Food science is the science of food. Food scientists study the physical, microbiological, and chemical makeup of food. Food technology is the application of food science to the selection, preservation, processing, packaging, distribution, and use of safe food. The food industry is the largest manufacturing industry in the United States. This multidisciplinary field applies scientific disciplines including chemistry, microbiology, nutrition and engineering to develop new food products as well as the processes designed to improve food safety and the quality of foods. Food scientists develop new foods, add value to raw food commodities and improve the quality and safety of foods. There are three concentration areas offered to allow students to focus on a specific area of interest:

1. Science, Engineering and Technology
2. Culinary Science
3. Meat Science

Consider exploring food science through our introductory course: FSTE 2110G Food Science I which fulfills the general education Area III Laboratory Science requirement. Food scientists typically work in the food and beverage industry in the areas of quality assurance, product development, product procurement, research, sensory evaluation, sales, and food safety regulations. Graduates of the program will also be prepared for postgraduate studies leading to research, production and management careers in the food and feed industries, government and academia.

A minimum grade of C- is required in all classes with CHEM, BCHE, BIOL, FSTE, or NUTR prefix.

Requirements
Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 120 credits with 48 credits in courses numbered 300 or above. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix | Title | Credits
--- | --- | ---
**General Education**

| Area I: Communications |  
| English Composition - Level 1 | 4
| English Composition - Level 2 |  
| ENGL 2210G | Professional & Technical Communication | 3
| or ENGL 2210H | Professional and Technical Communication Honors |  
| Oral Communication | 3

**Area II: Mathematics**

| MATH 1430G | Applications of Calculus I | 3

**Area III/IV: Laboratory Sciences and Social/Behavioral Sciences**

| CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | 4
| CHEM 1225G | General Chemistry II Lecture and Laboratory for STEM Majors | 4
| FSTE 2130G | Survey of Food and Agricultural Issues | 3

**Area V: Humanities**

| 1

**Area VI: Creative and Fine Arts**

| 1

**General Education Elective**

| 3

| BIOL 2110G & BIOL 2110L | Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory | 4

**Viewing A Wider World**

| 3

**Departmental Requirements**

| FSTE 2110G | Food Science I | 4
| FSTE 320 | Food Microbiology | 4
| FSTE 325 | Food Analysis | 3
| FSTE 328 | Introduction to Food Engineering | 3
| FSTE 331 | Food Preservation | 3
| FSTE 421 | Food Chemistry | 3
| FSTE 423 | Food Processing Technologies | 4
| FSTE 425 | Sensory Evaluation of Foods | 3
| FSTE 429 | Product Development | 3
| NUTR 2110 | Human Nutrition | 3

**Science, Technology and Engineering Concentration**

| FSTE 1120 | ACES in the Hole Foods I | 4
| FSTE 2120 | ACES in the Hole Foods II | 4
| FSTE 375 | ACES in the Hole Foods III | 4
| FSTE 475 | ACES in the Hole Foods IV | 4
| PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | 4

**Non-Departmental Requirements**

| ANSC 2310 | Introduction to Meat Science | 3
| BCHE 341 | Survey of Biochemistry | 4
| BIOL 311 & 311 L | General Microbiology and General Microbiology Laboratory | 5
| CHEM 2115 | Survey of Organic Chemistry and Laboratory | 4

**Choose one course from the following:**

| AECC 2140 | Technology and Communication for Business Management | 3
| BCIS 1110 | Introduction to Information Systems |  
| MATH 1350G | Introduction to Statistics |  

**Choose one course from the following:**

| 3

**Second Language:** (not required)

**Electives, to bring the total credits to 120**

| 5

**Total Credits**

| 120

1. See the General Education Section of the catalog for a full list of courses
2 MATH 1430G Applications of Calculus I is required for the degree but students may need to take any prerequisites needed to enter MATH 1430G first.

3 See the Viewing a Wider World Section of the catalog for a full list of courses

4 Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study for Students

This roadmap assumes student placement in MATH 1430G Intermediate Algebra and ENGL 1110G Rhetoric and Composition. The contents and order of this roadmap may vary depending on initial student placement in mathematics and English. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

Course | Title | Credits
--- | --- | ---
**First Year**<br>Fall | English Composition - Level 1 Course | 4
Area V/VI: Humanities or Creative/ Fine Arts Course | 3
CHEM 1215G | General Chemistry I Lecture and Laboratory for STEM Majors | 4
FSTE 2110G | Food Science I | 4
| Credits | 15
**Spring**<br>Oral Communication Course | 1<br>Area V/VI: Humanities or Creative/ Fine Arts Course | 3
CHEM 1225G | General Chemistry II Lecture and Laboratory for STEM Majors | 4
FSTE 1120 | ACES in the Hole Foods I | 4
Elective Course | 1<br>**Second Year**<br>Fall | ENGL 2210G or ENGL 2210H | 3<br>Choose one from the following: | 3
| AEEC 2140 | Technology and Communication for Business Management | 4
| BCIS 1110 | Introduction to Information Systems | 4
| CHEM 2115 | Survey of Organic Chemistry and Laboratory | 4
| MATH 1430G | Applications of Calculus I | 3
| Elective Course | 2<br>**Spring**<br>BIO 2110G or BIOL 2110L | Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory | 4<br>NUTR 2110 | Human Nutrition | 3<br>PHYS 1230G & PHYS 1230L | Algebra-Based Physics I and Algebra-Based Physics I Lab | 4<br>FSTE 2120 | ACES in the Hole Foods II | 4<br>**Credits** | 15<br>**Third Year**<br>Fall | Choose one from the following: | 3<br>AT 311 | Statistical Applications | 1<br>MATH 1350G | Introduction to Statistics | 1<br>BIO 311 or 311 L | General Microbiology and General Microbiology Laboratory | 5<br>FSTE 320 | Food Microbiology | 4<br>FSTE 328 | Introduction to Food Engineering | 3<br>**Credits** | 15<br>**Spring**<br>FSTE 325 | Food Analysis | 3<br>FSTE 421 | Food Chemistry | 3<br>FSTE 423 | Food Processing Technologies | 4<br>FSTE 375 | ACES in the Hole Foods III | 4<br>Elective Course | 1<br>**Fourth Year**<br>Fall | Viewing the Wider World | 5<br>FSTE 2130G | Survey of Food and Agricultural Issues | 3<br>BCHE 341 | Survey of Biochemistry | 4<br>FSTE 425 | Sensory Evaluation of Foods | 3<br>ANSC 2310 | Introduction to Meat Science | 3<br>**Credits** | 16<br>**Spring**<br>FSTE 331 | Food Preservation | 3<br>Viewing a Wider World | 5<br>FSTE 429 | Product Development | 3<br>FSTE 475 | ACES in the Hole Foods IV | 4<br>Elective Course | 1<br>**Credits** | 14<br>**Total Credits** | 120

1 See the General Education Section of the catalog for a full list of courses
2 Students must take one Area V: Humanities and one Area VI: Creative and Fine Arts course in order to complete the General Education requirements.
Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

MATH 1430G Applications of Calculus I is required for the degree but students may need to take any prerequisites needed to enter MATH 1430G first.

See the Viewing a Wider World Section of the catalog for a full list of courses.