits. 0 Lecture Hour. 6 Lab Hours.**

Students synthesize and apply knowledge and proficiency gained throughout the associate's degree program to complete projects that demonstrate skills in culinary, nutrition, costing, and management areas.

Prerequisites: CUL 110 and CUL 200 and CUL 205 (minimum grade C for all)

Instructor Consent Required

**CUL 291 Full-Time Cooperative Education 1: Culinary Arts**

**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their first full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: BUS 190 (minimum grade C) and co-op coordinator consent

Instructor Consent Required

**CUL 292 Full-Time Cooperative Education 2: Culinary Arts**

**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their second full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CUL 291

**CUL 293 Full-Time Cooperative Education 3: Culinary Arts**

**2 Credits. 1 Lecture Hour. 40 Lab Hours.**

Students seeking an associate's degree participate in their third full-time field learning experience related to their degree. Students must follow cooperative education policies and procedures to earn credit. Grades issued are Satisfactory or Unsatisfactory.

Prerequisites: CUL 292