

# DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION



Office in Gifford Building, Room 234  
(970) 491-FOOD (3663)  
[www.chhs.colostate.edu/fshn/](https://www.chhs.colostate.edu/fshn/) (<https://www.chhs.colostate.edu/fshn/>)

## ***Nourishing body and mind.***

Our programs train students to have an impact in the food, health, hospitality, and fermentation industries, with undergraduate and graduate degree programs.

Department Head, Christopher Gentile, Ph.D.

Dietetic Program Director, Sarah Johnson, Ph.D., RDN

Coordinated Master's Program in Dietetics, Director, Brittney Sly, Ph.D., M.P.H., RDN

Hospitality and Event Management Program Coordinators, Soo Kang, Ph.D. and Eric Milholland, Ph.D.

Fermentation Science and Technology Director, Jeff Callaway

## Undergraduate Majors

- Major in Fermentation Science and Technology (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/fermentation-science-technology-major/>)
- Major in Hospitality and Event Management (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/hospitality-and-event-management-major/>)
- Major in Nutrition and Food Science (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-food-science-major/>)
  - Dietetics and Nutrition Management Concentration (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-food-science-major-dietetics-management-concentration/>)
    - Accredited Didactic Program Option (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-food-science-major-dietetics-management-concentration-accredited-didactic-program-option/>)

- Childhood Nutrition Option (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-food-science-major-dietetics-management-concentration-childhood-option/>)
- Gerontology Nutrition Option (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-food-science-major-dietetics-management-concentration-gerontology-option/>)
- Food Science Concentration (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-food-science-major-food-science-concentration/>)
- Food Systems Concentration (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-food-science-major-food-systems-concentration/>) (No new students are being admitted into this concentration)
- Nutrition and Fitness Concentration (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-food-science-major-fitness-concentration/>)
- Pre-Health Nutrition Concentration (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-food-science-major-pre-health-nutrition-concentration/>)

## Minors

- Minor in Nutrition (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/nutrition-minor/>)
- Food Science/Safety Interdisciplinary Minor (<http://catalog.colostate.edu/general-catalog/university-wide-programs/interdisciplinary-studies/food-science-safety-interdisciplinary-minor/>)

## Graduate Graduate Programs in Food Science and Human Nutrition

At the graduate level, both M.S. and Ph.D. degrees are offered in Food Science and Nutrition. Students interested in graduate work should refer to the Graduate and Professional Bulletin (<http://catalog.colostate.edu/general-catalog/graduate-bulletin/>) and the Department of Food Science and Human Nutrition (<http://www.fshn.chhs.colostate.edu/>).

## Certificate

- Nutrition Sciences (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/graduate-certificate-nutrition-sciences/>)

## Master's Programs

- Master of Science in Food Science and Nutrition, Dietetics Option (Online) (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/food-science-nutrition-ms-dietetics-option-online/>)
- Master of Science in Food Science and Nutrition, Food Science Specialization, Plan A and Plan B (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/ms-food-science-nutrition-food-science-specialization/>)

- Master of Science in Food Science and Nutrition, Nutrition Specialization, Plan A and Plan B (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/ms-food-science-nutrition-nutrition-specialization/>)

## Ph.D.

- Ph.D. in Food Science and Nutrition, Food Science Specialization (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/phd-food-science-nutrition-food-science-specialization/>)
- Ph.D. in Food Science and Nutrition, Nutrition Specialization (<http://catalog.colostate.edu/general-catalog/colleges/health-human-sciences/food-science-human-nutrition/phd-food-science-nutrition-nutrition-specialization/>)

## Courses

Subjects in this department include: Food Science and Human Nutrition (FSHN) and Food Technology (FTEC) and Hospitality Management (RRM).

## Food Science and Human Nutrition (FSHN)

### FSHN 125 Food and Nutrition in Health Credits: 2 (2-0-0)

**Course Description:** Nutritional quality and safety of food related to human health.

**Prerequisite:** None.

**Terms Offered:** Fall, Spring.

**Grade Modes:** S/U within Student Option, Trad within Student Option.

**Special Course Fee:** No.

### FSHN 150 Survey of Human Nutrition Credits: 3 (3-0-0)

**Course Description:** Basic nutrition principles and concepts; their application to personal health and interactions with societal and environmental issues.

**Prerequisite:** None.

**Registration Information:** Sections may be offered: Online.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FSHN 192 First Year Seminar Credit: 1 (0-0-1)

**Course Description:** Facilitate a successful transition to college for new incoming students by emphasizing personal growth and identifying campus resources.

**Prerequisite:** None.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FSHN 220 Intro to Nutrition for Sports and Fitness Credits: 3 (3-0-0)

**Course Description:** Introduction to nutrition regarding optimal dietary patterns and nutrient intake for general fitness and various forms of sports activities.

**Prerequisite:** FSHN 150 or FSHN 350.

**Registration Information:** Sections may be offered: Online.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FSHN 300 Food Principles and Applications Credits: 3 (3-0-0)

**Course Description:** Application of food preparation theories to modification and evaluation of food products.

**Prerequisite:** (CHEM 103 or CHEM 107 or CHEM 111) and (FSHN 150).

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FSHN 301 Food Principles and Applications Laboratory Credits:

2 (0-6-0)

**Course Description:** Techniques and manipulative skills for preparation and evaluation of standard and modified food products.

**Prerequisite:** FSHN 300, may be taken concurrently.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

### FSHN 340 Food as Preventive Medicine Credits: 3 (3-0-0)

**Course Description:** Food consumption patterns, individual foods, and specific food constituents (nutrients and phytochemicals) associated with health benefits.

**Prerequisite:** BZ 110 and BZ 111 or FSHN 150 and LIFE 102.

**Restriction:** Must be a: Undergraduate.

**Registration Information:** Credit not allowed for both FSHN 340 and FSHN 380A1.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FSHN 350 Human Nutrition Credits: 3 (3-0-0)

**Course Description:** Focus on the various metabolic pathways through which nutrients pass, the regulation of those pathways, how dysregulation of the pathways can lead to chronic disease, and how these pathways can be targeted for therapeutic opportunities to maximize human health.

**Prerequisite:** BMS 300, may be taken concurrently or HES 300, may be taken concurrently.

**Registration Information:** Sections may be offered: Online.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FSHN 360 Nutrition Assessment Credits: 2 (2-0-0)

**Course Description:** Principles of anthropometric, dietary, and biochemical assessment of nutritional status.

**Prerequisite:** FSHN 350.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FSHN 386A Practicum: Food Service Management Credits: 2 (0-0-4)

**Course Description:**

**Prerequisite:** None.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

### FSHN 386B Practicum: Gerontology Credits: 3 (0-0-9)

**Course Description:**

**Prerequisite:** None.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**FSHN 386C Practicum: School Nutrition Credits: 3 (0-0-9)****Course Description:****Prerequisite:** None.**Terms Offered:** Fall, Spring.**Grade Mode:** S/U Sat/Unsat Only.**Special Course Fee:** No.**FSHN 392 Dietetic Practice Seminar Credit: 1 (0-0-1)****Course Description:** Pre-professional skills to prepare students for the pursuit of careers in the field of dietetics.**Prerequisite:** (BZ 111 with a minimum grade of B and BZ 110 with a minimum grade of B or LIFE 102 with a minimum grade of B) and (CHEM 107 with a minimum grade of B and CHEM 108 with a minimum grade of B or CHEM 111 with a minimum grade of B and CHEM 112 with a minimum grade of B and CHEM 113 with a minimum grade of B) and (CHEM 245 with a minimum grade of B and CHEM 246 with a minimum grade of B) and (BMS 300 with a minimum grade of B and BMS 302 with a minimum grade of B and FSHN 150 with a minimum grade of B and FSHN 300 with a minimum grade of B and FSHN 301 with a minimum grade of B).**Registration Information:** 3.000 overall GPA.**Terms Offered:** Fall, Spring.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 428 Nutrition Teaching and Counseling Techniques Credits: 3 (3-0-0)****Course Description:** Objectives, principles, and organization of subject matter for nutrition education and counseling.**Prerequisite:** FSHN 350.**Term Offered:** Spring.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 444 Nutrition and Aging Credit: 1 (1-0-0)****Course Description:** Effect of aging on nutrient needs and impact of nutrition on successful aging and health in the elderly.**Prerequisite:** BZ 101 or BZ 110 or LIFE 102.**Registration Information:** Offered as an online course only. Credit not allowed for both FSHN 444 and FSHN 459.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 445 Early Childhood Health, Safety, and Nutrition Credits: 3 (0-0-3)****Also Offered As:** HDFS 445.**Course Description:** Planning, promoting and maintaining healthy life style and safe learning environment for preschool children. Nutrition, first aid and safety, physical activity, identifying and reporting abuse, prevention and management of acute illness and chronic disease and promotion of a high-quality indoor and outdoor environment, targeted for the early childhood education professional.**Prerequisite:** HDFS 310.**Registration Information:** Completion of 60 credits. Offered as an online course only. Credit not allowed for both FSHN 445 and HDFS 445.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 450 Medical Nutrition Therapy Credits: 5 (4-2-0)****Course Description:** Use of nutrition therapy in the treatment of acute conditions and chronic disease states.**Prerequisite:** (BMS 300 or HES 300) and (FSHN 350).**Registration Information:** Must register for lecture and laboratory.**Term Offered:** Fall.**Grade Mode:** Traditional.**Special Course Fee:** Yes.**FSHN 451 Community Nutrition Credits: 3 (3-0-0)****Course Description:** Influences on nutritional status, assessment of nutrition problems and needs, planning and evaluation of nutrition intervention programs.**Prerequisite:** FSHN 350, may be taken concurrently.**Term Offered:** Fall.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 455 Food Systems--Impact on Health/Food Security Credits: 2 (1-0-1)****Course Description:** Conventional and alternative food systems and their impact on nutrition, health, food security, and the environment.**Prerequisite:** FSHN 350 or FTEC 447.**Restriction:** Must be a: Undergraduate.**Registration Information:** Must register for lecture and recitation.

Sections may be offered as Mixed Face-to-Face.

**Term Offered:** Fall.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 459 Nutrition in the Life Cycle Credits: 3 (3-0-0)****Course Description:** Nutritional aspects associated with each phase of human life cycle including pregnancy, infancy, childhood, adolescence, and early and late adulthood.**Prerequisite:** FSHN 350.**Registration Information:** Credit not allowed for both FSHN 444 and FSHN 459.**Term Offered:** Fall.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 461 International Nutrition and Health Credits: 2 (2-0-0)****Course Description:** Survey of the nature and scope of global nutrition issues and their impact on health.**Prerequisite:** None.**Restriction:** Must not be a: Freshman, Sophomore.**Registration Information:** Junior standing.**Term Offered:** Fall.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 470 Integrative Nutrition and Metabolism Credits: 3 (3-0-0)****Course Description:** Influence of nutrition on roles and action of hormones and gene expression on metabolism.**Prerequisite:** BC 351 and FSHN 350.**Terms Offered:** Fall, Spring.**Grade Mode:** Traditional.**Special Course Fee:** No.

**FSHN 484 Supervised College Teaching Credits: Var[1-3] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Registration Information:** A maximum of 10 combined credits for all 384 and 484 courses are counted towards graduation requirements.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 486A Practicum: Counseling Credits: Var[1-3] (0-0-0)**

**Course Description:**

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** Yes.

**FSHN 486B Practicum: Nutrition Credits: Var[1-3] (0-0-0)**

**Course Description:** Supervised off-campus experience in nutrition.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 486C Practicum: Food Service Management Credits:**

**Var[1-3] (0-0-0)**

**Course Description:** Supervised off-campus experience in food service management.

**Prerequisite:** RRM 310.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 492 Seminar in Dietetics and Nutrition Credits: 2 (0-0-2)**

**Course Description:** Capstone seminar in nutrition and dietetics.

**Prerequisite:** None.

**Restriction:** Must be a: Senior, Senior - 5yr Bachelor, Senior - Post Bachelor, Senior - Second Bachelor.

**Registration Information:** Senior standing.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 495A Independent Study: Nutrition Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 495B Independent Study: Food Service Management Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 496A Group Study in Dietetics and Nutrition: Energy, Weight Management Credit: 1 (1-0-0)**

**Course Description:** Current topics in nutrition and professional skills for the dietetics profession.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 496B Group Study in Dietetics and Nutrition: Sustainable Food Issues Credit: 1 (1-0-0)**

**Course Description:** Current topics in nutrition and professional skills for the dietetics profession.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 496C Group Study in Dietetics and Nutrition: Nutrition and Chronic Disease Credit: 1 (1-0-0)**

**Course Description:** Current topics in nutrition and professional skills for the dietetics profession.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 496D Group Study in Dietetics and Nutrition: Nutrition for Athletes Credit: 1 (1-0-0)**

**Course Description:** Current topics in nutrition and professional skills for the dietetics profession.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 496E Group Study in Dietetics and Nutrition: Food Safety Credit: 1 (1-0-0)**

**Course Description:** Current topics in nutrition and professional skills for the dietetics profession.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 496F Group Study in Dietetics and Nutrition: Service Marketing Credit: 1 (1-0-0)**

**Course Description:** Current topics in nutrition and professional skills for the dietetics profession.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 496G Group Study in Dietetics and Nutrition: Food and Consumer Issues Credit: 1 (1-0-0)**

**Course Description:** Current topics in nutrition and professional skills for the dietetics profession.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 496H Group Study in Dietetics and Nutrition: Public Health and Policy Credit: 1 (1-0-0)**

**Course Description:** Current topics in nutrition and professional skills for the dietetics profession.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.



**FSHN 496I Group Study in Dietetics and Nutrition: Special Topics Credit: 1 (1-0-0)**

**Course Description:** Current topics in nutrition and professional skills for the dietetics profession.

**Prerequisite:** FSHN 350.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 500 Food Systems, Nutrition, and Food Security Credits: 2 (2-0-0)**

**Course Description:** Global and local food systems and their potential influence on nutrition and food security.

**Prerequisite:** FSHN 350.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 501 Research Methods in Dietetics Credits: 3 (0-0-3)**

**Course Description:** Testing and generating theory. Methods for collecting and analyzing quantitative and qualitative data, critique of research and proposal development.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 503 Issues in Dietetics Practice Credits: 3 (0-0-3)**

**Course Description:** Environment in which foodservice, hospitality, and healthcare organizations operate; impact of change on hospitality and healthcare organizations.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 504 Micronutrients Credits: 3 (0-0-3)**

**Course Description:** Coordination of structure and function related to metabolic needs as a basis for evaluating micronutrient needs in normal or altered metabolic states.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 505 Nutrition and Physical Activity in Aging Credits: 3 (0-0-3)**

**Course Description:** Physiological changes during aging and impacts on health and disease; focus on successful aging with emphasis on physical activity and nutrition.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 506 Nutrition and Human Performance Credits: 3 (0-0-3)**

**Course Description:** Relationship of specific nutrients and optimal nutrition to physical efficiency and performance.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 507 Nutrition Education in the Community Credits: 3 (0-0-3)**

**Course Description:** Principles and practices of teaching individuals and groups to translate nutrition knowledge into action. Emphasis on research and evaluation.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 508 International Nutrition and World Hunger Credits: 3 (0-0-3)**

**Course Description:** Magnitude, causes, and nature of hunger and under-nurturing; programs and policies to alleviate hunger.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 509 Nutrition Counseling and Education Methods Credits: 3 (0-0-3)**

**Course Description:** Application of learning theories and nutrition counseling with individuals and groups in the community and clinical settings.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 510 Pediatric Clinical Nutrition Credits: 3 (0-0-3)**

**Course Description:** Physiological, biochemical and nutritional aspects of disease processes relevant to infants and children up to 18 years of age.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 511 Maternal and Child Nutrition Credits: 3 (0-0-3)**

**Course Description:** Behavioral, physiological and public health issues impacting dietary and nutritional factors that support growth and development.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics; written permission of instructor. Offered as an online course only.

**Terms Offered:** Fall, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 512 Nutritional Aspects of Oncology Credits: 3 (0-0-3)**

**Course Description:** Relationships between nutrition and cancer including the role of nutrition in specific cancers, cancer prevention and patient management.

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in dietetics. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 520 Advanced Medical Nutrition Therapy Credits: 3 (3-0-0)**

**Course Description:** Role of nutrition in etiology and treatment of selected disorders.

**Prerequisite:** FSHN 550 or FSHN 551.

**Restriction:** Must be a: Graduate.

**Registration Information:** FSHN 550 or FSHN 551 or admission to GP-IDEA program in Dietetics. Sections may be offered: Online.

**Terms Offered:** Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 521 Advanced Medical Nutrition Therapy Lab Credit: 1 (0-2-0)**

**Course Description:** Practical application of the treatment of selected nutrition-related diseases and disorders.

**Prerequisite:** FSHN 550 and FSHN 551.

**Restriction:** Must be a: Graduate.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FSHN 525 Nutrition Education Theories and Practice Credits: 2 (2-0-0)**

**Course Description:** Examination of current theories, skills, and models used in nutrition education programs as preparation for research and practice.

**Prerequisite:** FSHN 350.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 530 Principles of Nutrition Science & Metabolism Credits: 3 (3-0-0)**

**Course Description:** Science of nutrition, including the ingestion and digestion of food, the absorption, transport, and metabolism of macro and micronutrients, energy balance and bodyweight regulation, and relationships to health and risk of disease. Structure, functional roles, and metabolic regulation of carbohydrates, lipids, and proteins during conditions of fasting, feeding, and exercise. The role of vitamins and minerals in cellular and whole body homeostasis.

**Prerequisite:** BMS 300 or CHEM 245 or FSHN 150 or LIFE 102.

**Restriction:** Must be a: Graduate.

**Registration Information:** Graduate standing.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 531 Diet, Nutrition, and Chronic Disease Credits: 3 (2-0-1)**

**Course Description:** Principles related to the role of diet and nutrition in obesity, digestive health, type 2 diabetes, cardiovascular disease, and cancer with a focus on current evidence and best practices for prevention.

**Prerequisite:** FSHN 530.

**Registration Information:** Graduate standing. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 532 Emerging Issues in Nutrition Credits: 3 (2-0-1)**

**Course Description:** Principles related to emerging areas of nutrition and their role in health promotion. Focus is on current research related to micronutrients and supplements, sports nutrition, food safety and technology, food systems, nutrition and aging, and nutrigenomics.

**Prerequisite:** FSHN 530.

**Registration Information:** Graduate standing. Offered as an online course only.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 540 Nutrigenomics and Advanced Lipid Metabolism Credits: 3 (0-0-3)**

**Course Description:** How nutrients regulate gene expressions (nutrigenetics) and how genotype influences an individual's nutrient requirements (nutrigenomics).

**Prerequisite:** None.

**Registration Information:** Admission to GP-IDEA program in Dietetics. Offered as an online course only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 550 Advanced Nutritional Science I Credits: 3 (3-0-0)**

**Course Description:** Protein, vitamin, mineral metabolism; human studies, animal models.

**Prerequisite:** BC 351 or BC 403.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 551 Advanced Nutritional Science II Credits: 3 (3-0-0)**

**Course Description:** Carbohydrate, lipid, energy metabolism; human studies, animal models.

**Prerequisite:** BC 351 or BC 403.

**Restrictions:** Must not be a: Freshman, Sophomore, Junior. Must be a: Graduate.

**Registration Information:** Undergraduates with senior standing may enroll with consent of instructor. Sections offered as Mixed Face-to-Face or Online.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 561 International Nutrition Studies Credits: 2 (2-0-0)**

**Course Description:** Analysis of global nutrition, malnutrition issues, and their impact on health.

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Graduate cooperative program.

**Registration Information:** Credit allowed for only one of the following: FSHN 461, FSHN 561, or FSHN 661.

**Term Offered:** Fall (even years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 586 Practicum-Advanced Clinical Nutrition Credits:**

**Var[1-3] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Term Offered:** Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**FSHN 587A Internship: Clinical Dietetics Credits: Var[1-6] (0-0-0)**

**Course Description:** Supervised practice in clinical nutrition.

**Prerequisite:** None.

**Restriction:** Must be a: Graduate.

**Registration Information:** Admission to Master of Science in Food Science and Nutrition, Dietetics Option, Plan B. Written consent of instructor.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**FSHN 587B Internship: Community Dietetics Credits: Var[1-6] (0-0-0)**

**Course Description:** Supervised practice in community nutrition.

**Prerequisite:** None.

**Restriction:** Must be a: Graduate.

**Registration Information:** Admission to Master of Science in Food Science and Nutrition, Dietetics Option, Plan B. Written consent of instructor.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**FSHN 587C Internship: Food Service Management Credits:**

**Var[1-6] (0-0-0)**

**Course Description:** Supervised practice in food service management.

**Prerequisite:** None.

**Restriction:** Must be a: Graduate.

**Registration Information:** Admission to Master of Science in Food Science and Nutrition, Dietetics Option, Plan B. Written consent of instructor.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**FSHN 590 Workshop Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Term Offered:** Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 600 Responsible Conduct of Research Credit: 1 (1-0-0)**

**Course Description:** Responsible conduct of research (RCR) including ethical frameworks, publication practices, human and animal research and data management. Case studies and professional codes of conduct will be used to explore conduct of ethical research in humans and animals and how to avoid and manage research misconduct.

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** This is a partial semester course. Credit not allowed for both FSHN 580A2 and FSHN 600.

**Term Offered:** Spring.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**FSHN 601 Grant Writing in Nutritional Sciences Credits: 2 (2-0-0)**

**Course Description:** Examine each of the processes involved in a grant application. Emphasis on NIH grant mechanisms; translates to all forms of academic grant writing.

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Credit not allowed for both FSHN 580A3 and FSHN 601.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 620 Community Nutrition Planning and Evaluation Credits: 3 (2-0-1)**

**Course Description:** Community nutrition assessment; nutrition program planning and evaluation, nutrition policy analysis.

**Prerequisite:** FSHN 350.

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 628 Advanced Nutrition Counseling Techniques Credits: 2 (2-0-0)**

**Course Description:** Principles, strategies and techniques for interviewing, assessing and providing nutrition counseling in community settings.

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Term Offered:** Fall.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 630 Integrative Exercise and Nutrition Metabolism Credits: 3 (3-0-0)**

**Also Offered As:** HES 630.

**Course Description:** Advances in integrative human metabolism under conditions of changing energy flux.

**Prerequisite:** HES 610 and FSHN 551.

**Restriction:** Must be a: Graduate, Professional.

**Registration Information:** Credit not allowed for both FSHN 630 and HES 630.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 640 Selected Topics in Nutritional Epidemiology Credits: 2 (2-0-0)**

**Course Description:** Overview of topics in nutritional epidemiology; study design, interpretation of findings, linkage of data to action.

**Prerequisite:** (FSHN 350) and (STAT 301 or STAT 307 or ERHS 307).

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 650A Recent Developments in Human Nutrition: Protein, Vitamins, and Minerals Credits: 2 (2-0-0)**

**Course Description:** Appraisal of literature on human nutritional status.

**Prerequisite:** FSHN 550.

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Term Offered:** Fall (even years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 650B Recent Developments in Human Nutrition: Carbohydrates, Lipids, and Energy Credits: 2 (2-0-0)**

**Course Description:** Appraisal of literature on human nutritional status.

**Prerequisite:** FSHN 551.

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Term Offered:** Fall (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 650C Recent Developments in Human Nutrition: Genomic, Proteomics, and Metabolomics Credits: 2 (2-0-0)**

**Course Description:** Appraisal of literature on human nutritional status.

**Prerequisite:** FSHN 551.

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Term Offered:** Spring (even years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 660 Women's Issues in Lifecycle Nutrition Credits: 2 (2-0-0)**

**Course Description:** Current nutritional issues related to selected stages of the lifecycle compared to normal adult nutritional needs.

**Prerequisite:** FSHN 459.

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 675 Regulation of Energy Intake Credits: 3 (3-0-0)**

**Course Description:** Central and peripheral mechanisms controlling energy intake with emphasis on humans. Current theories, experimental approaches, and new research.

**Prerequisite:** FSHN 350 and PSY 454.

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FSHN 684 Supervised College Teaching Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 686A Practicum: Counseling Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** FSHN 520.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** Yes.

**FSHN 686B Practicum: Nutrition Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**FSHN 686C Practicum: Food Services Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**FSHN 692 Seminar Credit: 1 (0-0-1)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 695A Independent Study: Food Science Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 695B Independent Study: Nutrition Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Graduate cooperative program, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FSHN 695C Independent Study: Food Service Management Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.



**FSHN 696A Group Study: Food Science Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FSHN 696B Group Study: Nutrition Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FSHN 696C Group Study: Dietetics Credit: 1 (0-0-1)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Registration Information:** Sections may be offered: Online.**Terms Offered:** Fall, Spring.**Grade Mode:** S/U Sat/Unsat Only.**Special Course Fee:** No.**FSHN 696D Group Study: Exercise and Nutrition Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FSHN 698A Research: Dietetics Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Registration Information:** Admission to the GP-IDEA program in Dietetics. Offered as an online course only.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** S/U Sat/Unsat Only.**Special Course Fee:** No.**FSHN 698B Research: Nutrition Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** S/U Sat/Unsat Only.**Special Course Fee:** No.**FSHN 698C Research: Food Service Management Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** S/U Sat/Unsat Only.**Special Course Fee:** No.**FSHN 699B Thesis: Nutrition Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FSHN 699C Thesis: Food Service Management Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FSHN 700 Cellular Nutrition Credits: 2 (2-0-0)****Course Description:** Essential nutrient requirements of cells and organs.**Prerequisite:** FSHN 550 and FSHN 551 or BC 403 and BMS 501.**Restriction:** Must be a: Graduate, Professional.**Term Offered:** Fall (odd years).**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 750 Nutritional Basis of Chronic Disease Credits: 2 (2-0-0)****Course Description:** Role of nutrition in the pathogenesis and prevention of specific chronic diseases.**Prerequisite:** FSHN 550 and FSHN 551.**Restriction:** Must be a: Graduate, Professional.**Term Offered:** Fall.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 792 Seminar-Research Topics in Nutrition Credit: 1 (0-0-1)****Course Description:** Ph.D. seminar in literature review.**Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring.**Grade Mode:** Traditional.**Special Course Fee:** No.**FSHN 795 Independent Study Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FSHN 796 Group Study Credit: 1 (0-0-1)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.**FSHN 799 Dissertation-Nutrition Credits: Var[1-18] (0-0-0)****Course Description:****Prerequisite:** None.**Restriction:** Must be a: Graduate, Professional.**Terms Offered:** Fall, Spring, Summer.**Grade Mode:** Instructor Option.**Special Course Fee:** No.

## Food Technology (FTEC)

### FTEC 110 Food-From Farm to Table Credits: 3 (2-0-1)

**Course Description:** Commercial food processing, related to preservation and enhancing of food quality, safety, and value.

**Prerequisite:** None.

**Registration Information:** Must register for lecture and recitation. Sections may be offered: Face-to-Face, Mixed Face-to-Face, or Online.

**Terms Offered:** Fall, Spring, Summer.

**Grade Modes:** S/U within Student Option, Trad within Student Option.

**Special Course Fee:** No.

### FTEC 210 Science of Food Fermentation Credits: 3 (2-2-0)

**Course Description:** Science, history, culture, gastronomy, safety, health, and nutrition aspects of fermented foods and beverages.

**Prerequisite:** (BZ 111 and BZ 110 or LIFE 102) and (CHEM 107 or CHEM 111) and (FSHN 150).

**Registration Information:** Must register for lecture and laboratory.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

### FTEC 292 Introduction to Fermentation Science Credit: 1 (0-0-1)

**Course Description:** Introduction to a multidisciplinary, science-based program of study, and exploring career options and skill development through panel discussions by alumni and industry partners.

**Prerequisite:** None.

**Restriction:** Must be a: Undergraduate.

**Term Offered:** Spring (even years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FTEC 350 Fermentation Microbiology Credits: 2 (2-0-0)

**Course Description:** Integration of fermentation science, microbiology, and chemistry.

**Prerequisite:** BC 351, may be taken concurrently and MIP 300.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FTEC 351 Fermentation Microbiology Laboratory Credits: 2 (0-4-0)

**Course Description:** Introduction to fermentation microbiological practices with relevance to production, quality control, and food safety in the food and beverage industry.

**Prerequisite:** FTEC 350, may be taken concurrently.

**Restriction:** Must be a: Undergraduate.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

### FTEC 360 Brewing Processes Credits: 4 (3-0-1)

**Course Description:** Influence of raw material selection, malting, mashing, boiling, and fermentation on quality of beverages.

**Prerequisite:** CHEM 245 and FTEC 210, may be taken concurrently.

**Registration Information:** Must register for lecture and recitation.

Required field trips.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FTEC 375 Introduction to Fermentation Unit Operations Credits: 4 (3-0-1)

**Course Description:** Principles related to processes and equipment design in fermented food and beverage industries. Survey of unit operations.

**Prerequisite:** (FTEC 360) and (PH 121 or PH 141).

**Registration Information:** Must register for lecture and recitation.

Required field trips. Credit not allowed for both FTEC 375 and FTEC 480A2.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FTEC 400 Food Safety Credits: 3 (3-0-0)

**Course Description:** Safety of human food emphasizing safe production, processing, marketing, preparation, consumption, and regulations.

**Prerequisite:** CHEM 107 or CHEM 111.

**Term Offered:** Fall.

**Grade Modes:** S/U within Student Option, Trad within Student Option.

**Special Course Fee:** No.

### FTEC 422 Brewing Science I Credits: 4 (3-3-0)

**Course Description:** Application of scientific and technical aspects of malting, brewing, fermenting, finishing, packaging, and sensory evaluation of beer.

**Prerequisite:** FTEC 360.

**Registration Information:** Must register for lecture and laboratory.

Required field trips. 21 years of age.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

### FTEC 430 Sensory Evaluation of Food Products Credits: 2 (1-2-0)

**Course Description:** Application of sensory evaluation techniques to the study of foods.

**Prerequisite:** FSHN 301 or FTEC 210.

**Registration Information:** Must register for lecture and laboratory.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

### FTEC 440 Packaging Technology Credits: 2 (2-0-0)

**Course Description:** Science, technology, and management of packaging.

**Prerequisite:** FTEC 360.

**Registration Information:** Required field trips.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

### FTEC 447 Food Chemistry Credits: 2 (2-0-0)

**Course Description:** Chemistry of food constituents as related to food quality and stability.

**Prerequisite:** CHEM 241 or CHEM 245 or CHEM 345.

**Registration Information:** Credit not allowed for both ANEQ 447 and FTEC 447.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 460 Brewing Science II Credits: 4 (3-3-0)**

**Course Description:** Assessment, quantification, and control of all aspects of commercial beer production from malting through packaging and dispensing.

**Prerequisite:** FTEC 422.

**Registration Information:** Must register for lecture and laboratory. Required field trips. 21 years of age.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**FTEC 465 Food Production Operations Credits: 3 (3-0-0)**

**Course Description:** Production, operation, and management techniques used in the food industry at company, local and international levels.

**Prerequisite:** FTEC 210.

**Registration Information:** Required field trips.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 478 Phytochemicals and Probiotics for Health Credits: 2 (2-0-0)**

**Course Description:** Examination of phytochemistry and probiotic organisms important in human health.

**Prerequisite:** BC 351.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 487 Internship Credits: Var[1-15] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FTEC 492 Seminar: Fermentation Science and Food Safety Credits: 2 (1-0-1)**

**Course Description:** Capstone seminar in fermentation science and food safety.

**Prerequisite:** None.

**Registration Information:** Senior standing.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 495 Independent Study Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FTEC 496A Group Study Fermentation Science: Current Issues Credit: 1 (0-0-1)**

**Course Description:** Explore emerging health issues associated with fermented foods and beverages.

**Prerequisite:** FSHN 350 or FTEC 360.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 496B Group Study Fermentation Science: Functional Foods in Health Credit: 1 (0-0-1)**

**Course Description:** Functional foods may be used to maintain overall good health and to prevent, manage, and/or treat disease. Apply nutrition science and fermentation science to learn how foods or food components are functional, their bioavailability, and the physiological effects related to human health.

**Prerequisite:** FSHN 350 or FTEC 360.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 570 Food Product Development Credits: 2 (2-0-0)**

**Course Description:** Food product concepts, feasibility, and evaluation.

**Prerequisite:** ANEQ 447 or FTEC 447.

**Term Offered:** Fall (even years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 572 Food Biotechnology Credits: 2 (2-0-0)**

**Course Description:** Interrelationships among microorganisms, food processing methods, advances in biotechnology and food quality, spoilage, shelf-life and safety.

**Prerequisite:** MIP 334.

**Term Offered:** Spring (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 574 Current Issues in Food Safety Credits: 2 (2-0-0)**

**Course Description:** Current food safety issues from field to table; microbiological, consumer, processing, and agricultural issues.

**Prerequisite:** None.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 576 Cereal Science Credits: 2 (2-0-0)**

**Course Description:** Chemistry and functionality of cereal grain components and their importance in human nutrition.

**Prerequisite:** ANEQ 447 or FTEC 447.

**Term Offered:** Fall (odd years).

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 578 Phytochemicals and Probiotics for Health Credits: 3 (2-0-1)**

**Also Offered As:** HORT 578.

**Course Description:** Examination of phytochemicals and probiotic organisms important in human health.

**Prerequisite:** BC 351.

**Registration Information:** Senior standing. Must register for lecture and recitation. Credit not allowed for both FTEC 578 and HORT 578.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**FTEC 698 Research Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FTEC 699 Thesis Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

**FTEC 799 Dissertation Credits: Var[1-18] (0-0-0)**

**Course Description:**

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Instructor Option.

**Special Course Fee:** No.

## Hospitality Management-RRM (RRM)

**RRM 101 Hospitality Industry Credits: 3 (3-0-0)**

**Course Description:** Food service, lodging, and tourism industries; exploration of various industry segments and career opportunities.

**Prerequisite:** None.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 200 Hotel Operations Credits: 3 (3-0-0)**

**Course Description:** Front office and room management as related to resorts and hotels. Computer application, financial controls, employee and guest relations.

**Prerequisite:** RRM 101.

**Restriction:** Must not be a: Senior.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 310 Food Service Systems-Operations Credits: 3 (3-0-0)**

**Course Description:** Technical operations: menu planning, evaluation, recipe standardization, forecasting, food cost, sanitation, hospital food distribution systems.

**Prerequisite:** None.

**Registration Information:** Sections may be offered: Online.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 311 Food Service Systems-Production and Purchasing Credits: 3 (3-0-0)**

**Course Description:** Quantity food production principles, purchasing specifications, market channels.

**Prerequisite:** RRM 310.

**Registration Information:** Sections may be offered: Online.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 312 Hospitality Human Resource Management Credits: 3 (2-0-1)**

**Course Description:** Principles and practices of employee management in the hospitality industry including employment process, training, legal aspects, performance.

**Prerequisite:** RRM 310.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 330 Alcohol Beverage Control and Management Credits: 2 (2-0-0)**

**Course Description:** Classification, production, and service of controlled beverages; management of facilities and people; safe service training; financial controls.

**Prerequisite:** CHEM 103, may be taken concurrently or CHEM 107, may be taken concurrently or CHEM 111, may be taken concurrently.

**Term Offered:** Fall.

**Grade Modes:** S/U within Student Option, Trad within Student Option.

**Special Course Fee:** No.

**RRM 340 Restaurant Operations Credits: 5 (0-10-0)**

**Course Description:** Principles, practices, philosophies, systems for daily operation of casual or fine dining restaurant; focus on developing solutions to problems.

**Prerequisite:** RRM 101, may be taken concurrently.

**Registration Information:** Written consent of instructor.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 345 Food, Beverage, and Labor Cost Control Credits: 3 (3-0-0)**

**Course Description:** Cost control for food, beverage, and labor in the hospitality industry.

**Prerequisite:** ACT 205 or ACT 210.

**Restriction:** Must not be a: Freshman.

**Registration Information:** Sophomore standing.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 350 Hospitality Marketing Credits: 3 (3-0-0)**

**Course Description:** Operations marketing, including consumer behaviors, marketing strategies, and marketing plans in the hospitality industry.

**Prerequisite:** RRM 101.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 355 Culinary Tourism and Hospitality Management Credits: 3 (3-0-0)**

**Course Description:** Understanding and implications of culinary tourism and hospitality management in a global context covering its history, cultural dimension, globalization and localization, marketing and branding, festivals and events, and sustainability issues.

**Prerequisite:** NRRT 270 or RRM 101.

**Restriction:** Must be a: Freshman.

**Registration Information:** Credit not allowed for both NRRT 380A1 and RRM 355.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 371A Study Abroad--Thailand: Hospitality and Tourism in Thailand Credits: 3 (0-0-3)**

**Course Description:** International focus on hospitality and tourism in Thailand. Emphasis on hospitality consumers/travelers and the current trends.

**Prerequisite:** None.

**Registration Information:** Credit not allowed for both RRM 371A and RRM 382A.

**Term Offered:** Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 386 Practicum Credits: 3 (0-0-9)**

**Course Description:** Practicum in Hospitality Management.

**Prerequisite:** RRM 101.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**RRM 400 Food and Society Credits: 3 (2-0-1)**

**Course Description:** Exploration of the influence of food, dining, and nutrition on cultural aspects of the human experience.

**Prerequisite:** SOC 100 or PSY 100.

**Restriction:** Must not be a: Freshman.

**Registration Information:** Completion of AUCC 3D and AUCC 1C or AUCC 3E requirements. Must register for lecture and recitation.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 410 Food Safety Management Credits: 2 (2-0-0)**

**Course Description:** Management and practical applications of safe food service including sanitation, food borne illness, worker hygiene, proper food temperatures and handling, hazard analysis critical control points, local/state/federal health rules and regulations. ServSafe® Manager Certification.

**Prerequisite:** (CHEM 103 or CHEM 107 or CHEM 111) and (RRM 310).

**Registration Information:** Junior standing.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 450 Leadership in the Hospitality Industry Credits: 3 (3-0-0)**

**Course Description:** Exploration of leadership skills, their relationship to ethics through self-analysis, and leading change in the hospitality industry.

**Prerequisite:** RRM 310 and MGT 305.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 460 Event and Conference Planning Credits: 3 (2-0-1)**

**Course Description:** Overview of event planning and management. Explores key concepts critical to the success of any event and current trends in the industry.

**Prerequisite:** NRRT 270 or RRM 101.

**Registration Information:** Junior standing. Must register for lecture and recitation. Required field trips. Credit not allowed for both RRM 460 and NRRT 460.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**RRM 487 Internship in Hospitality Management Credits: 5 (0-0-25)**

**Course Description:** Supervised off-campus experience in food and beverage, lodging, or event planning focusing on management tasks and responsibilities.

**Prerequisite:** RRM 101 and RRM 310, may be taken concurrently.

**Registration Information:** Sophomore standing. Written consent of instructor.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** S/U Sat/Unsat Only.

**Special Course Fee:** No.

**RRM 492 Seminar on Hospitality and Event Management Credits: 3 (0-0-3)**

**Course Description:** Applying and synthesizing service knowledge, leadership, and management functions, planning and executing a capstone project, developing a career portfolio, and networking with industry professionals.

**Prerequisite:** MKT 305.

**Restrictions:** Must not be a: Freshman, Sophomore, Junior. Must be a: Undergraduate.

**Registration Information:** Senior standing.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** Yes.

**RRM 500 Understanding Food Credits: 3 (3-0-0)**

**Course Description:** Role of food in the creation of identity, as a driver of technology, and the prominent role food plays in the media.

**Prerequisite:** RRM 400.

**Registration Information:** RRM 400 or admission to GPIdea program in Dietetics. Sections may be offered: Online.

**Terms Offered:** Fall, Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 510 Foodservice Management Credits: 2 (1-0-1)**

**Course Description:** Analysis of a wide variety of foodservice operations, including procurement, forecasting, operational design, and menu planning.

**Prerequisite:** NRRT 442 or NRRT 471.

**Registration Information:** Must register for lecture and recitation. This is a partial semester course. Offered as Mixed Face-to-Face only.

**Term Offered:** Spring.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 520 Lodging Management Credits: 2 (1-0-1)**

**Course Description:** Operating standards and practices essential to the profitability of a hotel, lodging, and accommodation enterprise.

**Prerequisite:** NRRT 442 or NRRT 471.

**Registration Information:** Must register for lecture and recitation. This is a partial-semester course. Offered as Mixed Face-to-Face only.

**Term Offered:** Fall.

**Grade Mode:** Traditional.

**Special Course Fee:** No.

**RRM 686 Practicum-Food Service Management Credit: 1 (0-4-0)**

**Course Description:** Food production, menu planning, nutritional analysis and food costing.

**Prerequisite:** None.

**Restriction:** Must be a: Graduate, Professional.

**Terms Offered:** Fall, Spring, Summer.

**Grade Mode:** Traditional.

**Special Course Fee:** No.