Department of Food Science and Human Nutrition

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Michael Pagliassotti, PhD, Department Head
Dietetic Program Director Mary Harris, Ph.D., R.D.
Hospitality Management Director Jeff Miller, Ph.D.

Undergraduate Majors
• Major in Nutrition and Food Science
  • Dietetics and Nutrition Management Concentration
    • Accredited Didactic Program Option
    • Childhood Nutrition Option
    • Gerontology Nutrition Option
  • Food Safety and Nutrition Concentration
  • Nutrition and Fitness Concentration
  • Nutritional Sciences Concentration
• Major in Hospitality Management
• Major in Fermentation Science and Technology

Minors
• Minor in Nutrition

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 and the Department of Food Science and Human Nutrition (http://www.fshn.chhs.colostate.edu).

Master Programs
• Master of Science in Food Science and Nutrition, Plan A*
• Master of Science in Food Science and Nutrition, Plan B*
• Master of Science in Food Science and Nutrition, Plan A, Nutrition and Exercise Science Specialization

• Master of Science in Food Science and Nutrition, Plan B, Nutrition and Exercise Science Specialization
• Master of Science in Food Science and Nutrition, Dietetics Option (Online)

Ph.D.
• Ph.D in Food Science and Nutrition*
* Please see department for program of study.

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

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 300 Food Principles and Applications Credits: 3 (3-0-0)
Course Description: Application of food preparation theories to modification and evaluation of food products.
Prerequisites: (CHEM 103 or CHEM 107 or CHEM 111) and (FSHN 150).
Registration Information: Sections may be offered: Online.
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.
Registration Information: Sections may be offered: Online.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.
FSHN 350  Human Nutrition  Credits: 3 (3-0-0)
Course Description: Metabolism of macro and micronutrients; physiological basis underlying dietary recommendations for human health. Nutrients, dietary requirements for physical well-being; evaluation of various diets.
Prerequisites: (BMS 300, may be taken concurrently) and (CHEM 245 or CHEM 341).
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: 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: 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: 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.
Prerequisites: (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 (LIFE 102 with a minimum grade of B or BZ 110 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: FSHN 150.
Registration Information: Admission to Gerontology Interdisciplinary Studies Program can be substituted for FSHN 150. Credit not allowed for both FSHN 444 and FSHN 459. Sections may be offered: Online.
Terms Offered: Fall, Spring.
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 lifestyle and safe learning environment for preschool children.
Prerequisite: HDFS 310 or PSY 260.
Registration Information: Credit not allowed for both FSHN 445 and HDFS 445. Offered as an online course only.
Terms Offered: Fall, 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.
Prerequisites: BMS 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.
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 459 and FSHN 444.
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.
Prerequisites: 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]
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]
Course Description: 
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: S/U Sat/Unsat Only.
Special Course Fee: Yes.

FSHN 486B  Practicum: Nutrition  Credits: Var[1-3]
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]
Course Description: Supervised off-campus experience in food service management.
Prerequisite: FSHN 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 - Syr Bachelor, Senior - Post Bachelor, Senior - Second Bachelor.
Registration Information: Senior standing.
Term Offered: Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.

FSHN 495A  Independent Study: Nutrition  Credits: Var[1-18]
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]
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 polices 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.
Registration Information: FShN 550 or FShN 551 or admission to GP-IDEA program in Dietetics. Sections may be offered: Online.
Term Offered: Summer.
Grade Mode: Traditional.
Special Course Fee: No.
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 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.
Prerequisites: (BC 351 or BC 403) and (FShN 350).
Term Offered: Fall.
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.
Prerequisites: (BC 351 or BC 403) and (FShN 350).
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.
FShN 575 Nutrition Education for a Healthy Heart Credit: 1 (0-0-1)
Course Description: Nutrition-related issues of atherosclerotic cardiovascular disease risk reduction and background in the art/science of facilitating behavior change.
Prerequisite: None.
Registration Information: Offered as an online course only.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Traditional.
Special Course Fee: No.
FShN 586 Practicum-Advanced Clinical Nutrition Credits: Var[1-3]
Course Description: 
Prerequisite: None.
Term Offered: Summer.
Grade Mode: S/U Sat/Unsat Only.
Special Course Fee: No.
FShN 587A Internship: Clinical Dietetics Credits: 6 (0-18-0)
Course Description: 
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.
FShN 587B Internship: Community Dietetics Credits: 6 (0-18-0)
Course Description: 
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.
FSHN 587C  Internship: Food Service Management  Credits: 6 (0-18-0)
Course Description: None.
Prerequisite: None.
Term Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Fee: No.

FSHN 590  Workshop  Credits: Var[1-18]
Course Description: None.
Term Offered: Summer.
Grade Mode: Instructor Option.
Special 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, Professional.
Term Offered: Spring.
Grade Mode: Traditional.
Special 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, Professional.
Term Offered: Fall.
Grade Mode: Instructor Option.
Special 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.
Prerequisites: HES 610 and FSHN 551.
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring.
Grade Mode: Traditional.
Special 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.
Prerequisites: (FSHN 350) and (STAT 301 or STAT 307 or ERHS 307).
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall.
Grade Mode: Traditional.
Special 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, Professional.
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special 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, Professional.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special 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, Professional.
Term Offered: Spring (even years).
Grade Mode: Traditional.
Special 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, Professional.
Term Offered: Spring.
Grade Mode: Traditional.
Special Fee: No.

FSHN 661  International Nutrition  Credits: 2 (2-0-0)
Course Description: Roles of technological programs and international agencies in meeting nutritional needs.
Prerequisite: FSHN 350.
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special Fee: No.

FSHN 670  Laboratory Methods  Credits: 2 (1-2-0)
Course Description: Laboratory techniques and instrumentation in nutrition and food science.
Prerequisite: CHEM 245 or CHEM 246.
Restriction: Must be a: Graduate, Professional.
Registration Information: Must register for lecture and laboratory.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special 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,
eperimental approaches, and new research.
Prerequisites: FSHN 350 and PSY 454.
Restriction: Must be a: Graduate, Professional.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

FSHN 684  Supervised College Teaching  Credits: Var[1-18]
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]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring.
Grade Mode: S/U Sat/Unsat Only.
Special Course Fee: Yes.

FSHN 686B  Practicum: Nutrition  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring.
Grade Mode: S/U Sat/Unsat Only.
Special Course Fee: No.

FSHN 686C  Practicum: Food Services  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring.
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.
Grade Mode: Instructor Option.
Special Course Fee: No.

FSHN 695A  Independent Study: Food Science  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.

FSHN 695B  Independent Study: Nutrition  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.

FSHN 695C  Independent Study: Food Service Management  Credits: Var[1-18]
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]
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]
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]
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]
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.
Grade Mode: S/U Sat/Unsat Only.
Special Course Fee: No.

FSHN 698B  Research: Nutrition  Credits: Var[1-18]
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 698D  Research: Exercise and Nutrition  Credits: Var[1-18]
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 999  Dissertation-Nutrition  Credits: Var[1-18]  
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 (3-0-0)  
Course Description: Commercial food processing, related to preservation and enhancing of food quality, safety, and value.  
Prerequisite: None.  
Terms Offered: Spring.  
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.  
Prerequisites: (CHEM 107 or CHEM 111) and (LIFE 205 or MIP 300).  
Registration Information: Must register for lecture and laboratory.  
Terms Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: Yes.  

FTEC 350  Fermentation Microbiology  Credits: 2 (2-0-0)  
Course Description: Integration of fermentation science, microbiology, and chemistry.  
Prerequisite: CHEM 245 or FTEC 210 or LIFE 206 or MIP 302.  
Term Offered: Spring.  
Grade Mode: Traditional.  
Special Course Fee: No.  

FTEC 360  Brewing Processes  Credits: 3 (1-4-0)  
Course Description: Influence of raw material selection, malting, mashing, boiling, and fermentation on quality of beverages.  
Prerequisites: CHEM 245 and FTEC 210.  
Registration Information: Must register for lecture and laboratory.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: Yes.  

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 420  Quality Assessment of Food Products  Credits: 3 (2-2-0)  
Course Description: Quality control of raw ingredients to manufactured products; assessment and sensory evaluation of foods.  
Prerequisites: FTEC 110 and LIFE 205.  
Registration Information: Must register for lecture and laboratory.  
Term Offered: Spring (even years).  
Grade Mode: Traditional.  
Special Course Fee: No.
FTEC 422  Brewing Analysis and Quality Control  Credits: 2 (1-2-0)
Course Description: Assessment, quantification, and control of various aspects of commercial beer production.
Prerequisite: FTEC 460.
Registration Information: Must register for lecture and laboratory. Required field trips.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.

FTEC 430  Sensory Evaluation of Fermented Products  Credits: 2 (1-2-0)
Course Description: Application of sensory evaluation techniques to the study of fermented foods.
Prerequisite: FSHN 301 or FTEC 210.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: Yes.

FTEC 440  Refining and Packaging Technology  Credits: 2 (2-0-0)
Course Description: Science, technology, and management of refining and packaging.
Prerequisite: FTEC 360.
Term Offered: Spring.
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 245 or CHEM 345.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

FTEC 460  Brewing Science and Technology  Credits: 3 (2-2-0)
Course Description: Scientific and technical aspects of brewing, fermenting, finishing, and evaluating microbrewed style of lagers and ales.
Prerequisites: (CHEM 245) and (MATH 118).
Registration Information: 21 years of age. Must have completed 60 credits. Must register for lecture and laboratory.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.

FTEC 465  Food Production Management  Credits: 2 (2-0-0)
Course Description: Production, operation, and management techniques used in the food industry at company, local and international levels.
Prerequisite: FTEC 360, may be taken concurrently.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

FTEC 487  Internship  Credits: Var[1-15]
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

FTEC 492  Seminar: Fermentation Science & Technology  Credits: 2 (1-0-1)
Course Description: Capstone seminar in fermentation science and technology.
Prerequisites: FTEC 460 and FTEC 465.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

FTEC 495  Independent Study  Credits: Var[1-18]
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:
Prerequisite: FSHN 350 or FTEC 360.
Term Offered: Spring (even years).
Grade Mode: Traditional.
Special Course Fee: No.

FTEC 496B  Group Study Fermentation Science: Functional Foods in Health  Credit: 1 (0-0-1)
Course Description:
Prerequisite: FSHN 350 or FTEC 360.
Term Offered: Spring (even years).
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: 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: Fall (odd years).
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: FTEC 447.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.
FTEC 578 Bioactives and Probiotics for Health Credits: 3 (2-0-1)

Course Description: Mechanisms through which functional foods and probiotics modulate intracellular signal transduction and protein expression in chronic disease states.

Prerequisites: (BC 351) and (LIFE 205 or MIP 300).

Registration Information: Must register for lecture and recitation. Sections may be offered: Online.

Terms Offered: Fall, Spring (even years).

Grade Mode: Traditional.

Special Course Fee: No.

FTEC 698 Research Credits: Var[1-18]

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]

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]

Course Description:

Prerequisite: None.

Restriction: Must be a: Graduate, Professional.

Terms Offered: Fall, Spring, Summer.

Grade Mode: Instructor Option.

Special Course Fee: No.