BS in FOOD SCIENCE (284320) MAP Sheet
Department of Nutrition, Dietetics, and Food Science
For students entering the degree program during the 2014–2015 curricular year.

Food science is the multidisciplinary study of food, utilizing biology, chemistry, nutrition, engineering, and other sciences.

<table>
<thead>
<tr>
<th>UNIVERSITY CORE AND GRADUATION REQUIREMENTS</th>
<th>PROGRAM REQUIREMENTS (65-68 total hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIVERSITY CORE REQUIREMENTS</td>
<td>Consult with a faculty advisor prior to finalizing your curriculum plan.</td>
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<tr>
<td>Requirements</td>
<td>Complete the following core requirements:</td>
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<tr>
<td></td>
<td>Chem 105* General College Chemistry 4.0</td>
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<td></td>
<td>MMBio 221* General Microbiology 3.0</td>
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<td></td>
<td>NDFS 250 Essentials of Food Science 3.0</td>
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<td></td>
<td>NDFS 251 Essentials of Food Sci Lab 1.0</td>
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<td></td>
<td>NDFS 350 Food Analysis 4.0</td>
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<td>NDFS 355 Food Process Engineering 4.0</td>
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<td></td>
<td>NDFS 361 Food Microbiology 3.0</td>
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<td>NDFS 362 Food Commodity Processing 3.0</td>
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<td></td>
<td>NDFS 462 Food Regulations &amp; Quality Assurance 2.0</td>
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<td></td>
<td>Phscc 105* General Physics 1 3.0</td>
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<td>Stat 121* Principles of Statistics 3.0</td>
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<td>Complete one of the following tracks:</td>
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<td>a. Food Science Technical Track:</td>
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<td>Complete the following:</td>
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<td></td>
<td>Chem 106 General College Chemistry 3.0</td>
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<td>Chem 107 General College Chemistry Lab 1.0</td>
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<td></td>
<td>Chem 351 Organic Chemistry 3.0</td>
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<td></td>
<td>Chem 352 Organic Chemistry 3.0</td>
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<td>Chem 353 Organic Chemistry Lab 2.0</td>
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<td>(1 hour required)</td>
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<td>Chem 481 Biochemistry 3.0</td>
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<td>NDFS 200 Nutrient Metabolism 3.0</td>
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<td>NDFS 450 Food Chemistry 3.0</td>
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<td>NDFS 464 Food Sensory Evaluation 1.0</td>
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<td>NDFS 465 Food Product Development 3.0</td>
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<td></td>
<td>Phscc 106 General Physics 2 3.0</td>
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<td>TMA 150 Public Speaking 3.0</td>
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<td>Complete one course from the following:</td>
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<tr>
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<td>Math 112* Calculus 1 4.0</td>
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<td>Math 119* Introduction to Calculus 4.0</td>
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<td>b. Food Industry Management Track</td>
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<td>Complete the following:</td>
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<tr>
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<td>Acc 200 Principles of Accounting 3.0</td>
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<td>Bus M 488 Agribusiness Management 1 3.0</td>
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<tr>
<td></td>
<td>Bus M 489 Agribusiness Management 2 3.0</td>
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<td></td>
<td>Chem 285 Intro Bio-organic Chemistry 4.0</td>
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<td></td>
<td>Econ 110* Econ Principles &amp; Problems 3.0</td>
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<td></td>
<td>Fin 201 Principles of Finance 3.0</td>
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FOR UNIVERSITY CORE QUESTIONS CONTACT THE ADVISEMENT CENTER   FOR PROGRAM QUESTIONS SEE YOUR FACULTY ADVISOR

*THESE CLASSES FILL BOTH UNIVERSITY CORE AND PROGRAM REQUIREMENTS (11–14 hours overlap)
BS in FOOD SCIENCE (284320)  
2014–2015

Recommended Courses:
Consult with a faculty advisor before selecting:

**Food Science Technical Track:**
- Chem 223 Quantitative & Qualitative Analysis 4.0
- Econ 110 Econ Principles and Problems 3.0
- Engl 316 Technical Communication 3.0
- IAS 220 Intro to Development Studies 3.0
- Mfg 355 Plastics Materials and Processing 3.0
- NDFS 100 Essentials of Human Nutrition 3.0
- NDFS 191 Careers in Food Science 1.0
- Phsccs 105 General Physics Lab 1 1.0
- Phsccs 106 General Physics Lab 2 1.0
- PWS 100 Living with Plants 3.0
- StDev 317R Career Strategies 2.0
- Tech 201 Hist of Creativity in the Arts, Sci, and Technology 1 3.0
- Tech 202 Hist of Creativity in the Arts, Sci, and Technology 2 3.0

**Sophomore Year**

**Total Hours** 15.0

**Suggested Sequence of Courses:**
**Food Science Technical Track**

**FRESHMAN YEAR**

1st Semester
- Chem 105 (FWSpSu) 4.0
- First-Year Writing or A Htg 100 3.0
- Quantitative Reasoning (if needed) 3.0
- NDFS 191 (FW) (recommended) 1.0
- Rel A 121 (FWSpSu) 2.0
- General elective 2.0
- **Total Hours** 15.0

Note: Students are encouraged to complete an average of 15 credit hours each semester or 30 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate.
THE DISCIPLINE:
Food Science is the multidisciplinary study of food and the application of knowledge thus gained to developing food products and processes, preserving and storing food, and assuring food safety and quality. Food science addresses the conversion of raw agricultural products into a nutritious, convenient, and economical food supply. Most of the food products available in grocery stores were developed, produced and tested by food scientists. Students graduating in Food Science are well prepared for immediate employment in the food industry. The technical track curriculum also provides excellent preparation as a premedical, preprofessional major. With one additional credit hour, students graduating in the technical track are able to obtain a minor in chemistry. Students pursuing the management track are eligible to apply for a business minor and are well prepared for graduate studies in a Master of Business Administration (MBA) program.

PRACTICAL EXPERIENCE AND INTERNSHIPS:
Students can get hands-on experience working several semesters with faculty on research projects. Summer work opportunities are available with many food companies in numerous cities. The department has developed ongoing summer internships with several food companies.

PROFESSIONAL ASSOCIATION:
BYU's food science technical track curriculum has been reviewed and approved by the Institute of Food Technologists (IFT), the professional society of food scientists.

HONORARY SOCIETIES AND CLUBS:
Students and faculty interact in the various social, service and career-related activities of the Food Science Club. The Food Science Club is a student chapter of IFT and participates in the statewide IFT Bonneville Section, which helps students develop a network of professional contacts. Students may also participate in Food Science College Bowl and other student competitions sponsored by IFT.

CAREERS:
Food Science provides excellent career prospects in the worldwide, multibillion dollar food industry. The food industry is consistently looking for graduates to fill all of the unique and challenging opportunities available. Potential careers include:

Food research and development scientist—Develops new food products according to market demand. Improves and modifies existing foods to meet current consumer wants. Participates in manufacturing scale-up and commercialization of lab prototypes.

Food plant production manager—Manages and supervises food processing plant. Uses technical and business skills to ensure economical production. Manages personnel and solves food production problems.


Food Ingredient technical salesperson—Contacts industrial customers or potential users of food ingredients. Provides technical insight and assistance. Extends the company’s products among consuming companies.

Basic research scientist—Conducts basic and applied food research. Works in industry, academia, or government.

(See faculty advisor for additional career choices.)

FINANCING:
Scholarships are available from the department, the college, and IFT. University and federal sources of scholarships and financing are also available. Many students work part time to help with finances. Research opportunities and summer work are available for most students. Work in the department as research or teaching assistants is available for some qualified students.