

# Department of Food Science, Nutrition and Health Promotion

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## Interim Department Head: Professor Ashli Brown

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 a degree in Culinology®. This is a dual degree program in which students take courses at Mississippi State University and the Mississippi University for Women in Columbus, MS. 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 to food manufacturing and product development.

The Pre-Health Professions concentration is designed to develop students who have a thorough understanding of the principles of food science and have also fulfilled the prerequisites for medical school or other health-related professional or graduate school programs (examples include but are not limited to: medicine, nursing, physician's assistant, physical therapy, pharmacy, occupational therapy, public health, optometry, podiatry, and others).

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 Food and Nutrition concentration is an accredited Didactic Program in Dietetics (DPD) through the Accreditation Council for Education in Nutrition and Dietetics, providing the required course work needed to apply for a supervised practice program required for Registered Dietitian Nutritionist (RDN) eligibility. (The terms Registered Dietitian (RD) and Registered Dietitian Nutritionist (RDN) are used interchangeably.)

Students in Food Science, 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)
- Food and Nutrition
- Pre-Health Professions

## 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 Dietetics (DPD) at Mississippi State University 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 2190, Chicago, IL, 60606-6995; telephone 800-877-1600 or 312-899-0040, <http://www.eatright.org/ACEND>. Upon completion of the DPD program, graduates may pursue participation in a supervised practice program/dietetic internship.

Didactic Program in Dietetics:

- a. To enter the Didactic Program in Nutrition and Dietetics (DPD) Food and Nutrition concentration, students must have a 3.0 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 2293 Individual and Family Nutrition, ST 2113 Introduction to Statistics.
- b. A grade of "C" or better is required in all DPD courses. A course with a final grade lower than a "C" must be repeated.
- c. Students who wish to receive a Letter of Intent and/or verification statement from the MSU Didactic Program in Dietetics (DPD) must have a minimum of a 3.0 GPA and a minimum grade of "C" or better in all of the required DPD courses.
- d. Six (6) hours are available for electives, and students are encouraged to consider an academic minor.
- e. Transfer credits with a grade of "C" or better will be considered toward fulfilling degree requirements. After completion of the DPD undergraduate degree, successful completion of the supervised practice program/dietetic internship, followed by passing the Registration Exam, a student fulfills the requirements to become a Registered Dietitian. Beginning in January 2024, a minimum of a Master's degree will be an eligibility requirement to take the Registration Exam.

## BS in Food Science, Nutrition, and Health Promotion

### Food Processing/Business Concentration (FSTP)

Major Advisors: Wes Schilling, Professor, and Shecoya White, Assistant Professor

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

<b>English Composition</b>		<b>6</b>
EN 1103 or EN 1104	English Composition I Expanded English Composition I	
EN 1113 or EN 1173	English Composition II Accelerated Composition II	
<b>Fine Arts (General Education)</b>		<b>3</b>
Select from University Gen Ed Core		
<b>Natural Sciences (General Education)</b>		<b>12</b>
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>		<b>6</b>
MA 1313	College Algebra (or higher math)	
ST /BQA /MA 2113 or ST 3123	Introduction to Statistics Introduction to Statistical Inference	
<b>Humanities (General Education)</b>		<b>6</b>
Select from University Gen Ed Core		
<b>Social/Behavioral Sciences (General Education)</b>		<b>6</b>
AEC 2713	Introduction to Food and Resource Economics	
Select from University Gen Ed Core		
<b>Major Core Courses</b>		<b>17</b>
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 or CO 1013 or CO 3213	Fundamentals of Public Speaking Introduction to Communication Small Group Communication	
<b>Food Processing/Business Concentration</b>		<b>68</b>
BIO 3304	General Microbiology	
MA 1323	Trigonometry	

PH 1113 or PH 2213	General Physics I Physics I
AEC 3413 or MKT 3013	Introduction to Food Marketing Principles of Marketing
AELC 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences <sup>1</sup>
AELC 4203	Applications of Computer Tech to Agricultural Education, Leadership, and Communications <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 (6 hours)
FNH 4573 or FNH 4583	Food Engineering Fundamentals Food Preservation Technology
FNH 4593	New Food Product Development
Business Electives (12 hours) <sup>5</sup>	
Processing Electives (6-8 hours) <sup>3</sup>	
FNH Electives (3 hours) <sup>4</sup>	
Free Electives (0-1 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 , FNH 4143 Dairy Foods Processing, FNH 4514 Poultry Processing, or FNH 4613 Seafood Processing

<sup>4</sup> Choose one additional FNH 3000-4000 level course 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 Advisors: Wes Schilling, Professor, and Shecoya White, Assistant Professor

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>	<b>6</b>
EN 1103	English Composition I
EN 1113 or EN 1173	English Composition II Accelerated Composition II
<b>Fine Arts (General Education)</b>	<b>3</b>
Select from University Gen Ed Core	
<b>Natural Sciences (General Education)</b>	<b>12</b>
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>	<b>6</b>
MA 1713	Calculus I
ST /BQA /MA 2113	Introduction to Statistics

or ST 3123	Introduction to Statistical Inference	
<b>Humanities (General Education)</b>		<b>6</b>
Select from University Gen Ed Core		
<b>Social/Behavioral Sciences (General Education)</b>		<b>6</b>
AEC 2713	Introduction to Food and Resource Economics	
Select from University Gen Ed Core		
<b>Major Core Courses</b>		<b>17</b>
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>		<b>68</b>
BIO 1144	Biology II	
BIO 3304	General Microbiology	
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	
AELC 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences <sup>1</sup>	
AELC 4203	Applications of Computer Tech to Agricultural Education, Leadership, and Communications <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 (6 hours)	
Processing Electives (3-4 hours) <sup>3</sup>		
FNH Electives (3-4 hours) <sup>4</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 1 course (3-4 hours) from the Food Processing Electives: FNH 3314 , FNH 4143 Dairy Foods Processing, FNH 4514 Poultry Processing, or FNH 4613 Seafood Processing

<sup>4</sup> Choose an additional 3-4 hours from all 3000-4000 level Food Science, Nutrition and Health Promotion classes.

## Food Safety Concentration (FDS)

Major Advisors: Wes Schilling, Professor, and Shecoya White, Assistant Professor

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>		<b>6</b>
EN 1103	English Composition I	
EN 1113 or EN 1173	English Composition II Accelerated Composition II	
<b>Fine Arts (General Education)</b>	Select from University Gen Ed Core	<b>3</b>
<b>Natural Sciences (General Education)</b>		<b>12</b>
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>		<b>6</b>
MA 1313	College Algebra	
MA 1323 or MA 1713	Trigonometry Calculus I	
<b>Humanities (General Education)</b>	Select from University Gen Ed Core	<b>6</b>
<b>Social/Behavioral Sciences (General Education)</b>	Select from University Gen Ed Core	<b>6</b>
<b>Major Core Courses</b>		<b>17</b>
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 or CO 1013 or CO 3213	Fundamentals of Public Speaking Introduction to Communication Small Group Communication	
<b>Food Safety Concentration <sup>1</sup></b>		<b>48</b>
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	
AELC 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences <sup>2</sup>	
AELC 4203	Applications of Computer Tech to Agricultural Education, Leadership, and Communications <sup>3</sup>	
ADS 4114	Animal Nutrition	
FNH 2011	Career Planning and Success Skills in Food Science	
FNH 4241	Applied Food Chemistry	
FNH 3314		

FNH 4414	Microbiology of Foods	
FNH 4514	Poultry Processing	
FNH 4583	Food Preservation Technology	
<b>Electives (Select 3-6 credits from the following list)</b>		<b>3-6</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 1113	Animal Science	
ADS 1121	Animal Science Laboratory	
ADS 3214	Livestock Growth and Development	
ADS 3312	Livestock Management Practices	
ADS 4113	Swine Science	
ADS 4124	Animal Breeding	
ADS 4323	Beef Cattle Science	
ADS 4613	Physiology of Reproduction	
ADS 4611	Practices in Physiology of Reproduction	
BIO 2103	Cell Biology	
BIO 4413	Immunology	
BIO 4503	Vertebrate Histology	
BIO 4514	Animal Physiology	
VS 3014	Anatomy and Physiology	
PO 4033	Diseases of Poultry	
PO 4324	Avian Reproduction	
PO 4334	Broiler Production	
PO 4413	Poultry Nutrition	
PO 4844	Avian Anatomy and Physiology	
<b>Total Hours needed for major through Junior Year</b>		<b>104-107</b>
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 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.		
<b>Optional Senior Year</b>		<b>17</b>
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		
<b>Total Hours</b>		<b>124</b>

<sup>1</sup> 45 hours is equal to 48-3 hours to account for the substitution for FNH 2293 in the major core.

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

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

## Food and Nutrition Concentration (FN)

Major Advisors: Amanda Conrad, Didactic Program in Nutrition and Dietetics Director and Instructor; Rahel Mathews, Assistant Professor; and Renee Matich, Instructor

<b>English Composition</b>		<b>6</b>
EN 1103	English Composition I	
or EN 1104	Expanded English Composition I	
EN 1113	English Composition II	
or EN 1173	Accelerated Composition II	
<b>Fine Arts</b>		<b>3</b>
Select from University General Education Core		
<b>Natural Sciences</b>		<b>12</b>
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>Math (General Education)</b>		<b>6</b>
ST /BQA /MA 2113	Introduction to Statistics	
or ST 3123	Introduction to Statistical Inference	
<b>Humanities (General Education)</b>		<b>6</b>
Select from University General Education Core		
<b>Social/Behavioral Sciences (General Education)</b>		<b>6</b>
PSY 1013	General Psychology	
SO 1003	Introduction to Sociology	
or SO 1103	Contemporary Social Problems	
or SO 1203	Sociology of Families	
<b>Major Core Courses</b>		<b>17</b>
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>		<b>59</b>
BCH 4013	Principles of Biochemistry	
BIO 1134	Biology I	
BIO 3004	Human Anatomy	
BIO 3014	Human Physiology	
MGT 3113	Principles of Management	
KI 2603	Medical Terminology	
FNH 2201	Nutrition and Dietetics Career Planning	
FNH 2203	Science of Food Preparation	
FNH 3283	The Food Service System	
FNH 3723	Community Nutrition	
FNH 4013	Nutrition Assessment	
FNH 4123	Medical Nutrition Therapy I	
FNH 4233	Medical Nutrition Therapy II	
FNH 4253	Macronutrients: Human Metabolism	
FNH 4284	Quantity Food Production and Service	
FNH 4293	Micronutrients: Human Metabolism <sup>3</sup>	

FNH 4323	Professional Skills for Nutrition and Dietetics	
FNH 4353	Nutrition Throughout the Life Cycle	
FNH 4363	Research Methods in Food and Nutrition <sup>2</sup>	
FNH 4373	Nutrition Education and Counseling Skills	
Free Electives		9
<b>Total Hours</b>		<b>124</b>

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

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

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

## Pre-Health Professions Concentration (PHP)

Major Advisors: Wes Schilling, Professor; Shecoya White, Assistant Professor; and Antonio Gardner, Assistant Professor

PHP is designed to develop students who have a thorough understanding of principles of food science and have also fulfilled the prerequisites for medical school or other health-related professional or graduate school programs.

<b>English Composition</b>		<b>6</b>
EN 1103	English Composition I	
EN 1113	English Composition II	
or EN 1173	Accelerated Composition II	
<b>Fine Arts</b>		<b>3</b>
Select from General Education Core		
<b>Math (General Education)</b>		<b>9</b>
MA 1313	College Algebra (or higher)	
ST /BQA /MA 2113	Introduction to Statistics	
or ST 3123	Introduction to Statistical Inference	
MA 1713	Calculus I	
<b>Natural Science</b>		<b>12</b>
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>Humanities (General Education)</b>		<b>6</b>
Select from General Education Core		
<b>Social/Behavioral Sciences (General Education)</b>		<b>6</b>
Select from General Education Core (SO 1013 and PSY 1073 recommended)		
<b>Major Core</b>		<b>17</b>
FNH 2293	Individual and Family Nutrition	
FNH 3111	Food Science, Nutrition and Health Promotion Seminar	
FNH 4243	Composition and Chemical Reactions of Foods	
MGT 3513	Introduction to Human Resource Management	
CH 4511	Organic Chemistry Laboratory I	
CH 4513	Organic Chemistry I	
CO 1003	Fundamentals of Public Speaking	
or CO 1013	Introduction to Communication	
or CO 3213	Small Group Communication	
<b>Pre-Health Professions Concentration</b>		<b>57</b>
AELC 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences <sup>1</sup>	
AELC 4203	Applications of Computer Tech to Agricultural Education, Leadership, and Communications <sup>2</sup>	
BCH 4013	Principles of Biochemistry	
BIO 1144	Biology II	



BIO 3014	Human Physiology
BIO 3304	General Microbiology
CH 4521	Organic Chemistry Laboratory II
CH 4523	Organic Chemistry II
FNH 3103	Introduction to Health Professions
FNH 3163	Basic Principles of Health Promotion
FNH 4123	Medical Nutrition Therapy I
FNH 4241	Applied Food Chemistry
FNH 4393	Prevention and Control of Disease
FNH 4414	Microbiology of Foods
FNH 4583	Food Preservation Technology
MA 1723	Calculus II
PH 1113 or PH 2213	General Physics I Physics I
PH 1123 or PH 2223	General Physics II Physics II
PHI 3323	Medical Ethics

Electives (Choose 2-3 classes based on requirements for specific health professional school; see advisor for options) 8

**Total Hours** 124

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

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

## B.S. in Culinology®

Major Advisors: Wes Schilling, Professor and Shecoya White, Assistant Professor

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."

## Degree Requirements

**English Composition** 6

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

**Mathematics (General Education)** 6

MA 1313	College Algebra
ST 3123	Introduction to Statistical Inference

**Natural Sciences** 8

CH 1213	Chemistry I
CH 1211	Investigations in Chemistry I

CH 1223	Chemistry II	
CH 1221	Investigations in Chemistry II	
<b>Humanities (General Education)</b>		<b>6</b>
Select from General Education courses		
<b>Fine Arts (General Education)</b>		<b>3</b>
Select from General Education courses		
<b>Social/Behavioral Sciences (General Education)</b>		<b>6</b>
Select from General Education courses (w/advisor approval)		
<b>Major Requirements</b>		<b>78</b>
CH 2503	Elementary Organic Chemistry	
CH 2501	Elementary Organic Chemistry Laboratory	
BIO 1134	Biology I	
BIO 3304	General Microbiology	
FNH 1103	Introduction to Food Science, Nutrition and Health Promotion	
FNH 2203	Science of Food Preparation	
FNH 2112	Food Products Evaluation	
FNH 2293	Individual and Family Nutrition	
FNH 4164	Quality Assurance of Food Products	
FNH 4333	Food Law	
FNH 4583	Food Preservation Technology	
FNH 4593	New Food Product Development	
FNH 4243	Composition and Chemical Reactions of Foods	
FNH 4241	Applied Food Chemistry	
FNH 4414	Microbiology of Foods	
CA 1251	ServSafe <sup>MUW</sup>	
CA 2003	Introduction to Culinary Arts <sup>MUW</sup>	
CA 3005	Food Prep I <sup>MUW</sup>	
CA 3015	Food Prep II <sup>MUW</sup>	
CA 3023	Menu and Recipe Development <sup>MUW</sup>	
CA 3500	CA Internship <sup>2</sup>	
or FNH 4480	Food Science Internship	
CA 4005	Food Preparation III <sup>MUW</sup>	
CA 4013	World Cuisines <sup>MUW</sup>	
CA 4103	Business Skills in Culinary Arts <sup>MUW</sup>	
<b>CA/FNH Electives</b>		<b>5-6</b>
Choose from list of approved electives <sup>1</sup>		
<b>Oral Communication Requirement</b>		<b>3</b>
CO 1003	Fundamentals of Public Speaking	
or CO 3213	Small Group Communication	
<b>Writing Requirement</b>		<b>3</b>
AELC 3203	Professional Writing in Agriculture, Natural Resources, and Human Sciences	
<b>Total Hours</b>		<b>124</b>

- MUW  
<sup>1</sup> CA courses offered by Mississippi University for Women in Columbus, Mississippi  
 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 4363 Research Methods in Food and Nutrition, FNH 4114 Analysis of Food Products, FNH 4143 Dairy Foods Processing, FNH 3314, 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 Management, CA 3643 CA Venture Marketing, CA 3653 HR Management of Culinary Business, CA 4603 Culinary Arts Entrepreneurship
- <sup>2</sup> To be completed after the Junior or Senior Year.

## 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		
FNH 4164	Quality Assurance of Food Products	
FNH 4143	Dairy Foods Processing	
FNH 4514	Poultry Processing	
FNH 4114	Analysis of Food Products	
<b>Total Hours</b>		<b>18</b>

## Meat Science Certificate

Major Advisor: Wes Schilling

The Department of Food Science, Nutrition, and Health Promotion and the Department of Animal and Dairy Sciences offer a Meat Science Certificate for students who wish to specialize in the meat processing industry. Students must complete a total of 24 credit hours as described below to be eligible for the certificate. Nineteen credit hours are in required courses, with the remaining 5 hours to be selected from several electives. Students must also complete 300 hours of hands-on experiential learning in meat processing, research, and extension activities. With this approach, students will be career ready professionals equipped with a comprehensive understanding of industry and a skill set designed for them to make an immediate impact in meat science government, academic, or industry positions upon graduation.

## Certificate Requirements

### Required Courses

ADS 3314 or FNH 3314		
FNH 4333	Food Law	3
FNH 4414 or BIO 4414	Microbiology of Foods Microbiology of Foods	4
FNH 4514 or PO 4514	Poultry Processing Poultry Processing	4
FNH 4480 or ADS 4420	Food Science Internship (3 credits must be at meat processing or related facility) Animal and Dairy Science Internship	1-6
HACCP Training (as a Directed Individual Study)		1

### Electives

Choose a minimum of 5 credit hours from the following:

ADS 3142 or FNH 3142	Meats Judging I Meats Judging I	
ADS 3214	Livestock Growth and Development	
ADS 4243 or FNH 4243	Composition and Chemical Reactions of Foods Composition and Chemical Reactions of Foods	
ADS 4313 or FNH 4313	Advanced Science of Muscle Foods Advanced Science of Muscle Foods	
FNH 4114	Analysis of Food Products	
FNH 4164	Quality Assurance of Food Products	
FNH 4241	Applied Food Chemistry	
FNH 4512	Poultry Products Safety and Sanitation	

