

FOOD SCIENCE AND TECHNOLOGY (MEAT SCIENCE) - BACHELOR OF SCIENCE IN FOOD SCIENCE AND TECHNOLOGY

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.

Consider exploring food science through our introductory course:

FSTE 2130G Survey of Food and Agricultural Issues 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.

Students are encouraged to use the elective hours to complete a minor in a related area such as chemistry, microbiology, and business. Consult an advisor for requirements.

Prefix	Title	Credits
General Education		
<i>Area I: Communications</i>		
<i>English Composition - Level 1</i> ¹		4
<i>English Composition - Level 2</i>		
ENGL 2210G	Professional and Technical Communication Honors	3
or ENGL 2210H	Professional and Technical Communication Honors	
<i>Oral Communication</i> ¹		3
<i>Area II: Mathematics</i>		
MATH 1430G	Applications of Calculus I ²	3
<i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i>		
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
<i>Area V: Humanities</i> ¹		3
<i>Area VI: Creative and Fine Arts</i> ¹		3
<i>General Education Elective</i>		
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		6
ANSC 351V	Agricultural Animals of the World	
Departmental Requirements		
FSTE 2110G	Food Science I	4
FSTE 4110	Food Microbiology	4
FSTE 4140	Food Analysis	3
FSTE 4130	Food Preservation	3
FSTE 4120	Food Chemistry	3
FSTE 4230	Food Processing Technologies	4
FSTE 4250	Sensory Evaluation of Foods and Product Development	3
FSTE 4150	Food Safety	3
NUTR 2110	Human Nutrition	3
<i>Meat Science Concentration</i>		
ANSC 2330	Animal Production	3
ANSC 301	Animal and Carcass Evaluation	3
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 395	Biochemistry I	3
BIOL 311 & 311 L	General Microbiology and General Microbiology Laboratory	5
CHEM 2120	Integrated Organic Chemistry and Biochemistry	3
<i>Choose one course from following:</i>		3
AEEC 2140	Technology and Communication for Business Management	
BCIS 1110	Introduction to Information Systems	
<i>Choose one course from following:</i>		3
A ST 311	Statistical Applications	
MATH 1350G	Introduction to Statistics	
Second Language: (not required)		
Electives, to bring the total credits to 120 ⁴		21
Total Credits		121

¹ See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) 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 (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext>) 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.

First Year

Fall	Credits
English Composition - Level 1 Course ¹	4
Area V/VI: Humanities or Creative/ Fine Arts Course ^{1,2}	3
CHEM 1215G General Chemistry I Lecture and Laboratory for STEM Majors	4
FSTE 2110G Food Science I	4
Credits	15

Spring	Credits
Oral Communication Course ¹	3
Area V/VI: Humanities or Creative/ Fine Arts Course ^{1,2}	3
CHEM 1225G General Chemistry II Lecture and Laboratory for STEM Majors	4
ANSC 2310 Introduction to Meat Science	3
Elective Course ³	2
Credits	15

Second Year

Fall	Credits
ENGL 2210G Professional and Technical Communication Honors or ENGL 2210H or Professional and Technical Communication Honors	3
Choose one from the following:	3
AEEC 2140 Technology and Communication for Business Management	
BCIS 1110 Introduction to Information Systems	
CHEM 2120 Integrated Organic Chemistry and Biochemistry	3
MATH 1430G Applications of Calculus I ³	3
Elective Course ³	2
Credits	14

Spring	Credits
BIOL 2110G Principles of Biology: Cellular and Molecular Biology & BIOL 2110L and Principles of Biology: Cellular and Molecular Biology Laboratory	4
NUTR 2110 Human Nutrition	3
ANSC 2330 Animal Production	3
PHYS 1230G Algebra-Based Physics I & PHYS 1230L and Algebra-Based Physics I Lab	4
Elective Course ³	1
Credits	15

Third Year

Fall	Credits
Choose one from the following:	3

A ST 311	Statistical Applications	
MATH 1350G	Introduction to Statistics	
BIOL 311 & 311 L	General Microbiology and General Microbiology Laboratory	5
FSTE 4110	Food Microbiology	4
FSTE 4150	Food Safety	3
Elective Course ⁴		3
Credits		18
Spring		
FSTE 4140	Food Analysis	3
FSTE 4120	Food Chemistry	3
FSTE 4230	Food Processing Technologies	4
Elective Course ³		5
Credits		15
Fourth Year		
Fall		
ANSC 351V	Agricultural Animals of the World	3
FSTE 2130G	Survey of Food and Agricultural Issues	3
BCHE 395	Biochemistry I	3
FSTE 4250	Sensory Evaluation of Foods and Product Development	3
ANSC 301	Animal and Carcass Evaluation	3
Credits		15
Spring		
FSTE 4130	Food Preservation	3
Viewing the Wider World ⁵		3
Elective Course ³		8
Credits		14
Total Credits		121

¹ See the General Education (<https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/>) 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

³ 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.

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.

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