

# Department of Food Science, Nutrition and Health Promotion

## Department Head: Professor Sam Chang

Office: 107 Herzer Building

The Food Science, Nutrition and Health Promotion major offers the opportunity to gain a broad education in food science, nutrition, and health, as well as the specific academic background to pursue careers as food scientists and dietitians/nutritionists. It involves the integration of new knowledge and advances in technology and the physical and biological sciences with psychological, sociological, and behavioral sciences in the provision of a safe, nutritious food supply. Research, teaching, and outreach extend the continuum from the processing of food to its marketing, consumption, and impact on public health and community.

Food scientists integrate knowledge from engineering, biological, and physical sciences to study the nature of foods, the causes of deterioration, the principles underlying food processing, and the improvement of foods for the consuming public. Food technology is the application of food science to the selection, preservation, processing, packaging, distribution, and use of safe, nutritious, and wholesome foods (<http://www.ift.org/knowledge-enter/learnabout-food-science.aspx>, 2013).

The Department offers either a degree or a concentration in Culinology®. This is a dual degree program in which students take courses at Mississippi State University and Mississippi University for Women in Columbus, Mississippi.

The Culinology® curriculum includes courses that combine the disciplines of food science and culinary arts. Culinologists work in diverse areas within the food industries -from experimental chefs and menu planners to food manufacturing, fine dining and product development.

Nutritionists and dietitians are food and nutrition experts studying the relationship of nutrition and diet in promoting health and treating disease. Studies include nutritional science, medical nutrition therapy, community nutrition, food service, food production and management of food service operations, chemistry, physiology, plus a variety of supporting coursework in related disciplines. The Nutrition concentration fulfills the Academy of Nutrition and Dietetics academic requirements to become a Registered Dietitian (RD).

The Department of Food Science, Nutrition and Health Promotion (FNH) is proud to offer undergraduate education in Food Science and Nutrition. Nutrition is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the Academy of Nutrition and Dietetics, 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606-6995; telephone 312-899-0040, ext. 5400. <http://www.eatright.org/ACEND>.

Nutrition and Health Promotion have many exciting and diverse career opportunities. Food Science, Nutrition and Health Promotion careers include Research Scientist (Industrial, Government, Academic); Food Engineer; Food Microbiologist; Research and Development; Product Development Technologist; Research Chef; Food Manufacturing Operations Manager; Quality Control Technician; Regulatory Affairs; Food Packaging Specialist; Processing Engineer; Technical Sales

in the Food Industry; Technical Services; Public Health/Community Nutritionist; Clinical Nutrition Educator; Nutrition Educator; Registered Dietitian (Pediatric, Cardiovascular, Renal, Private Practice, Sports/Wellness, Weight Management, Business and Industry, and Journalism and Communications); Healthcare/School Food Service Director; Pharmaceutical Sales Representative; and Public Relations and Marketing Specialists.

A major in Food Science, Nutrition and Health Promotion is also an excellent choice for students interested in pursuing pre-professional career paths like Veterinary School, Medical School, Pharmacy, Physical Therapy, Nursing School, and Dental School.

The following concentrations are offered in the Department of Food Science, Nutrition and Health Promotion:

- Food Processing/Business
- Food Science
- Food Safety (pre-vet)
- Culinology®
- Nutrition

## Food and Nutrition Concentration

The Food and Nutrition Concentration prepares students for a wide variety of careers. For students interested in becoming a Registered Dietitian, the Didactic Program in Nutrition and Dietetics (DP) at Mississippi State University is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) of the American Dietetic Association. Upon completion of the DP program, graduates may pursue participation in a supervised practice program.

Didactic Program in Nutrition and Dietetics:

1. To enter the Didactic Program in Nutrition and Dietetics (DP), students must have a 3.0 MSU GPA and have completed the following courses with a grade of "C" or better: CH 1213 Chemistry I, CH 1211 Investigations in Chemistry I, CH 1223 Chemistry II, CH 1221 Investigations in Chemistry II, CH 2503 Elementary Organic Chemistry, CH 2501 Elementary Organic Chemistry Laboratory, BIO 1134 Biology I, FNH 2203 Science of Food Preparation, FNH 2293 Individual and Family Nutrition, ST 2113 Introduction to Statistics.
2. A grade of "C" or better is required in all Didactic Program courses. A course with a final grade lower than a "C" must be repeated.
3. Students who wish to receive a Letter of Intent and/or verification statement from the MSU Didactic Program in Nutrition and Dietetics (DP) must have a minimum of a 3.0 MSU GPA and a minimum grade of "C" or better in all of the required DP courses.
4. Nine (9) hours are available for electives, and students are encouraged to consider an academic minor.
5. Transfer credits with a grade of "C" or better will be considered toward fulfilling degree requirements. Successful completion of the supervised practice program, followed by the Registration Exam, fulfills the requirements to become a Registered Dietitian.

## Food Processing/Business Concentration (FSTP)

Major Advisor: Associate Professor Wes Schilling

FSTP combines food science and business courses to prepare students for careers in the food industry, government, or private business.

<b>English Composition</b>		6
EN 1103	English Composition I	
or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	
or EN 1173	Accelerated Composition II	
<b>Fine Arts (General Education)</b>		3
Select from University Gen Ed Core		
<b>Natural Sciences (General Education)</b>		12
BIO 1134	Biology I	
CH 1213	Chemistry I	
CH 1211	Investigations in Chemistry I	
CH 1223	Chemistry II	
CH 1221	Investigations in Chemistry II	
<b>Math (General Education)</b>		6
MA 1313	College Algebra (or higher math)	
ST /BQA /MA 2113	Introduction to Statistics	
or ST 3123	Introduction to Statistical Inference	
<b>Humanities (General Education)</b>		6
Select from University Gen Ed Core		
<b>Social/Behavioral Sciences (General Education)</b>		6
AEC 2713	Introduction to Food and Resource Economics	
Select from University Gen Ed Core		
<b>Major Core Courses</b>		17
CH 2503	Elementary Organic Chemistry	
CH 2501	Elementary Organic Chemistry Laboratory	
MGT 3513	Introduction to Human Resource Management	
FNH 3111	Food Science, Nutrition and Health Promotion Seminar	
FNH 2293	Individual and Family Nutrition	
FNH 4243	Composition and Chemical Reactions of Foods	
CO 1003	Fundamentals of Public Speaking	
or CO 1013	Introduction to Communication	
or CO 3213	Small Group Communication	
<b>Food Processing/Business Concentration</b>		68
PH 1113	General Physics I	
or PH 2213	Physics I	
AEC 3413	Introduction to Food Marketing	
MKT 3013	Principles of Marketing	
AIS 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences <sup>1</sup>	
AIS 4203	Applications of Computer Technology to Agricultural Information Science and Education <sup>2</sup>	
FNH 2011	Career Planning and Success Skills in Food Science	
FNH 2112	Food Products Evaluation	
FNH 4114	Analysis of Food Products	
FNH 4241	Applied Food Chemistry	
FNH 4333	Food Law	
FNH 4414	Microbiology of Foods	

FNH 4480	Food Science Internship
FNH 4573	Food Engineering Fundamentals
FNH 4583	Food Preservation Technology
FNH 4593	New Food Product Development
Electives - Food Processing (6-8 hours) <sup>3</sup>	
Electives in FNH (9 hours) <sup>4</sup>	
Business Electives (12 hours) <sup>5</sup>	
Free Electives (0-2 hours)	
<b>Total Hours</b>	<b>124</b>

- <sup>1</sup> Fulfills Jr/Sr Writing Requirement
- <sup>2</sup> Fulfills Computer Lit Requirement
- <sup>3</sup> Choose 2 courses (6-8 hours) from the Food Processing Electives: FNH 3314 Introduction to Meat Science, FNH 4143 Dairy Foods Processing, FNH 4514 Poultry Processing, or FNH 4613 Seafood Processing
- <sup>4</sup> Choose three additional FNH 3000-4000 level courses from all food science, nutrition, and health promotion classes
- <sup>5</sup> A minor in AgEcon, Marketing, Finance, Management or Business Administration will satisfy the requirement for 12 credits of business electives. In lieu of a minor, students should select 12 credit hours from the following: ACC 2013 Principles of Financial Accounting, MKT 3013 Principles of Marketing, AEC 3133 Introductory Agribusiness Management, AEC 3213 International Trade in Agriculture, AEC 3413 Introduction to Food Marketing, AEC 4113 Agribusiness Firm Management, AEC 4123 Financial and Commodity Futures Marketing, AEC 4133 Analysis of Food Markets and Prices, AEC 4343 Advanced Farm Management; all classes listed under the minors for Marketing, Finance, Business Administration, and Management are also acceptable business electives.

## Food Science Concentration (FSSC)

Major Advisor: Associate Professor Wes Schilling

FSSC is designed for students who wish to explore a career in research, pursue graduate studies, work for the government, or work in the food industry.

<b>English Composition</b>		6
EN 1103	English Composition I	
or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	
or EN 1173	Accelerated Composition II	
<b>Fine Arts (General Education)</b>		3
Select from University Gen Ed Core		
<b>Natural Sciences (General Education)</b>		12
BIO 1134	Biology I	
CH 1213	Chemistry I	
CH 1211	Investigations in Chemistry I	
CH 1223	Chemistry II	
CH 1221	Investigations in Chemistry II	
<b>Math (General Education)</b>		6
MA 1713	Calculus I	
ST /BQA /MA 2113	Introduction to Statistics	

or ST 3123	Introduction to Statistical Inference	
<b>Humanities (General Education)</b>		6
Select from University Gen Ed Core		
<b>Social/Behavioral Sciences (General Education)</b>		6
AEC 2713	Introduction to Food and Resource Economics	
Select from University Gen Ed Core		
<b>Major Core Courses</b>		17
CH 2503	Elementary Organic Chemistry	
CH 2501	Elementary Organic Chemistry Laboratory	
MGT 3513	Introduction to Human Resource Management	
FNH 2293	Individual and Family Nutrition	
FNH 3111	Food Science, Nutrition and Health Promotion Seminar	
FNH 4243	Composition and Chemical Reactions of Foods	
CO 1003	Fundamentals of Public Speaking	
or CO 1013	Introduction to Communication	
or CO 3213	Small Group Communication	
<b>Food Science Concentration</b>		68
BIO 1144	Biology II	
BCH 4013	Principles of Biochemistry	
MA 1723	Calculus II	
PH 1113	General Physics I	
or PH 2213	Physics I	
PH 1123	General Physics II	
or PH 2223	Physics II	
ACC 2013	Principles of Financial Accounting	
MKT 3013	Principles of Marketing	
AIS 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences <sup>1</sup>	
AIS 4203	Applications of Computer Technology to Agricultural Information Science and Education <sup>2</sup>	
FNH 2011	Career Planning and Success Skills in Food Science	
FNH 2112	Food Products Evaluation	
FNH 4114	Analysis of Food Products	
FNH 4164	Quality Assurance of Food Products	
FNH 4241	Applied Food Chemistry	
FNH 4333	Food Law	
FNH 4414	Microbiology of Foods	
FNH 4573	Food Engineering Fundamentals	
or FNH 4583	Food Preservation Technology	
FNH 4593	New Food Product Development	
FNH 4480	Food Science Internship	
Electives - Food Processing (3-4 hours) <sup>3</sup>		
Electives - FNH (4-6 hours) <sup>4</sup>		
Free Electives (0-2 hours)		
<b>Total Hours</b>		124

<sup>1</sup> Fulfills Jr/Sr Writing Requirement<sup>2</sup> Fulfills Computer Lit Requirement

- <sup>3</sup> Choose 1 course (3-4 hours) from the Food Processing Electives: FNH 3314 Introduction to Meat Science, FNH 4143 Dairy Foods Processing, FNH 4514 Poultry Processing, or FNH 4613 Seafood Processing
- <sup>4</sup> Choose an additional 4-6 hours from all 3000-4000 level food science, nutrition, and health promotion classes.

## Food Safety Concentration (FDS)

Major Advisors: Associate Professor Wes Schilling, Assistant Professor J. Byron Williams

FDS is designed as a Pre-Veterinary option that focuses on factors affecting food safety and all coursework essential for acceptance in the College of Veterinary Medicine.

<b>English Composition</b>		6
EN 1103	English Composition I	
or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	
or EN 1173	Accelerated Composition II	
<b>Fine Arts (General Education)</b>		3
Select from University Gen Ed Core		
<b>Natural Sciences (General Education)</b>		12
BIO 1134	Biology I	
CH 1213	Chemistry I	
CH 1211	Investigations in Chemistry I	
CH 1223	Chemistry II	
CH 1221	Investigations in Chemistry II	
<b>Math (General Education)</b>		6
MA 1313	College Algebra	
MA 1323	Trigonometry	
or MA 1713	Calculus I	
<b>Humanities (General Education)</b>		6
Select from University Gen Ed Core		
<b>Social/Behavioral Sciences (General Education)</b>		6
AEC 2713	Introduction to Food and Resource Economics	3
Select from Gen Ed Core		
<b>Major Core Courses</b>		17
CH 2503	Elementary Organic Chemistry	
CH 2501	Elementary Organic Chemistry Laboratory	
MGT 3513	Introduction to Human Resource Management	
FNH 3111	Food Science, Nutrition and Health Promotion Seminar	
FNH 2293	Individual and Family Nutrition	
FNH 4243	Composition and Chemical Reactions of Foods	
CO 1003	Fundamentals of Public Speaking	
or CO 1013	Introduction to Communication	
or CO 3213	Small Group Communication	
<b>Food Safety Concentration <sup>1</sup></b>		42
CH 4523	Organic Chemistry II	
CH 4521	Organic Chemistry Laboratory II	
BIO 1144	Biology II	
BIO 3304	General Microbiology	
BCH 4013	Principles of Biochemistry	

PH 1113 or PH 2213	General Physics I Physics I
PH 1123 or PH 2223	General Physics II Physics II
AIS 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences <sup>2</sup>
AIS 4203	Applications of Computer Technology to Agricultural Information Science and Education <sup>3</sup>
ADS 4115	Animal Nutrition (substituted for FNH 2293 in core)
FNH 2011	Career Planning and Success Skills in Food Science
FNH 4241	Applied Food Chemistry
FNH 4313	Advanced Science of Muscle Foods
FNH 4414	Microbiology of Foods
FNH 4514	Poultry Processing
FNH 4583	Food Preservation Technology
<b>Electives (Select 6-9 credits from the following list)</b>	
ACC 2013	Principles of Financial Accounting
FNH 3142	Meats Judging I
FNH 4114	Analysis of Food Products
FNH 4143	Dairy Foods Processing
FNH 4164	Quality Assurance of Food Products
FNH 4593	New Food Product Development
ADS 1114	Animal Science
ADS 3213	Livestock Growth, Development and Evaluation
ADS 3312	Livestock Management Practices
ADS 4113	Swine Science
ADS 4123	Animal Breeding
ADS 4613	Physiology of Reproduction
ADS 4611	Practices in Physiology of Reproduction
BIO 2103	Cell Biology
BIO 4413	Immunology
BIO 4514	Animal Physiology
VS 2033	Diseases of Poultry
VS 3014	Anatomy and Physiology
PO 4324	Avian Reproduction
PO 4333	Broiler Production
PO 4413	Poultry Nutrition
PO 4844	Avian Anatomy and Physiology
<b>Total Hours needed for major through Junior Year</b>	

104-107

Students will receive a B.S. in Food Science, Nutrition, and Health Promotion upon successful completion of their first year in the College of Veterinary Medicine at Mississippi State University.

If students do not obtain admittance into the School of Veterinary Medicine after their junior year, an optional 4th year that is listed below will allow these students to graduate with a B.S. in Food Science, Nutrition, and Health Promotion (Food Animal Safety Concentration) after their fourth year of studies as well as allow these students another year to attempt to earn admittance into the School of Veterinary Medicine.

#### Optional Senior Year

FNH 4114	Analysis of Food Products
FNH 4164	Quality Assurance of Food Products

FNH 4593	New Food Product Development
6 hours of electives for 3000-4000 level FNH classes	
Electives from the Electives list above to reach a minimum of 124 hours	
1	42 hours is equal to 45-3 hours to account for the substitution for FNH 2293 in the major core.
2	Fulfills Jr/Sr Writing Requirement
3	Fulfills Computer Lit Requirement

## Culinology Concentration (CN)

Major Advisor: Associate Professor Wes Schilling

CN is designed for students who wish to work as a research chef or work in the areas of product development or research and development in the food industry.

<b>English Composition</b>		6
EN 1103 or EN 1163	English Composition I Accelerated Composition I	
EN 1113 or EN 1173	English Composition II Accelerated Composition II	
<b>Fine Arts (General Education)</b>		3
Select from University Gen Ed Core		
<b>Natural Sciences</b>		12
BIO 1134	Biology I	
CH 1213	Chemistry I	
CH 1211	Investigations in Chemistry I	
CH 1223	Chemistry II	
CH 1221	Investigations in Chemistry II	
<b>Math (General Education)</b>		6
MA 1313	College Algebra	
ST /BQA /MA 2113 or ST 3123	Introduction to Statistics Introduction to Statistical Inference	
<b>Humanities (General Education)</b>		6
Select from University Gen Ed Core		
<b>Social/Behavioral Sciences (General Education)</b>		6
AEC 2713	Introduction to Food and Resource Economics	
Select from University Gen Ed Core		
<b>Major Core Courses</b>		17
CH 2503 or CH 4513	Elementary Organic Chemistry Organic Chemistry I	
CH 2501 or CH 4511	Elementary Organic Chemistry Laboratory Organic Chemistry Laboratory I	
MGT 3513	Introduction to Human Resource Management	
FNH 3111	Food Science, Nutrition and Health Promotion Seminar	
FNH 2293	Individual and Family Nutrition	
CO 1003 or CO 1013 or CO 3213	Fundamentals of Public Speaking Introduction to Communication Small Group Communication	
<b>Culinology Concentration courses</b>		68
PH 1113	General Physics I	

or PH 2213	Physics I	
ACC 2013	Principles of Financial Accounting	
MKT 3013	Principles of Marketing	
AIS 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences <sup>1</sup>	
AIS 4203	Applications of Computer Technology to Agricultural Information Science and Education <sup>2</sup>	
FNH 2011	Career Planning and Success Skills in Food Science	
FNH 2112	Food Products Evaluation	
FNH 2203	Science of Food Preparation	
FNH 4114	Analysis of Food Products	
FNH 4241	Applied Food Chemistry	
FNH 4333	Food Law	
FNH 4480	Food Science Internship	3-6
FNH 4583	Food Preservation Technology	
or FNH 4573	Food Engineering Fundamentals	
FNH 4593	New Food Product Development	
Electives - Food Processing (4-6 hours)		
FNH Electives (4-6 hours)		
CA 1251	ServSafe <sup>3</sup>	
or FNH 4000	Directed Individual Study in Food Science, Nutrition and Health Promotion	
CA 2003	Intro to Culinary Arts	
CA 3005	Food Prep I	
CA 3015	Food Prep II	
CA 3103	Dining Room Service	
CA 4013	World Cuisines	
Electives (0-2 hours)		

<sup>1</sup> Fulfills Jr/Sr Writing Requirement

<sup>2</sup> Fulfills Computer Lit Requirement

<sup>3</sup> These courses (abbreviation CA) are taught at Mississippi University for Women in the Culinary Arts Institute.

## Food and Nutrition Concentration (FN)

Major Advisor: Professor Sylvia Byrd, Didactic Program in Nutrition and Dietetics Director; Instructor Renee Matich, FSNHP Undergraduate Coordinator

<b>English Composition</b>		6
EN 1103	English Composition I	
or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	
or EN 1173	Accelerated Composition II	
<b>Fine Arts</b>		3
Select from General Education Core		
<b>Math</b>		6
MA 1313	College Algebra (or higher)	
ST /BQA /MA 2113	Introduction to Statistics	
<b>Science</b>		12
CH 1213	Chemistry I	

CH 1211	Investigations in Chemistry I	
CH 1223	Chemistry II	
CH 1221	Investigations in Chemistry II	
BIO 3304	General Microbiology	
<b>Humanities</b>		6
Select from General Education Core		
<b>Social Sciences</b>		6
PSY 1013	General Psychology	
Select from General Education Core with Advisor Approval		
<b>Major Core</b>		17
CH 2503	Elementary Organic Chemistry	
or CH 4513	Organic Chemistry I	
CH 2501	Elementary Organic Chemistry Laboratory	
or CH 4511	Organic Chemistry Laboratory I	
MGT 3513	Introduction to Human Resource Management	
FNH 2293	Individual and Family Nutrition	
FNH 3111	Food Science, Nutrition and Health Promotion Seminar	
FNH 4243	Composition and Chemical Reactions of Foods	
CO 1003	Fundamentals of Public Speaking <sup>1</sup>	
or CO 1013	Introduction to Communication	
or CO 3213	Small Group Communication	
<b>Food and Nutrition Concentration</b>		68
BIO 1134	Biology I	
BIO 3014	Human Physiology	
MGT 3114	Principles of Management and Production	
KI 2603	Medical Terminology	
BCH 4013	Principles of Biochemistry	
FNH 2203	Science of Food Preparation	
FNH 3003	Nutrition Field Experience	
FNH 3263	Research Methods in Food and Nutrition <sup>2</sup>	
FNH 3283	The Food Service System	
FNH 3701	Nutrition Professional Development	
FNH 3723	Community Nutrition	
FNH 4013	Nutrition Assessment	
FNH 4123	Nutrition and Chronic Disease	
FNH 4233	Medical Nutrition Therapy	
FNH 4253	Macronutrients: Human Metabolism	
FNH 4293	Micronutrients: Human Metabolism <sup>3</sup>	
FNH 4284	Quantity Food Production and Service.	
FNH 4353	Nutrition Throughout the Life Cycle	
FNH 4373	Nutrition Education and Counseling Skills	
Electives (9 hours)		
<b>Total Hours</b>		124

<sup>1</sup> Fulfills Oral Communication Requirement

<sup>2</sup> Fulfills Jr/Sr Writing Requirement

<sup>3</sup> Fulfills Computer Literacy Requirement



## Food Science Minor

Students will be required to complete the following courses to receive a minor in Food Science:

FNH 4241	Applied Food Chemistry	1
FNH 4243	Composition and Chemical Reactions of Foods	3
FNH 4414	Microbiology of Foods	4
FNH 4583	Food Preservation Technology	3
Choose 7 or more credits from the following electives:		7
FNH 4593	New Food Product Development	
FNH 1103	Introduction to Food Science, Nutrition and Health Promotion	
FNH 3314	Introduction to Meat Science	
FNH 4164	Quality Assurance of Food Products	
FNH 4143	Dairy Foods Processing	
FNH 4514	Poultry Processing	
FNH 4114	Analysis of Food Products	
Total Hours		18

## B.S. in Culinology®

Major Advisors: Associate Professor Wes Schilling

The Culinology® degree program offers the opportunity to gain a broad education in Food Science and Culinary Arts. It involves the integration of Food Science and Culinary Arts so that students are prepared to work in diverse areas within the food industries -- from experimental research chefs and menu planners to food manufacturing, fine dining, and product development.

Culinology® is an approach to food that blends culinary arts and food technology. Through the blending of these two disciplines, culinology® seeks to make food taste better -- whether purchased in a supermarket or eaten in a restaurant. Culinology® also seeks to make food more consistent and safer. A primary application of culinology® is to logically translate sophisticated food concepts, such as those applied in fine dining or in a traditional ethnic cuisine, to items that are on the menus of chain restaurants or those processed for retail sale. Such chain-menu or retail product development is only possible through the astute combination of culinary arts and food science and technology.

According to Jeff Cousminer in Food Product Design Magazine, the word *culinology*® was coined by the first president and founder of the Research Chefs Association, Winston Riley. The original meaning of the word was quite different than what it has come to mean today. Originally the word was designed to be a combination of two words, culinary and technology. So the first meaning of the word was the convergence of culinary arts and all technology, which includes communications, chemistry, physiology, economics and many others.

Accredited culinology® educational programs are offered by many institutions. The curriculum included courses that combine the disciplines of cooking and food science. According to industry professionals, like Kraft's Harry Crane, culinology® should "help jump-start product development."

## General Education Requirements

### English Composition

EN 1103	English Composition I	3
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or EN 1163	Accelerated Composition I	
EN 1113	English Composition II	3
or EN 1173	Accelerated Composition II	

### Mathematics

MA 1313	College Algebra	3
ST 3123	Introduction to Statistical Inference	3

### Science

CH 1213	Chemistry I	3
CH 1211	Investigations in Chemistry I	1
CH 1223	Chemistry II	3
CH 1221	Investigations in Chemistry II	1

### Humanities

Select from General Education courses		6
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### Fine Arts

Select from General Education courses		3
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### Social Sciences

AEC 2713	Introduction to Food and Resource Economics	3
Select from General Education courses (w/advisor approval)		3

### Major Requirements

CH 2503	Elementary Organic Chemistry	3
CH 2501	Elementary Organic Chemistry Laboratory	1
BIO 1134	Biology I	4
BIO 3304	General Microbiology	4
FNH 1103	Introduction to Food Science, Nutrition and Health Promotion	3
FNH 2203	Science of Food Preparation	3
FNH 2112	Food Products Evaluation	2
FNH 2293	Individual and Family Nutrition	3
FNH 4164	Quality Assurance of Food Products	4
FNH 4333	Food Law	3
FNH 4583	Food Preservation Technology	3
FNH 4593	New Food Product Development	3
FNH 4243	Composition and Chemical Reactions of Foods	3
FNH 4241	Applied Food Chemistry	1
FNH 4414	Microbiology of Foods	4
CA 1251	ServSafe <sup>MUW</sup>	1
CA 2003	Intro to Culinary Arts <sup>MUW</sup>	3
CA 3005	Food Prep I <sup>MUW</sup>	5
CA 3015	Food Prep II <sup>MUW</sup>	5
CA 3023	Menu and Recipe Dev <sup>MUW</sup>	3
CA 3500	CA Internship <sup>2</sup>	6-12
CA 4013	World Cuisines <sup>MUW</sup>	3
CA 4103	Business Skills in Culinary Arts <sup>MUW</sup>	3

### CA/FNH Electives

Choose from list of approved electives <sup>1</sup>		6-10
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### Oral Communication Requirement

CO 1003	Fundamentals of Public Speaking	3
or CO 3213	Small Group Communication	

### Writing Requirement

AIS 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences	3
<b>Total Hours</b>		<b>124</b>

MUNCA courses offered by Mississippi University for Women in Columbus, Mississippi

- 1 At least 3 hours must be FNH or business (ACC, MKT, MGT) electives and at least 3 hours must be Culinary Arts (CA) electives: FNH 3263 Research Methods in Food and Nutrition, FNH 4114 Analysis of Food Products, FNH 4143 Dairy Foods Processing, FNH 3314 Introduction to Meat Science, FNH 4514 Poultry Processing, FNH 4573 Food Engineering Fundamentals, FNH 3283 The Food Service System, FNH 4283 Purchasing Food and Equipment for Food Service Systems, ACC 2013 Principles of Financial Accounting, MKT 3013 Principles of Marketing, MGT 3513 Introduction to Human Resource Management, CA 3103 Dining Room Service, CA 3153 Demonstration Techniques, CA 3753 Advancing Baking, CA 4153 Food Styling, CA 2603 CA Entrepreneurship, CA 3623 Business Law for CA, CA 3633 Service Design and Mgmt, CA 3643 CA Venture Marketing, CA 3653 HR Mgmt of Cul Business, CA 4603 Culinary Arts Entrepreneurship
- 2 To be completed after the Junior or Senior Years.