Food Science (H SCI)

Curriculum in Food Science

Administered by the Department of Food Science and Human Nutrition

Students select one of the following options and complete all requirements for that option: food science and technology option, food science and industry option, or consumer food science option. Courses listed below are required for all of the options, except where specified by option below.

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: 13 cr.
ENGL 150 Critical Thinking and Communication 3
ENGL 250 Written, Oral, Visual, and Electronic Composition 3
LIB 160 Information Literacy 1
SP CM 212 Fundamentals of Public Speaking 3
TSM 115 Solving Technology Problems 3
Total Credits 13

Humanities and Social Sciences: 6-12 cr.
Select Humanities course from approved list 3
ECON 101 Principles of Microeconomics 3
If H Sci student, select: 6
Additional Humanities course
Additional Humanities or Social Science course

Ethics and Environmental: 3-6 cr.
FS HN 342 World Food Issues: Past and Present 3
If AgLS student, select from: 2-3
ENV S 120 Introduction to Renewable Resources
ENV S 201 Introduction to Environmental Issues

Mathematical Sciences: 7-12 cr.
Select from: 8
MATH 165 & MATH 166 Calculus I and Calculus II
or
MATH 181 & MATH 182 Calculus and Mathematical Modeling for the Life Sciences I and Calculus and Mathematical Modeling for the Life Sciences II
Select from: 3-4
STAT 101 Principles of Statistics
STAT 104 Introduction to Statistics
STAT 105 Introduction to Statistics for Engineers
Total Credits 11-12

Food science and technology option:

Select from:
MATH 177 General Chemistry I 4
CHEM 177L Laboratory in General Chemistry I 1
CHEM 178 General Chemistry II 3
CHEM 331 Organic Chemistry I 3
CHEM 331L Laboratory in Organic Chemistry I 1
CHEM 332 Organic Chemistry II 3
PHYS 111 General Physics 5
PHYS 112 General Physics 5

Total Credits 25

Food science and industry option, and consumer food science option:

Select from:
CHEM 163 College Chemistry I & 163L and Laboratory in College Chemistry
CHEM 177 General Chemistry I & 177L and Laboratory in General Chemistry I
CHEM 178 General Chemistry II & CHEM 178L and General Chemistry II
CHEM 231 Elementary Organic Chemistry 3
CHEM 231L Laboratory in Elementary Organic Chemistry 1
PHYS 106, 111, or 115 4-5

Total Credits 13-17

Biological Sciences: 12-13 cr.

Food science and technology option:

Select from:
BBMB 301 Survey of Biochemistry 3
BIOL 211 Principles of Biology I 3
BIOL 212 Principles of Biology II 3
MICRO 302 Biology of Microorganisms 3
MICRO 302L Microbiology Laboratory 1

Total Credits 13

Food science and industry option, and consumer food science option:

Select from:
BBMB 301 Survey of Biochemistry 3
BIOL 211 Principles of Biology I 3
BIOL 212 Principles of Biology II 3
Select from: 2-3
MICRO 201 Introduction to Microbiology
MICRO 302 Biology of Microorganisms
Select from: 1
MICRO 201L Introductory Microbiology Laboratory
MICRO 302L Microbiology Laboratory

Total Credits 12-13

Food Science and Human Nutrition: 43-44 cr.

Select from:
FS HN 101 Food and the Consumer 3
FS HN 110 Professional and Educational Preparation 1
FS HN 167 Introduction to Human Nutrition 3
FS HN 203 Contemporary Issues in Food Science and Human Nutrition 1
FS HN 311 Food Chemistry 3
FS HN 311L Food Chemistry Laboratory 1
FS HN 351 Introduction to Food Engineering Concepts 3
FS HN 403 Food Laws, Regulations, and the Regulatory Process 2
FS HN 405 Food Quality Assurance 3
FS HN 406 Sensory Evaluation of Food 3
FS HN 410 Food Analysis 3

Total Credits 43-44

Additional Information:

- Students must fulfill International Perspectives and U.S. Diversity requirements by selecting coursework from approved lists.
- Courses listed below are required for all of the options, except where specified by option below.
- 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>FS HN 411</td>
<td>Food Ingredient Interactions and Formulations</td>
<td>2</td>
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<tr>
<td>FS HN 412</td>
<td>Food Product Development</td>
<td>3</td>
</tr>
<tr>
<td>FS HN 420</td>
<td>Food Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>FS HN 471</td>
<td>Food Processing I</td>
<td>3</td>
</tr>
<tr>
<td>FS HN 480</td>
<td>Professional Communication in Food Science and</td>
<td>1</td>
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<td></td>
<td>Human Nutrition</td>
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**Food science and technology option, and food science and industry option:**

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<tr>
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</thead>
<tbody>
<tr>
<td>FS HN 421</td>
<td>Food Microbiology Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>FS HN 472</td>
<td>Food Processing II</td>
<td>3</td>
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**Consumer food science option:**

Select at least 5-6 cr from:

<table>
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<tr>
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<th>Course Title</th>
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<tbody>
<tr>
<td>FS HN 214</td>
<td>Scientific Study of Food</td>
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<tr>
<td>&amp; FS HN 215</td>
<td>Advanced Food Preparation Laboratory</td>
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<tr>
<td>FS HN 265</td>
<td>Nutrition for Active and Healthy Lifestyles</td>
<td></td>
</tr>
<tr>
<td>FS HN 421</td>
<td>Food Microbiology Laboratory</td>
<td></td>
</tr>
<tr>
<td>FS HN 472</td>
<td>Food Processing II</td>
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</tbody>
</table>

**Electives:** 3-19 cr. Select from any university coursework to earn at least 120 total credits.

Go to FS HN courses.