

# Integrated B.S. Biochemistry and Molecular Biology/M.S. Food Science

## Suggested 5-year Plan

Note: Prerequisites for the M.S. Food Science Program are in red; Food Science Graduate Courses are in bold

### FRESHMAN YEAR

<i>Fall</i>	<i>Credits</i>	<i>Spring</i>	<i>Credits</i>
CHEM 140 lecture and lab	4	CHEM 150 lecture and lab	4
MATH 110 lecture	3	MATH 111 lecture	3
BIOL 204 lecture and lab	4	BCHM 208 lecture and lab	4
FFC 100B lecture	3	GCI 150 lecture	1
		BCHM 100 lecture	1
<b>TOTAL CREDITS</b>	<b>14</b>		<b>13</b>

### SOPHOMORE YEAR

<i>Fall</i>	<i>Credits</i>	<i>Spring</i>	<i>Credits</i>
CHEM 230 lecture and lab	4	CHEM 331 lecture and lab	4
PHYS 107 lecture and lab	4	PHYS 108 lecture and lab	4
FSN 200 lecture	3	Math 303 lecture	3
GCI 200 lecture	1	GCI 250 lecture	1
<b>TOTAL CREDITS</b>	<b>12</b>		<b>12</b>

### JUNIOR YEAR

<i>Fall</i>	<i>Credits</i>	<i>Spring</i>	<i>Credits</i>
BCHM 335 lecture and lab	4	BCHM 336 lecture	3
Upper division elective	3-4	BIOL 317 lecture and lab	4
<b>TOTAL CREDITS</b>	<b>7-8</b>		<b>7</b>

### SENIOR YEAR

<i>Fall</i>	<i>Credits</i>	<i>Spring</i>	<i>Credits</i>
BCHM 420 lecture and lab	4	BCHM 436 lecture and lab	4
BCHM 487 lecture	3	FSN 520 and 521	4*
FSN 500	1*	Capstone	1-2
FSN 530 and 530L	4**		
Capstone (see catalog for details)	1-2		
<b>TOTAL CREDITS</b>	<b>13-14</b>		<b>9-10</b>

\*will only count towards graduate program

\*\*will count towards major and graduate program

### FIFTH YEAR

<i>Fall</i>	<i>Credits</i>	<i>Spring</i>	<i>Credits</i>
FSN 508	3	FSN 501 and 502	4
FSN 660	3	FSN Elective	3
FSN Elective	3	FSN Elective	3
<b>TOTAL CREDITS</b>	<b>9</b>		<b>10</b>

  

<i>Summer</i>	<i>Credits</i>
FSN 503	3
FSN 505	3
<b>TOTAL CREDITS</b>	<b>6</b>

Note: The M.S. Food Science suggested plan is based on the non-thesis option, which requires successful completion of the comprehensive exam (offered in January and June of each year). Additional details on the thesis and non-thesis options can be found in the catalog. Students will need to follow the catalog year requirements in which they matriculate in the M.S. Food Science Program.

## **Additional Information**

### **Integrated Bachelor of Science/Master of Science in Food Science**

The Integrated Bachelor of Science/Master of Science in Food Science program enables undergraduate students to begin taking M.S. coursework in their junior or senior year and receive a Master of Science in Food Science within one year of finishing their undergraduate degree. The program is open to all undergraduate Biochemistry and Molecular Biology, Chemistry, Biological Sciences and Health Sciences majors who meet the admission requirements. Undergraduates in other majors may be eligible as long as they have satisfied the prerequisites for the program and meet the admission requirements. Graduates of the program can pursue a variety of career opportunities in the food science industry.

Chapman students can apply to the M.S. program in their junior year. If accepted into a graduate program, undergraduate students may take up to 15 graduate credits once a minimum of 90 undergraduate credits have been completed or will be completed prior to the start of the course. Some of these 15 credits may also count towards their undergraduate degree credit requirement. Students would complete the remaining credit hours of graduate course work beginning in the summer or fall after receiving the undergraduate degree.

#### **Admission requirements for the Integrated Program:**

1. Graduate application available at [chapman.edu/admission/graduate/applynow.aspx](http://chapman.edu/admission/graduate/applynow.aspx).
2. Students with a cumulative 3.000 GPA or higher must apply during the junior year of their bachelor's degree in Biochemistry and Molecular Biology, Chemistry, Biological Sciences or Health Sciences.
3. A personal statement of approximately 500 words, which includes: a) student's interest in the integrated program at Chapman; b) career goals; and c) academic and research achievements.
4. Resume or curriculum vitae

Students in the integrated bachelor's plus master's programs will matriculate into the graduate program after the completion of their bachelor's degree. Students may not begin Year 5 coursework without certified completion of the bachelor's degree from Chapman University. The cumulative GPA at graduation must be 3.000 or higher.

#### **Prerequisites for the M.S. Food Science Program**

1. General chemistry with laboratory (two semesters)
2. Organic chemistry with laboratory (two semesters or one semester organic and one semester biochemistry)
3. Microbiology with laboratory
4. Statistics
5. Human nutrition

### **Food Science Courses**

**Note:** please check the food science catalog for the most recent version of course listings.

#### **core courses (12 credits)**

- [FSN 501 - Food Chemistry](#) **3 credits**
- [FSN 502 - Food Chemistry Lab](#) **1 credit**
- [FSN 520 - Food Processing and Preservation](#) **3 credits**
- [FSN 521 - Food Processing and Preservation Laboratory](#) **1 credit**
- [FSN 530 - Food Microbiology](#) **3 credits**
- [FSN 530L - Food Microbiology Lab](#) **1 credit**

## **requirements (7 credits)**

- [FSN 500 - Essentials of Food Science](#) **1 credit**
- [FSN 508 - Statistics for Food Scientists](#) **3 credits**
- [FSN 660 - Research Methods](#) **3 credits**

## **electives (15 credits)**

- [FSN 503 - Government Regulation of Foods](#) **3 credits**
- [FSN 505 - Food Safety](#) **3 credits**
- [FSN 506 - Workplace Communications for Food Scientists](#) **2 credits**
- [FSN 507 - Food Quality Management](#) **1 credit**
- [FSN 509 - Topics in Food, Diet and Culture](#) **3 credits**
- [FSN 510 - Food Industry Study Tour](#) **3 credits**
- [FSN 512 - Sensory Evaluation of Foods](#) **3 credits**
- [FSN 515 - Food Ingredients](#) **3 credits**
- [FSN 522 - Community Nutrition](#) **3 credits**
- [FSN 538 - Nutrition and Human Performance](#) **3 credits**
- [FSN 539 - Life Cycle Nutrition](#) **3 credits**
- [FSN 543 - Medical Nutrition Therapy](#) **3 credits**
- [FSN 551 - Food Fraud](#) **3 credits**
- [FSN 587 - Nutrigenomics](#) **3 credits**
- [FSN 594 - Food Product Development, Lecture and Laboratory](#) **4 credits**
- [FSN 600 - Advanced Food Science: Selected Topics](#) **3-12 credits**
- [FSN 601 - Food Packaging](#) **3 credits**
- [FSN 602 - Food Flavors](#) **3 credits**
- [BUS 605 - Marketing Management](#) **3 credits**
- [FSN 606 - Dietary Supplements and Functional Foods](#) **3 credits**
- [FSN 690 - Internship for Graduate Students](#) **½-3 credits**
- [FSN 691 - Student-Faculty Research](#) **1-3 credits**
- [FSN 698 - Thesis](#) **1- 6 credits** (6 credits required)
- [FSN 699 - Independent Research](#) **1-3 credits**