# University Core and Graduation Requirements

**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></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachings and Doctrine of The Book of Mormon</td>
<td>1</td>
<td>2.0</td>
<td>REL A 275</td>
</tr>
<tr>
<td>Jesus Christ and the Everlasting Gospel</td>
<td>1</td>
<td>2.0</td>
<td>REL A 250</td>
</tr>
<tr>
<td>Foundations of the Restoration</td>
<td>1</td>
<td>2.0</td>
<td>REL C 225</td>
</tr>
<tr>
<td>The Eternal Family</td>
<td>1</td>
<td>2.0</td>
<td>REL C 200</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td>1.0</td>
<td></td>
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<tr>
<td><strong>Global and Cultural Awareness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Heritage</td>
<td>1-2</td>
<td>3-6.0</td>
<td>from approved list</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td>6.0</td>
<td></td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Year Writing</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Advanced Written and Oral Communications</td>
<td>1</td>
<td>3.0</td>
<td>Recommended</td>
</tr>
<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>
<td>1</td>
<td>3.0</td>
<td>STAT 121*</td>
</tr>
<tr>
<td><strong>Total Hours</strong></td>
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<td>4.0</td>
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</tr>
<tr>
<td><strong>Arts, Letters, and Sciences</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Civilization 1</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Civilization 2</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Arts</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Letters</td>
<td>1</td>
<td>3.0</td>
<td>from approved list</td>
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<tr>
<td>Biological Science</td>
<td>1</td>
<td>3.0</td>
<td>BIO 100 or PDBIO 120</td>
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<tr>
<td>Physical Science</td>
<td>2</td>
<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 recommended</td>
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<tr>
<td><strong>Total Hours</strong></td>
<td></td>
<td>15.0</td>
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<tr>
<td><strong>Core Enrichment: Electives</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Religion Electives</td>
<td>3-4</td>
<td>6.0</td>
<td>from approved list</td>
</tr>
<tr>
<td>Open Electives</td>
<td>Variable</td>
<td>Variable</td>
<td>personal choice</td>
</tr>
<tr>
<td><strong>Graduation Requirements:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum residence hours required</td>
<td></td>
<td>30.0</td>
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</tr>
<tr>
<td>Minimum hours needed to graduate</td>
<td></td>
<td>120.0</td>
<td></td>
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</tbody>
</table>

**Graduation Requirements:**

The following semester recommendations are for the Food Science Technical Track.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Semester</td>
<td>15.0</td>
</tr>
<tr>
<td>2nd Semester</td>
<td>15.0</td>
</tr>
<tr>
<td>3rd Semester</td>
<td>15.0</td>
</tr>
<tr>
<td>4th Semester</td>
<td>16.0</td>
</tr>
<tr>
<td>5th Semester</td>
<td>15.0</td>
</tr>
<tr>
<td>6th Semester</td>
<td>15.0</td>
</tr>
<tr>
<td>7th Semester</td>
<td>16.0</td>
</tr>
<tr>
<td>8th Semester</td>
<td>16.0</td>
</tr>
</tbody>
</table>

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:
- CHEM 285 - Introductory Bio-organic Chemistry 4.0
- ECON 110 - Economic Principles and Problems 3.0
- FIN 201 - Principles of Finance 3.0
- HRM 300 - Organizational Behavior 3.0
- STRAT 488 - Agribusiness Management 1 3.0
- STRAT 489 - Agribusiness Management 2 3.0

**GROUP 2.2.2** Complete 1 course from the following course(s):
- NDFS 399R - Academic Internship 9.0v

**GROUP 2.2.3** Complete 1 course
- ENT 381 - Entrepreneurship Lecture Series 1.0
- ENT 382 - Technology Entrepreneurship Lecture Series 1.0
- MSB 380 - Executive Lectures 1.0

**GROUP 2.2.4** Complete 1 course
- ENT 301 - Business Model Ideation & Validation 3.0
- NDFS 200 - Nutrition Metabolism 3.0
- NDFS 450 - Food Chemistry 3.0
- NDFS 465 - Food Product Development 3.0

### OPTION 2.1 Complete 2 groups

**A. FOOD SCIENCE TECHNICAL TRACK**

**GROUP 2.1.1** Complete 25.0 hours from the following course(s)
- CELL 120 - Science of Biology 3.0
- CHEM 106 - General College Chemistry 2 3.0
- CHEM 107 - General College Chemistry Laboratory 1 3.0
- CHEM 351 - Organic Chemistry 1 3.0
- CHEM 352 - Organic Chemistry 2 3.0
- CHEM 353 - Organic Chemistry Laboratory - Nonmajors 2.0v
- CHEM 481 - Biochemistry 3.0
- NDFS 450 - Food Chemistry 3.0
- NDFS 464 - Food Sensory Evaluation 2.0
- NDFS 465 - Food Product Development 3.0

**GROUP 2.1.2** Complete 1 course
- MATH 112 - Calculus I 4.0
- MATH 119 - Introduction to Calculus 4.0

**OPTION 2.2 Complete 4 groups**

**B. FOOD INDUSTRY MANAGEMENT TRACK**

**GROUP 2.2.1** Complete 7 courses
- ACC 200 - Principles of Accounting 3.0

**GROUP 2.2.2** Complete 1 course
- MMIO 222 - Food Regulation 1.0
- MMIO 221 - Food Quality Assurance 1.0
- STRAT 488 - Agribusiness Management 1 3.0
- STRAT 489 - Agribusiness Management 2 3.0

**GROUP 2.2.3** Complete 1 course
- NDFS 399R - Academic Internship 9.0v

**GROUP 2.2.4** Complete 1 course
- ENT 381 - Entrepreneurship Lecture Series 1.0
- ENT 382 - Technology Entrepreneurship Lecture Series 1.0
- MSB 380 - Executive Lectures 1.0

**GROUP 2.2.5** Complete 1 course
- ENT 301 - Business Model Ideation & Validation 3.0
- NDFS 200 - Nutrition Metabolism 3.0
- NDFS 450 - Food Chemistry 3.0
- NDFS 465 - Food Product Development 3.0

**RECOMMENDED** Complete 13 courses

### A. FOOD SCIENCE TECHNICAL TRACK - RECOMMENDED COURSES (CONSULT WITH A FACULTY ADVISOR BEFORE SELECTING):
- CHEM 223 - (Not currently offered)
- ECON 110 - Economic Principles and Problems 3.0
- IAS 220 - Introduction to Development Studies 3.0
- MFGN 355 - Plastics Materials and Processing 3.0
- NDFS 200 - Nutrient Metabolism 3.0
- PHSCS 106 - General Physics 2 3.0
- PHSCS 107 - General Physics Lab 1 1.0
- PHSCS 108 - General Physics Lab 2 1.0
- PWS 100 - Plants in the Environment 3.0
- STDEV 150 - Public Speaking 3.0
- STDEV 317 - Job and Internship Search Strategies 2.0
- TECH 201 - (Not currently offered)
- TECH 202 - (Not currently offered)
- WRTG 316 - Technical Communication 3.0

**RECOMMENDED** Complete 2 options

### B. FOOD INDUSTRY MANAGEMENT TRACK - RECOMMENDED COURSES (CONSULT WITH A FACULTY ADVISOR BEFORE SELECTING):

**RECOMMENDED** Complete 1 course
- M COM 320 - Management Communication 3.0
- WRTG 316 - Technical Communication 3.0

**RECOMMENDED** Complete 11 courses
- IAS 220 - Introduction to Development Studies 3.0
- MATH 119 - Introduction to Calculus 4.0
- MFGN 479 - Innovation and Entrepreneurship 3.0
- NDFS 200 - Nutrient Metabolism 3.0
- NDFS 450 - Food Chemistry 3.0
- NDFS 464 - Food Sensory Evaluation 2.0
- PHSCS 106 - General Physics 2 3.0
- PWS 100 - Plants in the Environment 3.0
- STDEV 150 - Public Speaking 3.0
- TECH 201 - (Not currently offered)
- TECH 202 - (Not currently offered)

### 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 or other 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.

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 advisor for complete guidelines.

DEPARTMENT INFORMATION
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