

Department of Food Science, University of California
Bachelor of Science (BS) Degree Requirements
Brewing Science Option

PREPARATORY COURSEWORK (60 UNITS): Plan to complete these courses during freshman and sophomore year. All courses must be taken for a letter grade.

COURSE TITLE	COURSE NUMBER	TERM OFFERED	PREREQUISITES	UNITS
General Chemistry	CHE 2A	F, W, SSI	High school chemistry and physics, and concurrent enrollment in mathematics at or above the level of MAT 012 strongly recommended; must earn a qualifying score of 24 or better on the Chemistry Placement Exam	5
General Chemistry	CHE 2B	W, S	CHE 002A C- or better	5
General Chemistry	CHE 2C	F, S, SSI	CHE 002B C- or better	5
Organic Chemistry: Brief Course	CHE 8A	F, S, SSI	CHE 002B C- or better	2
Organic chemistry: Brief Course	CHE 8B	F, W, SSI, SSII	CHE 008A	4
Calculus for Biology & Medicine	MAT 17A	All	Two years of high school algebra, plane geometry, plane trigonometry, and satisfying the Mathematics Placement Requirement	4
Calculus for Biology & Medicine	MAT 17B	All	MAT 017A with a C- or better	4
Calculus for Biology & Medicine	MAT 17C	All	MAT 17B with a C- or better	4
Biological Sciences	BIS 2A	All	CHE 2A recommended	5
General Physics	PHY 7A	All	MAT 017B (can be concurrent)	4
General Physics	PHY 7B	All	PHY 007A	4
General Physics	PHY 7C	All	PHY 007B	4
Food Preservation	FST 50	F	CHE 2A; BIS 2A (can be concurrent); STA 13 (can be concurrent)	3
Nutrition	NUT 10	F, W, S, SSII	None	3
Statistics	STA 13	All	Two years of high school algebra or MAT D	4

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DEPTH SUBJECT MATTER (60 UNITS): Plan to complete these courses during your junior and senior year. All courses must be taken for a letter grade.

COURSE TITLE	COURSE NUMBER	QUARTER OFFERED	PREREQUISITES	UNITS
General Biochemistry	BIS 102	F, W, S, SSI	BIS 2A; CHE 8B	3
General Biochemistry	BIS 103	F, W, S, SSII	BIS 102	3
General Microbiology	MIC 102	All	BIS 2A; CHE 2B	3
Food Chemistry	FST 100A	F	CHE 8B; BIS 2A recommended	4
Food Physical Chemistry	FST 100C	W	PHY 7A-7B-7C; FST 100A	4
Food Chemistry Lab	FST 101A	F	FST 100A (must be concurrent)	3
Food Properties Lab	FST 101B	W	FST 100B (must be concurrent)	3
Malting and Brewing Science	FST 102A	F	BIS 102, BIS 103, senior standing	4
Practical Malting and Brewing	FST 102B	W	FST 102A; CHE 2C	4
Physical and Chemical Methods for Food Analysis	FST 103	W	CHE 2C, CHE 8B, BIS 103, FST 101A; FST 100C (can be concurrent)	4
Food Microbiology	FST 104	W	BIS 103	3
Food Microbiology Lab	FST 104L	S	BIS 2A; BIS 103; FST 104	4
Food Processing	FST 110	F	PHY 7A; PHY 7B; PHY 7C (can be concurrent); MAT 17C	4
Food Processing Lab	FST 110L	S	FST 110	2
Design and Analysis for Sensory Food Science	FST 117	F	STA 13	4
Introduction to Enzymology	FST 123	S	FST 102A; CHE 2C	3
Food Sensory Science	FST 127	W	FST 117	4
Food Science Career Seminar	FST 190	S	Junior or Senior standing	1

RESTRICTED ELECTIVES	UNITS
Choose 2-3 courses: FST 3, FST 109, FST 114, FST 123L, FST 159, FST 160, VEN 140	7

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ADDITIONAL NOTES:

- Students are responsible for staying informed about their degree requirements and regularly updating their academic plans.
- Meet with a Staff Advisor at least once a year to check progress toward graduation.
- Freshman and Sophomore students take courses numbered 001-099. Juniors and Seniors eligible for courses numbered 100-199.
- Students are expected to complete all preparatory coursework before starting their junior-level major requirements.
- Prerequisites will be enforced.
- Additional courses needed to complete the [university degree requirements](#).