

Bachelor of Science in Food Science Major: Food Science & Technology

Creating foods in a production setting and evaluating them in the laboratory is integrated into our curriculum from introductory classes all the way through to graduation. You will have opportunities to create new food products and develop new ways to manufacture, preserve, package, and ensure safety of food products. Students enrolled in this major earn the degree Bachelor of Science in Food Science and will complete a minimum of 121 credit hours as outlined below.

| General Education Requirements | | |
|--|--|---------------|
| Requirement | Course Options | Hours |
| GE Seminar | GENED 1201 | 1 |
| Writing and Information Literacy | Major requirement: ENGLISH 1110 * (or Student Choice – see below) | 3 |
| Mathematical & Quantitative Reasoning/Data Analysis | Major requirement: MATH 1151 * (or Student Choice – see below) | 5 |
| Literary, Visual and Performing Arts | Student Choice | 3 |
| Historical & Cultural Studies | Student Choice | 3 |
| Natural Science | Major requirement: BIOLOGY 1113* (or Student Choice – see below) | 4 |
| Social & Behavioral Sciences | Major requirement: AEDECON 2001 or ECON 2001.01 * (or Student Choice – see below) | 3 |
| Race, Ethnic and Gender Diversity | Student Choice | 3 |
| Theme: Citizenship for a Diverse & Just World^a | Student Choice | 4-6 |
| Theme: Student Choice^a | Student Choice | 4-6 |
| GE Reflection | GENED 4001 | 1 |
| General Education Credit Hours: | | 34-38* |

* Indicates a pre/corequisite course for this major that also satisfies this GE category. If a student makes an alternative selection in this GE category, they must also complete this course.

| B.S. in Food Science Degree Requirements | | |
|--|--|-----------|
| Requirement | Course Options | Hours |
| College & Department Survey | FAES 1100 (0.5) & FDSCTE 1100 (0.5) | 1 |
| Oral Expression | AGRCOMM 3130 or COMM 2110 | 3 |
| Additional Science | PHYSICS 1200 | 5 |
| Internship | FAES 3191 & FDSCTE 4191 | 1 |
| Credit Hours: | | 10 |

| Major Supporting Coursework | | |
|-----------------------------|--|-----------|
| Requirement | Course Options | Hours |
| General Chemistry | CHEM 1210 | 5 |
| | CHEM 1220 | 5 |
| Organic Chemistry | CHEM 2510 | 4 |
| Microbiology | MICROBIO 4000.01 or .02 | 4 |
| Biochemistry | BIOCHEM 4511 | 4 |
| Data Analysis | COMLDR 3537, AEDECON 2005, ANIMSCI 2260, HCS 2260, ENR 2000, or STAT 1450 | 3 |
| Credit Hours: | | 25 |

| Major Coursework | | |
|--|---|-----------|
| Course | Title | Hours |
| FDSCTE 2300 | Role of Food Science in Human Health ❖ | 3 |
| FDSCTE 2400 | Introduction to Food Processing | 3 |
| FDSCTE 3450 | Physical Principles in Food Processes | 3 |
| FDSCTE 4600 | Food Composition and Function | 3 |
| FDSCTE 5310 | Food Quality Assurance | 3 |
| FDSCTE 5400 | Unit Operations in Food Processing | 3 |
| FDSCTE 5500 | Measurement of Food Perception and Liking | 3 |
| FDSCTE 5536 | Food Microbiology Lecture | 3 |
| FDSCTE 5546 | Food Microbiology Laboratory | 3 |
| FDSCTE 5600 | Food Chemistry | 3 |
| FDSCTE 5610 | Food Analysis | 3 |
| Choose one Capstone course: | | |
| FDSCTE 5720 | Food Product Development | 3 |
| FDSCTE 5730 | Technical Problem Solving | 3 |
| Select two Processing courses: | | |
| FDSCTE 5410 | Fruit and Vegetable Processing | 3 |
| FDSCTE 5420 | Dairy Processing | 3 |
| FDSCTE 5430 | Food Fermentations | 3 |
| FDSCTE 5450 | Food Packaging | 3 |
| FDSCTE 5750 | Brewing Science Capstone | 3 |
| MEATSCI 4510 | Processed Meats | 3 |
| Major Electives: Select an additional six credit hours from options above and/or: | | |
| FDSCTE 2410 | Brewing Science | 2 |
| FDSCTE 4193 | Individual Studies | 1-3 |
| FDSCTE 4410 | Hazard Analysis and Critical Control Points (HACCP) | 2 |
| FDSCTE 4999 or 4999H | Research with Distinction or Honors Research with Distinction | 1-2 |
| FDSCTE 5320 | Food Laws and Regulations | 2 |
| FDSCTE 5330 | Food Plant Management | 2 |
| FDSCTE 5710 | Food Additives | 2 |
| FDSCTE 5721 | Applied Product Development | 1 |
| Major Credit Hours: | | 48 |

| | |
|-----------------------------------|--------------|
| General Education | 34-38 |
| Degree Requirements | 10 |
| Major Supporting Courses | 25 |
| Major | 48 |
| Open Electives | 0-4 |
| Minimum Total Credit Hours | 121 |

^a Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course (❖), one course in each GE Theme area may double count in the GE and major hours.

Policies and General Requirements for Degree

- A minimum of **121** total credit hours. Remedial coursework (English 1109; EDUTL 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1010; Mathematics 1040, 1050, 1073, 1074, 1075) do not count toward the 121-hour minimum requirement for the BS degree.
- A minimum of 30 semester hours of credit earned through regular course enrollment at this University, and regular course enrollment in the last semester in the College of Food, Agricultural, and Environmental Sciences.
- A cumulative point-hour ratio of at least 2.00 on all coursework completed at The Ohio State University as well as at least a 2.00 in the major.
- If a major-required course or major elective is a GE Theme course, two 3-4 cr courses (no more than one per theme area) is permitted to double count in the GE and major hours. GE Theme courses are indicated with a ♠ symbol.
- Students are encouraged to participate in education abroad opportunities. Consult with your advisor for how education abroad credit applies to your degree or consider the CFAES Global Option.
- Students must complete a minimum of 40 hours in major/major supporting coursework with at least 12 hours taken from the academic unit(s) offering the major at OSU in the baccalaureate program.
- Courses required in the major (including major supporting courses and major electives) may **not** be taken pass/non-pass.
- Coursework taken as open electives may include a maximum of 4 credit hours of physical activity courses (all 1139-1197 courses), and a maximum of 4 credit hours of campus music organizations.
- A college maximum of six hours of individual studies courses (x193) can be applied toward graduation; some majors may have a lower maximum.
- Students of CFAES must complete an internship of 1-2 hours as a requirement for degree. Any additional internship credit hours may count towards major hours (consult with your advisor). A college maximum of six hours of internship credit can be applied toward graduation; some majors may have a lower maximum.
- A maximum of three credits of 3488 can be applied toward graduation although some majors may have a lower maximum. A cumulative point-hour ratio of 2.0 is required to register for 3488 credit.
- Credit hours for 4999 ("with Research Distinction") and 4999H ("with Honors Research Distinction") are repeatable to maximum of six hours.
- **An application for degree must be submitted online at least two semesters prior to the intended graduation term. Application found at:**
<https://students.cfaes.ohio-state.edu/academics/undergraduate/graduation>

4-Year Course Plan B.S. in Food Science & Technology

This model plan of study is presented as a suggested path to graduate in four years. It is intended to be a useful guide; however, each student is unique and should review the Degree Requirements for their catalog year 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. To graduate in a timely manner, students must consult their academic advisor on a regular basis.

| Freshman Year | Autumn Semester | | | Spring Semester | | |
|--|---|---|---------------|---|-------------------------------|-------|
| Benchmarks | Course/Requirement | Course Name | Hours | Course/Requirement | Course Name | Hours |
| -Complete Math requirement -Complete at least one science -Complete English 1110.01 | FAES 1100 | College Survey | 5 | CHEM 1220 | General Chemistry II | 5 |
| | FDSCTE 1100 | Dept Survey | 5 | GE Math: MATH 1151 ^a | Calculus I | 5 |
| | GE SBS: AEDECON 2001 | Prin. of Food & Res. Econ. | 3 | GE WIL: ENGLISH 1110 | First-Year English Comp. | 3 |
| | CHEM 1210 | General Chemistry I | 5 | GE R.E. & G. Diversity | | 3 |
| | GE Nat Sci: BIOLOGY 1113 ^a | Energy Transfer & Dev. | 4 | | | |
| | GENED 1201 | GE Launch Seminar | 1 | | | |
| Hours: 30 | Total: 14 | | | Total: 16 | | |
| Sophomore Year | Autumn Semester | | | Spring Semester | | |
| Benchmarks | Course/Requirement | Course Name | Hours | Course/Requirement | Course Name | Hours |
| -Complete three science courses by the end of this year -Begin to consider an internship location | FDSCTE 2400 | Intro to Food Processing | 3 | MICROBIO 4000.01 or 02 | Basic and Pract. Microbio | 4 |
| | CHEM 2510 | Organic Chemistry | 4 | FDSCTE Elective | | 2 |
| | Add'l Sci: PHYSICS 1200 | Mech. Fluids, and Waves | 5 | FDSCTE 2300 ^b | Food Sci in Health ❖ | 3 |
| | FDSCTE 4600 | Food Comp. and Function | 3 | GE Lit, Vis and Perf Arts | | 3 |
| | | | | AEDECON 2005 ^a | Data Analysis | 3 |
| Hours: 60 | Total: 15 | | | Total: 15 | | |
| Junior Year | Autumn Semester | | | Spring Semester | | |
| Benchmarks | Course/Requirement | Course Name | Hours | Course/Requirement | Course Name | Hours |
| -Apply to graduate -Complete internship by end of the summer -Half of major hours to be completed by the end of the year | FDSCTE 4191& FAES 3191 | Internship | 1 | BIOCHEM 4511 | Intro to Biological Chemistry | 4 |
| | FDSCTE 3450 | Phys Princ. In Food Processes | 3 | FDSCTE 5546 | Food Microbiology Lab | 3 |
| | AGRCOM 3130 ^a or COMM 2110 | Oral Communication | 3 | FDSCTE Elective or Processing Course #1 | | 3 |
| | FDSCTE 5536 | Food Microbiology Lecture | 3 | GE Citizenship ^b | | 4 |
| | FDSCTE 5310 | Food Quality Assurance | 3 | GE Theme Option #2 ^b | | 3 |
| | FDSCTE Elective or Processing Course #1 | | 3 | | | |
| Hours: 92 | Total: 16 | | | Total: 16 | | |
| Senior Year | Autumn Semester | | | Spring Semester | | |
| Benchmarks | Course/Requirement | Course Name | Hours | Course/Requirement | Course Name | Hours |
| -Meet graduation requirements -Meet with a Career Services Advisor | FDSCTE XXXX | Processing Course #2 | 3 | FDSCTE Capstone or Elective | | 3 |
| | FDSCTE 5600 | Food Chemistry | 3 | FDSCTE 5610 | Food Analysis | 3 |
| | FDSCTE Elective | | 2 | GE History | | 3 |
| | FDSCTE Capstone or Elective | | 3 | GENED 4001 | GE Reflection | 1 |
| | FDSCTE 5500 | Measurement of Food Perception & Liking | 3 | FDSCTE 5400 | Unit Op. in Food Processing | 3 |
| | | | Free Elective | | 3 | |
| Hours: 92 | Total: 14 | | | Total: 15 | | |
| Minimum credit hours for Bachelor of Food Science Degree: 121 | | | | | | |

^a One possible course from approved GE list or major requirement that has multiple options, as outlined in corresponding Degree Requirements document.

^b Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course (❖), one course in each GE Theme area may double count in the GE and major hours.

4-Year Completion Checklist

| Freshman Year | Autumn Semester | | | Spring Semester | | |
|--|---|---|---|-----------------|--|--|
| Benchmarks <input type="checkbox"/> Complete Math requirement <input type="checkbox"/> Complete at least one science <input type="checkbox"/> Complete English 1110.01 Hours: _____ | Course/Requirement FAES 1100 FDSCTE 1100 _____ _____ _____ _____ _____ Notes: | ✓ | Course/Requirement _____ _____ _____ _____ _____ Notes: | ✓ | | |
| Sophomore Year | Autumn Semester | | | Spring Semester | | |
| Benchmarks <input type="checkbox"/> Complete three science courses by the end of this year <input type="checkbox"/> Begin to consider an internship location Hours: _____ | Course/Requirement _____ _____ _____ _____ _____ Notes: | ✓ | Course/Requirement _____ _____ _____ _____ _____ Notes: | ✓ | | |
| Junior Year | Autumn Semester | | | Spring Semester | | |
| Benchmarks <input type="checkbox"/> Apply to graduate <input type="checkbox"/> Complete internship by end of the summer <input type="checkbox"/> Half of major hours to be completed by the end of the year Hours: _____ | Course/Requirement _____ _____ _____ _____ _____ Notes: | ✓ | Course/Requirement _____ _____ _____ _____ _____ Notes: | ✓ | | |
| Senior Year | Autumn Semester | | | Spring Semester | | |
| Benchmarks <input type="checkbox"/> Meet graduation requirements <input type="checkbox"/> Meet with a Career Services Advisor Hours: _____ | Course/Requirement _____ _____ _____ _____ _____ Notes: | ✓ | Course/Requirement _____ _____ _____ _____ _____ Notes: | ✓ | | |

Minimum credit hours for Bachelor of Food Science Degree: 121
