### University Core Requirements:

<table>
<thead>
<tr>
<th>Requirements</th>
<th>#Classes</th>
<th>Hours</th>
<th>Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion Cornerstones</td>
<td>1</td>
<td>2.0</td>
<td>REL A 275</td>
</tr>
<tr>
<td>Mormon</td>
<td>1</td>
<td>2.0</td>
<td>REL A 250</td>
</tr>
<tr>
<td>Jesus Christ and the Everlasting Gospel</td>
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<td>2.0</td>
<td>REL C 225</td>
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<td>Foundations of the Restoration</td>
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<td>2.0</td>
<td>REL C 200</td>
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<td>The Individual and Society</td>
<td>1-2</td>
<td>3-6.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Global and Cultural Awareness</td>
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<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Skills</td>
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<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>First Year Writing</td>
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<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Advanced Written and Oral Communications</td>
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<td>3.0</td>
<td>WRTG 316</td>
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<td>Recommended</td>
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<tr>
<td>Quantitative Reasoning</td>
<td>1</td>
<td>3-4.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Languages of Learning (Math or Language)</td>
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<td>3.0</td>
<td>STAT 121*</td>
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<tr>
<td>Arts, Letters, and Sciences</td>
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<tr>
<td>Civilization 1</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Civilization 2</td>
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<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Arts</td>
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<td>3.0</td>
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<tr>
<td>Letters</td>
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<tr>
<td>Biological Science</td>
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<td>BIO 100 or PDBIO 120</td>
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<tr>
<td>Physical Science</td>
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<td>7.0</td>
<td>PHSCS 105* and CHEM 105*</td>
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<tr>
<td>Social Science</td>
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<td>3.0</td>
<td>ECON 110</td>
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### Core Enrichment: Electives

<table>
<thead>
<tr>
<th>Requirements</th>
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<th>Hours</th>
<th>Classes</th>
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<tbody>
<tr>
<td>Religion Electives</td>
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<td>6.0</td>
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</tr>
<tr>
<td>Open Electives</td>
<td>Variable</td>
<td>Variable</td>
<td>personal choice</td>
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</tbody>
</table>

### Graduation Requirements:

- Minimum residence hours required: 30.0
- Minimum hours needed to graduate: 120.0

### Suggested Sequence of Courses

#### Freshman Year

**1st Semester**

- **CHEM 305 (FWSpSu)** 4.0
- First Year Writing or American Heritage 3.0
- Quantitative Reasoning (if needed) 3.0
- NDFS 361 (F) 1.0
- Religion Cornerstone course 2.0
- General Elective 2.0
- **Total Hours** 15.0

**2nd Semester**

- First-Year Writing or American Heritage 3.0
- CHEM 306, 107 (FWSpSu) 4.0
- NDFS 100 (FWSu) 3.0
- PHSCS 105 (FWsp) 3.0
- Religion Cornerstone course 2.0
- **Total Hours** 15.0

#### Sophomore Year

**3rd Semester**

- **CHEM 351 (FWSp)** 3.0
- MATH 112 (FWSpSu) 4.0
- NDFS 250 (FWSp) 3.0
- NDFS 251 (FWSp) 1.0
- BIO 100 or PDBIO 120 3.0
- Religion Cornerstone Course 2.0
- **Total Hours** 16.0

**4th Semester**

- **CHEM 352 (FWSpSu)** 3.0
- CHEM 353 (FWSpSu) 1.0
- MMIBIO 221 (FWSpSu) (Biological Science) 3.0
- MMIBIO 222 (FWSpSu) 1.0
- Religion Cornerstone Course 2.0
- **Total Hours** 15.0

### Junior Year

**5th Semester**

- **CHEM 481 (FWSpSu)** 3.0
- NDFS 450 (F) 3.0
- NDFS 462 (F) 3.0
- Civilization 1 elective 3.0
- Arts or Letters elective 3.0
- **Total Hours** 15.0

**6th Semester**

- NDFS 464 (W) 2.0
- NDFS 465 (W) 3.0
- Social Science elective 3.0
- Religion elective 2.0
- Civilization 2 elective 3.0
- Global & Cultural Awareness elective 3.0
- **Total Hours** 16.0

### Senior Year

**7th Semester**

- **CHEM 482 (FWSp)** 3.0
- NDFS 450 (F) 3.0
- NDFS 462 (F) 3.0
- Civilization 1 elective 3.0
- Arts or Letters elective 3.0
- **Total Hours** 15.0

**8th Semester**

- NDFS 464 (W) 2.0
- NDFS 465 (W) 3.0
- Social Science elective 3.0
- Religion elective 2.0
- Civilization 2 elective 3.0
- Global & Cultural Awareness elective 3.0
- **Total Hours** 16.0

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.
### BS in Food Science (284320)

#### 2022-2023 Program Requirements (66 - 69 Credit Hours)

Consult with a faculty advisor prior to finalizing your curriculum plan.

**REQUIREMENT 1** Complete 14 courses

**CORE REQUIREMENTS:**
- PHSCS 105  
- NDFS 362  
- NDFS 361  
- NDFS 251 - Essentials of Human Nutrition  
- NDFS 100  
- NDFS 250 - Essentials of Food Science Laboratory  
- NDFS 250 - Food Analysis  
- NDFS 355 - Food Process Engineering  
- NDFS 361 - Food Microbiology  
- NDFS 362 - Food Processing  
- NDFS 465  
- NDFS 464  
- NDFS 450  
- CHEM 105  
- MMBIO 221 - General Microbiology  
- MMBIO 222 - General Microbiology Laboratory

**OPTION 2.1** Complete 2 groups

**A. FOOD SCIENCE TECHNICAL TRACK:**
- **GROUP 2.1.1** Complete 25.0 hours from the following course(s)
  - PHSCS 108  
  - CHEM 106 - General College Chemistry 2  
  - CHEM 107 - General College Chemistry Laboratory  
  - CHEM 351 - Organic Chemistry 1  
  - CHEM 352 - Organic Chemistry 2  
  - CHEM 353 - Organic Chemistry Laboratory- Nonmajors  
  - CHEM 481 - Biochemistry  
  - NDFS 450 - Food Chemistry  
  - NDFS 464 - Food Sensory Evaluation  
  - NDFS 465 - Food Product Development  
- **GROUP 2.1.2** Complete 1 course
  - MATH 112 - Calculus 1  
  - MATH 119 - Introduction to Calculus

**OPTION 2.2** Complete 4 groups

**B. FOOD INDUSTRY MANAGEMENT TRACK:**
- **GROUP 2.2.1** Complete 7 courses
  - ACC 200 - Principles of Accounting
  - MATH 221 - Principles of Finance  
  - MMBIO 222 - General Microbiology Laboratory  
  - MMBIO 223 - General Microbiology  
  - PHSCS 105  
  - PHSCS 106 - General Physics 2  
  - PHSCS 107 - General Physics Lab 1  
  - PHSCS 108 - General Physics Lab 2  
  - WRTG 316 - Technical Communication

**RECOMMENDED Complete 13 courses**

**REQUIREMENT 2 Complete 1 option**

**COMPLETE ONE OF THE FOLLOWING TRACKS:**

**A. FOOD SCIENCE TECHNICAL TRACK - RECOMMENDED COURSES (CONSULT WITH A FACULTY ADVISOR BEFORE SELECTING):**
- CHEM 285 - Introductory Bio-organic Chemistry  
- ECON 110 - Economic Principles and Problems  
- FIN 201 - Principles of Finance  
- HRM 300 - Organizational Behavior  
- STRAT 488 - Agribusiness Management 1  
- STRAT 489 - Agribusiness Management 2  
- NDFS 399R - Complete 1.0 hour of NDFS 399R to fulfill this requirement.  
- NDFS 398R - Academic Internship  
- NDFS 399R - Complete 2 options

**B. FOOD INDUSTRY MANAGEMENT TRACK - RECOMMENDED COURSES (CONSULT WITH A FACULTY ADVISOR BEFORE SELECTING):**
- MCOM 320 - Management Communication  
- WRTG 316 - Technical Communication

**OPTION 2.1 Complete 2 groups**

**A. FOOD SCIENCE TECHNICAL TRACK:**
- **GROUP 2.1.1** Complete 25.0 hours from the following course(s)
  - PHSCS 105  
  - CHEM 106 - General College Chemistry 2  
  - CHEM 107 - General College Chemistry Laboratory  
  - CHEM 351 - Organic Chemistry 1  
  - CHEM 352 - Organic Chemistry 2  
  - CHEM 353 - Organic Chemistry Laboratory- Nonmajors  
  - CHEM 481 - Biochemistry  
  - NDFS 450 - Food Chemistry  
  - NDFS 464 - Food Sensory Evaluation  
  - NDFS 465 - Food Product Development

**GROUP 2.1.2** Complete 1 course
- MATH 112 - Calculus 1  
- MATH 119 - Introduction to Calculus

**OPTION 2.2 Complete 4 groups**

**B. FOOD INDUSTRY MANAGEMENT TRACK:**
- **GROUP 2.2.1** Complete 7 courses
  - ACC 200 - Principles of Accounting
  - MATH 221 - Principles of Finance  
  - MMBIO 222 - General Microbiology Laboratory  
  - MMBIO 223 - General Microbiology  
  - PHSCS 105  
  - PHSCS 106 - General Physics 2  
  - PHSCS 107 - General Physics Lab 1  
  - PHSCS 108 - General Physics Lab 2  
  - WRTG 316 - Technical Communication

**GROUP 2.2.2 Complete 1 course**
- ENT 381 - Entrepreneurship Lecture Series  
- ENT 382 - Technology Entrepreneurship Lecture Series  
- MST 380 - Executive Lectures

**GROUP 2.2.3 Complete 1 course**
- ENT 301 - Business Model Ideation & Validation  
- NDFS 200 - Nutrient Metabolism  
- NDFS 450 - Food Chemistry  
- NDFS 465 - Food Product Development

**GROUP 2.2.4 Complete 1 course**
- MATH 221 - Principles of Finance  
- MMBIO 222 - General Microbiology Laboratory  
- MMBIO 223 - General Microbiology  
- PHSCS 105  
- PHSCS 106 - General Physics 2  
- PHSCS 107 - General Physics Lab 1  
- PHSCS 108 - General Physics Lab 2  
- WRTG 316 - Technical Communication

**RECOMMENDED Complete 2 options**

**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, predental or other 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 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.

**MAP DISCLAIMER**
While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

**DEPARTMENT INFORMATION**
Nutrition, Dietetics, and Food Science
Brigham Young University
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Provo, UT 84602
Telephone: (801) 422-3912
FAX: (801) 422-0258
E-Mail: laura_jefferies@byu.edu

**ADVISEMENT CENTER INFORMATION**
Life Sciences Advisement
Brigham Young University
2060 Life Sciences Building
Provo, UT 84602
Telephone: (801) 422-3042
lifesciences@byu.edu

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| **BS in Food Science (284320)** |  |
| **2022-2023** |  |
| 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. |  |

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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.