Food Science

www.ag.ndsu.edu/foodscience

Food Science Major

The Food Science major is offered through the Department of Plant Sciences in the College of Agriculture, Food Systems, and Natural Resources. It is designed to prepare students for a career in the food industry, the “world’s largest industry,” which is responsible for feeding the world.

The program is structured to develop an understanding of the nature, properties, and characteristics of foods through foundation courses in biochemistry, chemistry, microbiology, physics, and other related sciences. Applications include the study of food safety, processing, preservation, sanitation, storage, and marketing of foods. The analysis and microbiological and biochemical characterization of food products are also studied. Additionally, elective courses in economics and business administration are available to students intending to enter a management career.

Note: Transfer credits in food science from other institutions must have grades of 'C' or better to be accepted for the food science program at NDSU. The Institute of Food Technologists (IFT) approves the curriculum in the food science program. Students majoring in food science, therefore, are eligible to compete for the prestigious IFT scholarships.

The program also provides the opportunity to gain industrial experience during undergraduate study by means of industry internships. Upon completion of the program, graduates will be able to recognize, critically analyze, and solve problems realistically in both industrial and academic environments.

Major Requirements

Major: Food Science

Degree Type: B.S.
Minimum Degree Credits to Graduate: 128

General Education Requirements for Baccalaureate Degree

- A dynamic list of approved general education courses offered by term is available on the NDSU General Education Requirements (https://www.ndsu.edu/registrar/academics/gened) website.
- General education courses may be used to satisfy requirements for both general education and the major, minor, and program emphases, where applicable. Students should carefully review the major, minor, and program emphases requirements for minimum grade restrictions, if applicable.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>First Year Experience (F)</td>
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<tr>
<td>UNIV 189</td>
<td>Skills For Academic Success (Also offered with the following prefixes: ABEN, AGRI, BUSN, HD&amp;E, ME, NURS, PHRM)</td>
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<tr>
<td>Communication (C)</td>
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<td>12</td>
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<tr>
<td>ENGL 110</td>
<td>College Composition I</td>
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<tr>
<td>ENGL 120</td>
<td>College Composition II</td>
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<tr>
<td>COMM 110</td>
<td>Fundamentals of Public Speaking</td>
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<tr>
<td>Upper Division Writing †</td>
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<tr>
<td>Quantitative Reasoning (R) †</td>
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<tr>
<td>Science and Technology (S) †</td>
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<td>10</td>
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<tr>
<td>Humanities and Fine Arts (A) †</td>
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<td>6</td>
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<tr>
<td>Social and Behavioral Sciences (B) †</td>
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<td>6</td>
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<tr>
<td>Wellness (W) †</td>
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<tr>
<td>Cultural Diversity (D) ††</td>
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<td></td>
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<tr>
<td>Global Perspectives (G) ††</td>
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<td>Total Credits</td>
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<td>40</td>
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* May be satisfied by completing courses in another General Education category.
† May be satisfied with courses required in the major. Review major requirements to determine if a specific upper division writing course is required.

Major Requirements

Required Core Courses for Food Science
AGRI 150  Agriculture Orientation (Not required students transferring in 24 or more credits.)  1  
ABEN 263  Biological Materials Processing  3  
ANSC 340  Principles of Meat Science  3  
CFS 210  Introduction to Food Science and Technology  2-3  
or CFS 200  Introduction to Food Systems  
CFS 370  Food Processing I  3  
CFS 450  Cereal Technology  3  
MICR 453  Food Microbiology  3  
CFS 460  Food Chemistry  3  
CFS 461  Food Chemistry Laboratory  
CFS 464  Food Analysis  1  
CFS 470  Food Processing II  3  
CFS 471  Food Processing Laboratory  3  
CFS 474  Sensory Science of Foods  2  
CFS 480  Food Product Development (Capstone)  3  
SAFE/CFS/AGEC 452  Food Laws and Regulations  3  

### Supporting Courses
Select one of the following:  4  
BIOC 260  Elements of Biochemistry  
BIOC 460 & 460L  Foundations of Biochemistry and Molecular Biology I and Foundations of Biochemistry I Laboratory  
BIOL 150  General Biology I  3  
CHEM 121 & 121L  General Chemistry I and General Chemistry I Laboratory (May satisfy general education category S)  4  
CHEM 122 & 122L  General Chemistry II and General Chemistry II Laboratory (May satisfy general education category S)  4  
CHEM 341 & 341L  Organic Chemistry I and Organic Chemistry I Laboratory  4  
CSCI 114  Microcomputer Packages (May satisfy general education category S) or CSCI 116  Business Use of Computers  3 or 4  
ECON 201  Principles of Microeconomics (May satisfy general education category B and G)  3  
HINES 250  Nutrition Science (May satisfy general education category W)  3  
MATH 146 or MATH 165  Applied Calculus I (May satisfy general education category R)  4  
MICR 350 & 350L  General Microbiology and General Microbiology Lab  5  
PHYS 211 & 211L  College Physics I and College Physics I Laboratory (May satisfy general education category S)  4  
STAT 330  Introductory Statistics (May satisfy general education category R)  3  

**Total Credits**  81-83  

**Degree Requirements and Notes:**

- A 2.00 cumulative GPA is required for graduation and to remain in program.