

CULINARY FOOD SCIENCE (H SCI)

The Culinary Food Science degree program is a food science-based degree in which students develop basic culinary skills along with knowledge of the accompanying sciences. As a graduate, you'll combine food product development skills and entrepreneurial talents with scientific and technological knowledge.

The department also offers a culinary food science minor (<http://catalog.iastate.edu/previouscatalogs/2023-2024/collegeofagricultureandlifesciences/foodscienceandhumannutrition/#undergraduateminortext>).

Student Learning Outcomes

Upon graduation, students should be able to:

- Communicate effectively in their field of study using written, oral, visual and/or electronic forms.
- Demonstrate proficiency in ethical data collection and interpretation, literature review and citation, critical thinking and problem solving.
- Participate effectively in a group or team.
- Integrate creativity, innovation, or entrepreneurship in ways that produce value.
- Describe sociocultural competence relative to diversity, equity and/or inclusion.
- Explain how human activities impact the natural environment and how societies are affected.
- Meet program specific learning outcomes for the Culinary Food Science major.

Degree Requirements

Administered by the Department of Food Science and Human Nutrition

Total Degree Requirement: 120 cr.

Students must fulfill International Perspectives and U.S. Diversity requirements by selecting coursework from approved lists. These courses may also be used to fulfill other area requirements. Only 65 cr. from a two-year institution may apply to the degree which may include up to 16 technical cr.; 9 P-NP cr. of electives; 2.00 minimum GPA.

International Perspectives: 3 cr.

U.S. Diversity: 3 cr.

Communications and Library: 10 cr.

ENGL 150	Critical Thinking and Communication	3
ENGL 250	Written, Oral, Visual, and Electronic Composition	3
LIB 160	Introduction to College Level Research	1

SP CM 212	Fundamentals of Public Speaking	3
Total Credits		10

Humanities and Social Sciences: 9-15 cr.

FS HN 220	American Food and Culture	3
ECON 101	Principles of Microeconomics	3

If a Culinary Food Science student in the College of Human Sciences, 6 select:

Additional Humanities course	
Additional Humanities or Social Science course	

Ethics: 3 cr. (Included as part of the Humanities and Social sciences requirement)

FS HN 342	World Food Issues: Past and Present	3
-----------	-------------------------------------	---

Mathematical Sciences: 6-8 cr.

Select at least 3 credits from: 3-4

MATH 140	College Algebra	
MATH 143	Preparation for Calculus	
MATH 160	Survey of Calculus	
MATH 165	Calculus I	

Select at least 3 credits from: 3-4

STAT 101	Principles of Statistics	
STAT 104	Introduction to Statistics	

Total Credits 6-8

Physical Sciences: 9 cr.

CHEM 163	College Chemistry	4
	or CHEM 177 General Chemistry I	
CHEM 163L	Laboratory in College Chemistry	1
	or CHEM 177L Laboratory in General Chemistry I	
CHEM 231	Elementary Organic Chemistry	3
CHEM 231L	Laboratory in Elementary Organic Chemistry	1

Total Credits 9

Biological Sciences: 10-11 cr.

BBMB 301	Survey of Biochemistry	3
BIOL 212	Principles of Biology II	3
BIOL 212L	Principles of Biology Laboratory II	1
MICRO 201	Introduction to Microbiology	2-3
	or MICRO 302 Biology of Microorganisms	
MICRO 201L	Introductory Microbiology Laboratory	1
	or MICRO 302L Microbiology Laboratory	

Total Credits 10-11

Animal Science Coursework: 6 cr.

AN S 270	Foods of Animal Origin	2
AN S 270L	Foods of Animal Origin Laboratory	1
AN S 460	Science and Technology of Value Added Meat Products	3

Total Credits 6
Food Science and Human Nutrition: 42 cr.

FS HN 101	Food and the Consumer	3
FS HN 104	Introduction to Professional Skills in Culinary Science	1
FS HN 110	Professional and Educational Preparation	1
FS HN 167	Introductory Human Nutrition and Health	3
FS HN 203	Contemporary Issues in Food Science and Human Nutrition	1
FS HN 214	Scientific Study of Food	3
FS HN 215	Advanced Food Preparation Laboratory	2
FS HN 265	Nutrition for Active and Healthy Lifestyles	3
FS HN 305	Food Quality Management and Control	2
FS HN 311	Food Chemistry	3
FS HN 311L	Food Chemistry Laboratory	1
FS HN 314	Professional Development for Culinary Food Science and Food Science Majors	1
FS HN 403	Food Laws and Regulations	2
FS HN 406	Sensory Evaluation of Food	3
FS HN 407	Microbiological Safety of Foods of Animal Origins	3
FS HN 411	Food Ingredient Interactions and Formulations	2
FS HN 412	Food Product Development	3
FS HN 420	Food Microbiology	3
Take one of the following courses for 2 credits:		2

FS HN 491B Supervised Work Experience: Food Science
or FS HN 49 Supervised Work Experience: Culinary Science

Total Credits 42
Hospitality Management: 12 cr.

HSP M 133	Food Safety Certification	1
HSP M 380	Food Production Management	3
HSP M 380L	Food Production Management Experience	3
HSP M 383	Wine and Spirits in Hospitality Management	2
or FS HN 509	Sensory Evaluation of Wines	
HSP M 487	Fine Dining Management	3

Total Credits 12
Electives 1-13 cr. Select from any university coursework to earn at least 120 total credits.

Go to FS HN courses. (http://catalog.iastate.edu/previouscatalogs/2023-2024/azcourses/fs_hn/)

Culinary Food Science, B.S.**First Year**

Fall	Credits	Spring	Credits
FS HN 110	1	FS HN 104	1
CHEM 163 or 177	4	FS HN 167	3
CHEM 163L or 177L	1	BIOL 212	3
FS HN 101	3	BIOL 212L	1
MATH 140, 143, 160, or 165	3-4	ECON 101	3
ENGL 150	3	STAT 104 or 101	3-4
LIB 160	1		
16-17		14-15	

Second Year

Fall	Credits	Spring	Credits
CHEM 231	3	FS HN 265	3
CHEM 231L	1	BBMB 301	3
ENGL 250	3	MICRO 201 or 302	2-3
FS HN 203	1	MICRO 201L or 302L	1
FS HN 220	3	FS HN 214	3
HSP M 133	1	FS HN 215	2
SP CM 212	3		
15		14-15	

Third Year

Fall	Credits	Spring	Credits	Summer	Credits
AN S 270	2	FS HN 305	2	FS HN 491B or 491D	2
AN S 270L	1	FS HN 403	2		
FS HN 311	3	HSP M 380	3		
FS HN 311L	1	HSP M 380L	3		

FS HN 314	1 Humanities or social science (H Sci) or elective (AgLS)	3	
FS HN 411	2 Elective *	3	
FS HN 420	3		
Electives *	1-3		
14-16		16	2

Fourth Year

Fall	Credits	Spring	Credits
FS HN 406		3 AN S 460	3
FS HN 407		3 FS HN 342	3
FS HN 491B or 491D (if not yet completed)		2 FS HN 412	3
HSP M 383 (if not taking FS HN 509 Spring)		2 Humanities (H Sci) or Elective (AgLS)	3
HSP M 487		3 Elective *	3
U.S. Diversity		3	
16		15	

* Choose elective courses to total equal to or greater than 120 credits.

Notes: Planned course offerings may change and students need to check the online Schedule of Classes each term to confirm course offerings: <https://classes.iastate.edu> (<https://classes.iastate.edu/>).

This sequence is only an example. The number of credits taken each semester should be based on the individual student's situation. Factors that may affect credit hours per semester include student ability, employment, health, activities, and grade point consideration.

More information on the Culinary Food Science minor can be found here: www.catalog.iastate.edu/collegeofagricultureandlifesciences/foodscienceandhumannutrition/#undergraduateminortext (<http://catalog.iastate.edu/previouscatalogs/2023-2024/collegeofagricultureandlifesciences/foodscienceandhumannutrition/#undergraduateminortext>).