THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

4-Year Course Plan **Catalog Year 2022-2023**

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.**

Freshman Year (ATI)	**Autumn Semester**				**Spring Semester**			
Benchmarks	**Department**	**Course #**	**Course Name**	**Hours**	**Department**	**Course #**	**Course Name**	**Hours**
CHEM 1210 & 1220 should be completed by the end of this year.	AEDECON	2001	Principles of Food and Resource Economics [a]	3	BIOLOGY	1113.01	Energy Transfer and Development [a]	4-5
ENGLISH 1110 should be completed by the end of this year.	BIOTECH	1201T	Exploring Biochemical Sci. & Biotechnology	.5	CHEM	1220	General Chemistry 2	5
Begin to consider study abroad programs.	CHEM	1210	General Chemistry 1	5	GENED	1201	GE Launch Seminar	1
	ENGLISH	1110.01	First-Year English Composition	3	MATH	1151	Calculus 1	5
	GENSTDS	1201.01T	College Orientation	.5				
	_____	_____	GE Lit, Vis and Perf Arts	3				
			Total:	**15**			**Total:**	**15-16**
Sophomore Year (ATI)	**Autumn Semester**				**Spring Semester**			
Benchmarks	**Department**	**Course #**	**Course Name**	**Hours**	**Department**	**Course #**	**Course Name**	**Hours**
MATH 1151 should be completed by the end of this year.	AGRCOMM	3130	Oral Expression in Agriculture [a]	3	FDSCTE	2300	Role of Food Science in Human Health ❖	3
Apply to graduate from ATI at least one semester before the semester of your graduation.	CHEM	2510	Organic Chemistry 1	4	FDSCTE	2410	Brewing Science	2
	COMLDR	3537	Data Analysis in Applied Sciences [a]	3	FDSCTE	4410	Hazard Analysis and Critical Control Points	2
Maintain at least a 2.0 cumulative GPA.	FDSCTE	4600	Food Composition & Function	3	MICRBIO	4000.01	Basic & Practical Microbio.	4
Graduate with Associate of Science Degree.	_____	_____	GE Hist & Cultural Studies	3	_____	_____	GE R.E. & G. Diversity	3
					_____	_____	Elective	2
			Total:	**16**			**Total:**	**16**
							Total credit hours for Associate of Science Degree:	**62-63**
Junior Year (Columbus)	**Autumn Semester**				**Spring Semester**			
Benchmarks	**Department**	**Course #**	**Course Name**	**Hours**	**Department**	**Course #**	**Course Name**	**Hours**
Begin to consider an internship location. Internship should be completed by end of this summer.	FDSCTE	2400	Intro to Food Processing	3	BIOCHEM	4511	Intro to Biological Chemistry	4
	FDSCTE	3450	Phys Principles in Food Processes	3	FDSCTE	5546	Food Microbiology Lab	3
Apply to graduate from Columbus at least three semesters before the semester of your graduation.	FDSCTE	5310	Food Quality Assurance	3	_____	_____	Processing Course #1	3
	FDSCTE	5536	Food Microbiology	3	_____	_____	GE Citizenship #1 [b]	4
	PHYSICS	1200	Mechanics, Kinematics, Fluids, Waves	5				
			Total:	**17**			**Total:**	**14**
Senior Year (Columbus)	**Autumn Semester**				**Spring Semester**			
Benchmarks	**Department**	**Course #**	**Course Name**	**Hours**	**Department**	**Course #**	**Course Name**	**Hours**
Maintain at least a 2.0 GPA in the major, minor, and cumulative.	FDSCTE	5500	Measurement of Food Perception and Liking	3	FDSCTE	5400	Unit Operations in Food Processing	3
	FDSCTE	5600	Food Chemistry	3	FDSCTE	5610	Food Analysis	3
Graduate with Bachelor of Science Degree.	FDSCTE and FAES	4191 3191	Internship	1	GENED	4001	GE Reflection	1
	_____	_____	FDSCTE Capstone or Elective	3/2	_____	_____	FDSCTE Capstone or Elective	3/2
	_____	_____	Processing Course #2	3	_____	_____	Free Elective	2
	_____	_____	Major Elective	2	_____	_____	GE Theme #2 [b]	3
			Total:	**14-15**			**Total:**	**14-15**
							Total credit hours for Bachelor of Science Degree:	**121**

[a] One possible course from approved CFAES GE list or B.S. 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.

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Degree Requirements **Catalog Year 2022-2023**

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 that 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.

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.**

Table 1. Degree Requirements

Subject	Course Options	Hours	✓
GE Launch Seminar	GENED 1201	1	
Writing and Information Literacy	ENGLISH 1110.01	3	
Mathematical & Quantitative Reasoning/Data Analysis	MATH 1151	5	
Literary, Visual and Performing Arts	Student Choice	3	
Historical & Cultural Studies	Student Choice	3	
Natural Science	BIOLOGY 1113.01	4	
Social & Behavioral Sciences	AEDECON 2001 **or** ECON 2001	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	
Survey Courses	GENSTDS 1201.01T* **OR** FAES 1100 **and** BIOTECH 1201T* **OR** FDSCTE 1100	.5 .5	
Oral Expression	AGRCOMM 3130 or COMM 2110	3	
Additional Science	PHYSICS 1200	5	
Internship	FAES 3191 and FDSCTE 4191	1	
Supporting Required	*See Table 2.*	25	
Major	*See Table 3.*	48	
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. Theme courses are identified with a ❖ symbol.

[b] 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. Supporting Required Courses

Course(s)	Hours	✓
CHEM 1210 General Chemistry I	5	
CHEM 1220 General Chemistry II	5	
CHEM 2510 Organic Chemistry	4	
BIOCHEM 4511 Introduction to Biological Chemistry	4	
COMLDR 3537 Data Analysis for the Applied Sciences or AEDECON 2005, ANIMSCI 2260, HCS 2260, ENR 2000 or STAT 1450	3	
MICROBIO 4000.01 Basic & Practical Microbiology	4	
Total Additional Required Credit Hours	**25**	

Table 3. Major Requirements

Course(s)	Hours	✓
FDSCTE 2300 Role of Food Science in Human Health ❖	3	
FDSCTE 2400 Introduction to Food Processing	3	
FDSCTE 3450 Physical Principles in Food Processing	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	
Capstone (choose one of the following[b]): FDSCTE 5720 Food Product Development FDSCTE 5730 Technical Problem Solving	3	
Processing Option (choose two of the following[b]): FDSCTE 5410 Fruit & Vegetable Processing FDSCTE 5420 Dairy Processing FDSCTE 5430 Food Fermentations FDSCTE 5450 Food Packaging FDSCTE 5750 Brewing Science Capstone MEATSCI 4510 Processed Meats	6	
Major Electives (select an additional six credits from the options above and/or: FDSCTE 2410 Brewing Science (2) FDSCTE 4193 Independent Studies (1-3) FDSCTE 4410 Hazard Analysis & Critical Control Pts. (2) FDSCTE 4999 **OR** 4999H Research with Distinction (1-2) FDSCTE 5320 Food Laws & Regulations (2) FDSCTE 5330 Food Plant Management (2) FDSCTE 5710 Food Additives (2) FDSCTE 5721 Applied Product Development (1)	6	
Total Major Credit Hours	**48**	

Additional Bachelor's Degree Requirements:

1. A 2.00 cumulative CPHR is required as well as a 2.00 CPHR in the major and minor coursework.
2. 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.
3. Applications to graduate must be submitted at least three semesters in advance.