



Food Science and Technology at Oregon State University

Food Science and Technology? Think about it...

The food industry is the *world's largest industry*. You'll be developing foods and beverages in response to society's needs and demands. Making foods safer, more nutritious, more convenient, more fun. You'll be helping to feed the world. *Inventing and creating new products*. You may be a food chemist, a food microbiologist, a production manager, a food and package engineer, a product developer, a brewmaster, a winemaker, or a sensory scientist. You may work for a *big-name company*, or *start your own*.

Our graduates are in demand. They know their stuff. They get jobs. Good ones.

Our graduates are competitive. They work for companies of various sizes and diverse products (Tillamook, E&J Gallo, Deschutes Brewery, Keurig Green Mountain, Pacific Natural Foods, and Anheuser-Busch InBev, just to name a few). Some obtain graduate degrees or start their own business. Nationwide, Food Science graduates with a BS enjoy average starting salaries of over \$47,000.

No matter what you eat or drink today, chances are an OSU Food Scientist was involved.

We're good at what we do. We're the experts. We serve one of the first programs in the nation, and we're nationally and internationally known for our expertise in sensory science, food chemistry, and fermentation science. We're also on the cutting edge in high pressure processing, food microbiology, and seafood science.

You really use what you learn.

We're all about creative, real-world science. Food Chemistry, Food Microbiology, Food Analysis, Food Engineering. You learn about it, then you actually use it. Before you graduate. You will even get to taste it. We have a food processing pilot plant. A brewery. A winery. A cheese plant. Right here! We also go on great field trips - you see how it's done in the real world. Want an internship? No problem. We're connected.

You won't fall through the cracks around here. We're friendly. We're a place you can feel at home.

Classes are small - lecture classes average 35-45 students, labs average about 20. Your advisor and your food science course instructor will know you by name. You can hang out in the student lounge. We like having fun, too - just ask about the Food and Fermentation Science Club!

Scholarships. We have them.

Strong support from the food industry and other friends of the department enables us to offer 45 undergraduate scholarships each year. Scholarship awards through the department range from \$500 to \$2000. Additional scholarships are available at the college and university level, and our students are competitive for scholarships offered by national organizations such as the Institute of Food Technologists, American Society of Enology and Viticulture, and the Research Chefs Association. Studying can pay off around here!

We have options. Food Science Fermentation Science Enology and Viticulture

Choose yours. Join us. Learn. Have fun...then...taste your success!



Department of Food Science & Technology

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Food Science and Technology Curriculum with Options

Food Science Major Core (104 Cr.) - Required for all options

Supporting courses (75 Cr.)

Tech Wri, Science Wri, <u>or</u> Eng Comp.....	WR* 327, 362 <u>or</u> 222	3
<i>Select one of WR 327, 362, <u>or</u> 222</i>		
Public Speaking.....	COMM 111*	3
General Chemistry.....	CH* 231, 232, 233	4, 4, 4
General Chemistry Lab	CH* 261, 262, 263	1, 1, 1
Organic Chemistry/Lab.....	CH 331, 332/337	4, 4, 4
Quantitative Analysis	CH 324	4
Principles of Biology	BI* 211 , 212, 213	4, 4, 4
Elementary Biochemistry	BB 350	4
General Microbiology/Lab	MB 302/303	3, 2
Intro to Statistical Methods	ST 351	4
General Physics	PH 201	5

Complete one pair: MTH 227/228 or MTH 251/252

Calculus & Probability for Life Science	MTH 227*/228	4, 4
Differential/Integral Calculus.....	MTH 251*/252	4, 4

Depending on placement, some students may also need to complete some part of the progression: MTH 095, 111 and 112**

Core food science courses (29 Cr.)

Food Safety and Sanitation	FST 360.....	3
Industry Preparation/HACCP	FST 370	3
Communicating Food and Ferm Sci	FST 385^	3
Senior Seminar	FST 407	1
Food Law	FST 421*	3
Food Chemistry Fundamentals.....	FST 422	4
Food Systems Chemistry	FST 425	4
Intro to Food Engineering Principles	BEE 472	5
Intro to Food Eng Process Design	BEE 473	3

OPTION: FOOD SCIENCE (38 Cr.)

Additional Supporting Courses (12 Cr.)

Human Nutrition	NUTR 240 <u>or</u> 225.....	3
<i>NUTR 225 may be substituted, however NUTR 240 is preferred</i>		
General Physics.....	PH 202.....	5
Intro. Statistical Methods	ST 352.....	4

Food Science Option Required Courses (17 Cr.)

Sensory Evaluation of Food	FST 420	4
Food Analysis.....	FST 423.....	4
Food Processing Calculations/Lab	FST 490/491	2, 1
Food Microbiology.....	MB 440.....	3

Complete 3 credits from among FST 210, 212-213, or ANS 251. One class not used here may be applied as a Food Science Option Electives below.

Fruit & Vegetable Processing.....	FST 210 ^a	3
Dairy Processing/Lab	FST 212/213	2, 1
Animal Food Technology	ANS 251.....	3

Food Science Option Elective Courses (9 Cr.)

Seminar - Leadership Academy	AG 407**	3
Food Science Orientation	FST 101	1
Intro. Wines, Beers and Spirits	FST 251	3
Food Sci & Tech in Western Culture	FST 260*	3
Wine in the Western World.....	FST 273*	3
Research	FST 401**	3
Internship	FST 410**	3
Innovation and Food Prod Dev	FST 430.....	4
Brewing Science	FST 460	3
Wine Production Principles	FST 466	3
Fermentation Microbiology.....	FST 479	3
Topics in Fermentation	FST 480.....	1
Food Microbiology Lab.....	MB 441.....	2
Food in Non-Western Culture.....	NUTR 216*	3
Toxic Substances in Foods	TOX 429.....	3

Total Credits in Major: 142 | Preparatory Math 0-8 | Add'l. Bacc Core 21-24 |

Unrestricted Electives: 6-21 | Minimum 180 credits required for graduation

^a Writing Intensive Course

* Fulfills Bacc. Core requirements

** Competitive selection, and/or dept pre-approval required

^a Offered in alternate uneven years

OPTION: FERMENTATION SCIENCE (37 Cr.)

Additional Supporting Courses (8 Cr.)

Human Nutrition	NUTR 240 <u>or</u> 225	3
<i>NUTR 225 may be substituted, however NUTR 240 is preferred</i>		
General Physics.....	PH 202.....	5

Fermentation Science Option Required Courses (19-21 Cr.)

Brewing Science	FST 460	3
Wine Production Principles	FST 466	3
Fermentation Microbiology.....	FST 479	3
Food Processing Calculations/Lab	FST 490/491	2, 1
<i>Complete two analysis courses from among FST 423, FST 461, <u>or</u> FST 467. Course not applied here may be used as Ferm. Sci. Option Elective.</i>		
Food Analysis.....	FST 423.....	4
Brewing Analysis	FST 461.....	3
Wine Production, Analysis & Sensory Eval ...	FST 467.....	5

Fermentation Science Option Elective Courses (8-10 Cr., to bring Ferm Sci Option to 37 Cr.)

Seminar - Leadership Academy	AG 407**	3
Food Science Orientation	FST 101	1
Intro. Wines, Beers and Spirits	FST 251.....	3
Food Sci & Tech in Western Culture	FST 260*	3
Wine in the Western World.....	FST 273*	3
Research	FST 401**	3
Internship	FST 410**	3
Sensory Evaluation of Foods.....	FST 420.....	4
Topics in Fermentation	FST 480.....	1
<i>Up to 2 credits of FST 480 may be applied</i>		
Food Microbiology/Lab	MB 440/441	3, 2
Food in Non-Western Culture.....	NUTR 216*	3
Toxic Substances in Foods	TOX 429.....	3

Total Credits in Major: 141 | Preparatory Math 0-8 | Add'l. Bacc Core 21-24 |

Unrestricted Electives: 7-22 | Minimum 180 credits required for graduation

OPTION: ENOLOGY & VITICULTURE (37 Cr.)

Required Plant Sciences Courses (17 Cr.)

Plant Physiology	BOT 331.....	4
Biology of Horticulture	HORT 301	3
Grapevine Growth & Physiology.....	HORT 453	3
Principles & Practices Vineyard Prod.....	HORT 454	3
Soil Science/Lab.....	SOIL 205/206*.....	3, 1

Required Fermentation & Enology Courses (11 Cr.)

Wine Production Principles	FST 466.....	3
Wine Prod., Analysis and Sensory Eval	FST 467.....	5
Fermentation Microbiology.....	FST 479	3

Enology & Viticulture Option Elective Courses (9 Cr.)

Seminar - Leadership Academy	AG 407**	3
Intro. Plant Pathology.....	BOT 350	4
Intro. Pest Management.....	ENT 311	4
Food Science Orientation	FST 101	1
Intro to Wines, Beers & Spirits	FST 251	3
Food Sci & Tech in Western Culture	FST 260*	3
Wine in the Western World.....	FST 273*	3
Research	FST 401**	3
Internship	FST 410**	3
Sensory Evaluation of Foods.....	FST 420.....	4
Topics in Fermentation	FST 480.....	1

Up to 2 credits of FST 480 may be applied

Temp. Tree Fruit, Berries, Grapes, Nuts.....	HORT 251	2
Plant Nutrition.....	HORT 316	4
Food Microbiology/Lab	MB 440/441	3, 2
Food in Non-Western Culture.....	NUTR 216*	3

Total Credits in Major: 141 | Preparatory Math 0-8 | Add'l. Bacc Core 21-24 |

Unrestricted Electives: 7-22 | Minimum 180 credits required for graduation