# 4-Year Course Plan

**BIOCHEMICAL SCIENCES MAJOR – FOOD SCIENCE SPECIALIZATION (A.S.) INTERESTED IN FOOD SCIENCE & TECHNOLOGY MAJOR (B.S.)**

This model plan of study is presented as a suggested path to graduate in 4 years with an Associate of Science Degree with a major in Biochemical Sciences and specialization in Food Science and a Bachelor of Science Degree in Food Science with a major in Food Science & Technology. It is intended to be a useful guide; however, each student is unique and should review the Degree Requirements and work with their advisor to develop an individualized course plan that best fits their personal academic background and goals.

**NOTE:** This sheet should not be used in isolation. In order to graduate in a timely manner, students must consult their academic advisor on a regular basis.

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### Freshman Year (ATI)

<table>
<thead>
<tr>
<th>Benchmarks</th>
<th>Autumn Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department</strong></td>
<td><strong>Course #</strong></td>
<td><strong>Course Name</strong></td>
</tr>
<tr>
<td>CHEM 1210 &amp; 1220 should be completed by the end of this year.</td>
<td>BIOTECH 1201T</td>
<td>Exploring Biochemical Sci. &amp; Biotechnology</td>
</tr>
<tr>
<td>ENGLISH 1110 should be completed by the end of this year.</td>
<td>CHEM 1210</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>Begin to consider study abroad programs.</td>
<td>ENGLISH 1110.01</td>
<td>First-Year English Composition</td>
</tr>
<tr>
<td></td>
<td>GENSTDS 1201T</td>
<td>College Orientation</td>
</tr>
<tr>
<td></td>
<td>MATH 1150</td>
<td>Pre-calculus</td>
</tr>
<tr>
<td><strong>Total:</strong> 14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Sophomore Year (ATI)

<table>
<thead>
<tr>
<th>Benchmarks</th>
<th>Autumn Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department</strong></td>
<td><strong>Course #</strong></td>
<td><strong>Course Name</strong></td>
</tr>
<tr>
<td>MATH 1151 should be completed by the end of this year.</td>
<td>AEDECON 2001</td>
<td>Principles of Food and Resource Economics *</td>
</tr>
<tr>
<td>Apply to graduate from ATI at least one semester before the semester of your graduation.</td>
<td>BIOLOGY 1113</td>
<td>Energy Transfer and Development</td>
</tr>
<tr>
<td>Maintain at least a 2.0 cumulative GPA.</td>
<td>CHEM 2510</td>
<td>Organic Chemistry 1</td>
</tr>
<tr>
<td>Graduate with Associate of Science Degree.</td>
<td>____ ____</td>
<td>Arts/Humanities elective</td>
</tr>
<tr>
<td><strong>Total:</strong> 14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Junior Year (Columbus)

<table>
<thead>
<tr>
<th>Benchmarks</th>
<th>Autumn Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department</strong></td>
<td><strong>Course #</strong></td>
<td><strong>Course Name</strong></td>
</tr>
<tr>
<td>Begin to consider an internship location. Internship should be completed by end of this summer.</td>
<td>COMLDR 3537</td>
<td>Data Analysis in Applied Sciences *</td>
</tr>
<tr>
<td></td>
<td>FABENG 3481</td>
<td>Intro. to Food Engineering</td>
</tr>
<tr>
<td></td>
<td>FDSCTE 2400</td>
<td>Intro. to Food Science</td>
</tr>
<tr>
<td></td>
<td>FDSCTE 5600</td>
<td>Food Chemistry</td>
</tr>
<tr>
<td></td>
<td>HUMNUTR 2310</td>
<td>Fundamentals of Nutrition</td>
</tr>
<tr>
<td><strong>Total:</strong> 15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Senior Year (Columbus)

<table>
<thead>
<tr>
<th>Benchmarks</th>
<th>Autumn Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain at least a 2.0 GPA in the major, minor, and cumulative.</td>
<td>FDSCTE 5310</td>
<td>Food Quality Assurance</td>
</tr>
<tr>
<td>Graduate with Bachelor of Science Degree.</td>
<td>FDSCTE 5536</td>
<td>Food Microbiology</td>
</tr>
<tr>
<td></td>
<td>FDSCTE 5720</td>
<td>Food Product Dev. or Major Elective</td>
</tr>
<tr>
<td></td>
<td>FDSCTE 4191</td>
<td>Internship</td>
</tr>
<tr>
<td></td>
<td>____ ____</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>____ ____</td>
<td>Major Elective</td>
</tr>
<tr>
<td><strong>Total:</strong> 15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total credit hours for Associate of Science Degree: **60**

Total credit hours for Bachelor of Science Degree: **121**

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*One possible course from approved CFAES GE list or B.S. major requirement that has multiple options, as outlined in corresponding Degree Requirements document.*
Degree Requirements

BIOCHEMICAL SCIENCES MAJOR – FOOD SCIENCE SPECIALIZATION (A.S.) INTERESTED IN FOOD SCIENCE & TECHNOLOGY MAJOR (B.S.)

This advising sheet is for Ohio State ATI students who wish to earn both an Associate of Science (A.S) Degree with a major in Biochemical Sciences and specialization in Food Science and a Bachelor of Science (B.S.) Degree with a major in Food Science & Technology. The tables below outline the complete degree requirements to earn a B.S. in Food Science with a major in Food Science & Technology. The underlined courses are also the complete set of courses required in the A.S. Biochemical Sciences major – Food Science specialization. These courses can count toward both degree programs simultaneously.

### Table 1. Degree Requirements

<table>
<thead>
<tr>
<th>Subject</th>
<th>Course Options</th>
<th>Hours</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey Courses</td>
<td>GENSTDS 1201* or FAES 1100 and BIOTECH 1201* or FDSCTE 1100</td>
<td>.5</td>
<td></td>
</tr>
<tr>
<td>Writing Level 1</td>
<td>ENGLISH 1110</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Writing Level 2</td>
<td>AGRCOMM 2367 or other course from approved CFAES GE list.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Oral Communication</td>
<td>AGRCOMM 3130 or COMM 2110</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Math 1</td>
<td>MATH 1150</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Data Analysis</td>
<td>COMLDR 3537 or HCS 2220 or ADECON 2005 or ENR 2000 or ANIMSCI 2260 or STAT 1450</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Biological Science (with lab)</td>
<td>BIOLOGY 1113</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Physical Science (with lab)</td>
<td>CHEM 1210</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Additional Science</td>
<td>CHEM 1220</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Additional Science</td>
<td>PHYSICS 1200</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Social Science 1</td>
<td>RURLSOC 1500 or SOCIOL 1101*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Social Science 2</td>
<td>ADECON 2001 or ECON 2001</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Historical Study</td>
<td>HISTORY 1152 or other course from approved CFAES GE list.*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Culture &amp; Ideas or Historical Study</td>
<td>RELSTDS 2370 or other course from approved CFAES GE list.*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Literature</td>
<td>COMPSTD 2301 or other course from approved CFAES GE list.*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Art</td>
<td>MUSIC 2250 or other course from approved CFAES GE list.*</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Additional Required</td>
<td>See Table 2.</td>
<td>22-24</td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td>See Table 3.</td>
<td>36-43</td>
<td></td>
</tr>
<tr>
<td>Internship</td>
<td>FDSCTE 4191</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>------------------------------</td>
<td>0-7</td>
<td></td>
</tr>
</tbody>
</table>

**Minimum Total Credit Hours:** 121

* Available at [www.cfaes.osu.edu/students](http://www.cfaes.osu.edu/students)

* These courses may also be taken as Major Electives if not used to fulfill this requirement.

* courses are only offered at the Wooster (ATI) Campus

Note: A capital OR separates a pair of equivalent courses, a lowercase or separates a choice between different courses that fulfill the same requirement.

### Table 2. Additional Required Courses

<table>
<thead>
<tr>
<th>Course(s)</th>
<th>Hours</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select one of the options below for Organic Chemistry: CHEM 2510 and 2520 Organic Chemistry Lecture or CHEM 2510 and 2540 Organic Chemistry Lecture with Lab</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>BIOCHEM 4511 Introduction to Biological Chemistry</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>HUMNTR 2310 Fundamentals of Human Nutrition</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 1151 Calculus I</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>MICRBIIO 4000 Basic &amp; Practical Microbiology</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

**Total Additional Required Credit Hours:** 22-24

### Table 3. Major Requirements

<table>
<thead>
<tr>
<th>Course(s)</th>
<th>Hours</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>FABE 3481 Food Engineering</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FDSCTE 2400 Introduction to Food Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FDSCTE 5310 Food Quality Assurance</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FDSCTE 5400 Food Process Engineering</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FDSCTE 5536 Food Microbiology</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FDSCTE 5546 Food Microbiology Laboratory</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FDSCTE 5600 Food Chemistry</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FDSCTE 5610 Food Analysis</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Processing Option (choose one of the following*): FDSCTE 5410 Processing Fruit &amp; Vegetable Products or FDSCTE 5420 Dairy Processing or FDSCTE 5430 Food Fermentations or MEATSCI 4510 Processed Meats</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Capstone (choose one of the following*): FDSCTE 5720 Food Product Development or FDSCTE 5730 Technical Problem Solving</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Total Major Credit Hours:** 36-43

### Additional Bachelor’s Degree Requirements:

1. All students must complete at least one Social Diversity (●) course and two Global Issues (▲) courses. Please see the approved CFAES GE list for additional options.
2. A 2.00 cumulative CPHR is required as well as a 2.00 CPHR in the major and minor coursework.
3. Students must complete a minimum of 30 credit hours at The Ohio State University with at least 12 in the department in Columbus offering the major.
4. Applications to graduate must be submitted at least three semesters in advance.

***Degree requirements and course offerings are subject to change. March 2016 – JG***