

# FOOD SCIENCE AND TECHNOLOGY - BS, FOOD SCIENCE OPTION

## Program Requirements

### First Year

Fall		Semester Credit Hours
CHEM 119	Fundamentals of Chemistry I	4
ENGL 103 or ENGL 104	Introduction to Rhetoric and Composition or Composition and Rhetoric	3
FSTC 201	Food Science	3
FSTC 210/ NUTR 210	Horizons in Nutrition and Food Science	1
Mathematics ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics</a> ) <sup>1</sup>		3
General elective <sup>2</sup>		1
<b>Semester Credit Hours</b>		<b>15</b>

### Spring

BIOL 111	Introductory Biology I	4
CHEM 120	Fundamentals of Chemistry II	4
American history ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history</a> )		3
Mathematics ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics</a> ) <sup>1</sup>		3
<b>Semester Credit Hours</b>		<b>14</b>

### Second Year

Fall		Semester Credit Hours
CHEM 257	Organic Chemistry I - Structure and Function	4
NUTR 202 or NUTR 203	Fundamentals of Human Nutrition or Scientific Principles of Human Nutrition	3
POLS 206	American National Government	3
Select one of the following:		3
AGEC 105	Introduction to Agricultural Economics	
ECON 202	Principles of Economics	
ECON 203	Principles of Economics	
Language, philosophy and culture ( <a href="http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture">http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture</a> ) <sup>3</sup>		3
<b>Semester Credit Hours</b>		<b>16</b>

### Spring

ACCT 209	Survey of Accounting Principles	3
CHEM 258	Organic Chemistry II - Reactivity and Applications	4
PHYS 201	College Physics	4

American history (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history>) 3

Creative arts (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts>)<sup>3</sup> 3

**Semester Credit Hours 17**

### Third Year

#### Fall

CHEM 315	Fundamentals of Quantitative Analysis	3
CHEM 318	Quantitative Analysis Laboratory	1
ENGL 210	Technical and Professional Writing	3
FSTC 311	Principles of Food Processing	3
POLS 207	State and Local Government	3
General elective <sup>2</sup>		3

**Semester Credit Hours 16**

#### Spring

FSTC 312	Food Chemistry	3
FSTC 313	Food Chemistry Laboratory	1
MGMT 309	Survey of Management	3
Select one of the following:		3

STAT 301 Introduction to Biometry

STAT 302 Statistical Methods

STAT 303 Statistical Methods

Select one of the following: 3

ANSC 307 Meats

ANSC 457/  
FSTC 457 Hazard Analysis and Critical Control Point System

FSTC 281 Introduction to Fermentation and Brewing Sciences

FSTC 305 Fundamental Baking

FSTC 316 Fermentation Technology for Alternative Protein Production

FSTC 319 Molecular Methods for Microbial Detection and Characterization

FSTC 320/  
NUTR 320 Understanding Obesity - A Social and Scientific Challenge

FSTC 324 Food Safety and Preventive Controls for Human Food

FSTC 416 Precision Fermentation and Future of Foods

FSTC 420 Supervised Research in Mediterranean Nutrition and Food Processing in Italy

FSTC 422 Food Processing for Sustainable Nutrition in Brazil

FSTC 430 Harnessing the Power of Healthy Functional Food Ingredients

FSTC 485 Directed Studies

FSTC 489 Special Topics in...

FSTC 491 Research

HORT 419 Viticulture and Small Fruit Culture

HORT 420 Concepts of Wine Production

HORT 421 Enology

NUTR 211 Scientific Principles of Foods

NUTR 300/ FSTC 300	Religious and Ethnic Foods	
NUTR 410/ FSTC 410	Nutritional Pharmacometrics of Food Compounds	
POSC 406	Poultry Further Processing	
<b>Semester Credit Hours</b>		<b>13</b>

**Fourth Year****Fall**

ANSC 326/ FSTC 326	Food Bacteriology	3
ANSC 327/ FSTC 327	Food Bacteriology Lab	1
FSTC 314	Food Analysis	3
Select one of the following:		3
ANSC 307	Meats	
ANSC 457/ FSTC 457	Hazard Analysis and Critical Control Point System	
FSTC 281	Introduction to Fermentation and Brewing Sciences	
FSTC 305	Fundamental Baking	
FSTC 316	Fermentation Technology for Alternative Protein Production	
FSTC 319	Molecular Methods for Microbial Detection and Characterization	
FSTC 320/ NUTR 320	Understanding Obesity - A Social and Scientific Challenge	
FSTC 324	Food Safety and Preventive Controls for Human Food	
FSTC 416	Precision Fermentation and Future of Foods	
FSTC 420	Supervised Research in Mediterranean Nutrition and Food Processing in Italy	
FSTC 422	Food Processing for Sustainable Nutrition in Brazil	
FSTC 430	Harnessing the Power of Healthy Functional Food Ingredients	
FSTC 485	Directed Studies	
FSTC 489	Special Topics in...	
FSTC 491	Research	
HORT 419	Viticulture and Small Fruit Culture	
HORT 420	Concepts of Wine Production	
HORT 421	Enology	
NUTR 211	Scientific Principles of Foods	
NUTR 300/ FSTC 300	Religious and Ethnic Foods	
NUTR 410/ FSTC 410	Nutritional Pharmacometrics of Food Compounds	
POSC 406	Poultry Further Processing	
General elective <sup>2</sup>		3
<b>Semester Credit Hours</b>		<b>13</b>

**Spring**

AGSM 315/ FSTC 315	Food Process Engineering Technology	3
BICH 303 or BICH 410	Elements of Biological Chemistry or Comprehensive Biochemistry I	3

FSTC 401	Food Product Development	3
FSTC 444	Fundamentals of Food Law	3
FSTC 481	Seminar	1
General elective <sup>2</sup>		3
<b>Semester Credit Hours</b>		<b>16</b>
<b>Total Semester Credit Hours</b>		<b>120</b>

<sup>1</sup> MATH prefix required.

<sup>2</sup> Students may earn a chemistry minor by taking 6 hours of additional chemistry courses from an approved list as general electives. See the Department of Chemistry for more details. Students seeking a minor in chemistry must complete the Declaration of Minor in Chemistry form and have it approved by the undergraduate advisor in chemistry and their FSTC advisor.

<sup>3</sup> The graduation requirements include a requirement for 3 hours of International and Cultural Diversity (<http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/>) and 3 hours of Cultural Discourse (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/>). Selection must be from courses on the approved list. Selection can be courses that also satisfy the requirement for social and behavioral sciences; creative arts; language, philosophy and culture; or electives. For more information on core requirements visit the University Core Curriculum (<http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/>) catalog page.

A total of 120 hours is required for graduation; 36 hours of 300/400 level courses are required to meet the Texas A&M University residency requirement.