

Food Science Option		Legend:		<i>3= covered extensively; 2=covered moderately; 1=covered to some extent</i>												
Content	Learning Outcomes	Freshman classes		Sophomore classes		Junior classes					Senior classes					
		FDSC 1101	FDSC 1102	FDSC 2000	FDSC 2100	FDSC 3210	FDSC 3940	FDSC 3950	FDSC 4170	FDSC 4190	FDSC 4100	FDSC 4180	FDSC 4230	FDSC 4000	FDSC 3960	FDSC 4250
General Success Skills																
Communication skills (i.e., oral, written communication, listening, and interviewing, etc)	Demonstrate the use of oral and written communication skills. This includes: writing technical reports, letters, and memos; communicating technical information to a nontechnical audience; and making formal and informal presentations.	1	2		3		2	3	3	3	3	2	1	1	1	3
Critical-thinking/problem solving skills (i.e., creativity, resourcefulness, scientific reasoning, analytical thinking, etc.)	Define a problem, identify potential causes and possible solutions, and make thoughtful recommendations.	1	2	2	1	3	2	3	3	3	3		3		2	3
	Apply critical thinking skills to new situations.	1	2	1		1	2	3	3	2	2	1	3	1	3	2
Professionalism skills (i.e., ethics, integrity, respect for diversity).	Commit to the highest standards of professional integrity and ethical values.		3				1		3		1	1	1		1	2
	Work and /or interact with individuals from diverse cultures.		3						1	1	1		1		1	1
Life Long Learning Skills	Explain the skills necessary to continually educate oneself.		3			1	1		1	1			1		1	1
Interaction Skills (i.e., teamwork, mentoring, leadership, networking, interpersonal skills, etc.)	Work effectively with others.	1	3		3	2	2	3		1	3		2		2	3
	Provide leadership in a variety of situations.	1	3				2	1		1					1	1
	Deal with individual and/ or group conflict.	1	2		1		1	1		1	1					
Information acquisition skills (i.e., written and electronic searches, databases, Internet, etc)	Independently research scientific, and nonscientific information.	1	2	1	2		3	3	3	2	2	1		1	1	2
	Competently use library resources.	1		1	3		2	3	3	2	1	1	1	1	2	2
Organizational skills (i.e., time management, project management, etc.)	Manage time effectively.	1	1		3		1	3	1	2			1		1	2
	Facilitate group projects.	1	3		2		2	3		2	3				2	2
	Handle multiple tasks and pressures.	1	1		2		2	2		2	2					1
Food Chemistry and Analysis																
Structure and properties of food components including water, carbohydrates, protein, lipids, other nutrients, and food additives.	Understand the chemistry underlying the properties and reactions of various food components.			3	2	1			3	3		3	1			2
Chemistry of changes occurring during processing, storage, and utilization.	Have sufficient knowledge of food chemistry to control reactions in foods.			1	1				3	3		3	2			2
	Understand the major chemical reactions that limit shelf life of foods.			2	1				3	3		3				2

	Understand the unit operations required to produce a given food product.			1		1							2			3
Principles of food processing techniques, such as freeze drying, high pressure, aseptic processing, extrusion, etc.	Understand the principles and current practices of processing techniques and the effects of processing parameters on product quality.	1		3	1	2			1				3	1		3
Packaging materials and methods.	Understand the properties and uses of various packaging materials.			1		1								2		2
Cleaning and sanitation.	Understand the basic principles of and practices of cleaning and sanitation in food processing operations.			1											3	2
Water and waste management.	Understand the requirements for water utilization and waste management in food and food processing.				1						1		1	1		1
Applied Food Science																
Integration and application of food science principles (food chemistry, microbiology,	Be able to apply and incorporate the principles of food science in practical real-world situations and problems.				2	2	1	1	3	3	2	3	3		3	3
Computer skills	Know how to use computers to solve food science problems.				2	3					2		1			1
Statistical Skills	Be able to apply statistical principles to food science applications.				1						3					
Quality Assurance	Be able to apply the principles of food science to control and assure the quality of food products.			1	3			3			2	2	3	2	2	2
Analytical and affective methods of assessing sensory properties of food utilizing statistical methods.	Understand the principles of sensory analysis.			1						1	3					1
Current issues in food science.	Be aware of current topics of importance to the food industry.	2		2	2		1	3	2	1	2	1		3	1	2
Food laws and regulations.	Understand the government regulations required for the manufacture and sale of food products.	2		2	2	1	1	1	2		1	1	2	2	2	1

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