Department of Food Science and Human Nutrition

Office in Gifford Building, Room 234
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fshn.chhs.colostate.edu (http://fshn.chhs.colostate.edu)

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; physiologic 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: 
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.
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 (BMS 303 with a minimum grade of B and FSHN 150 with a minimum grade of B and FSHN 300 with a minimum grade of B).
Registration Information: 3.000 overall GPA.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

FSHN 392B 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 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 496A Group Study in Dietetics and Nutrition: Energy, Weight Management Credits: 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: Diet and Chronic Disease Credits: 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 for Athletes Credits: 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: Food Safety Credits: 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.
FHSN 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.

FHSN 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.

FHSN 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.

FHSN 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.

FHSN 500  Food Systems, Nutrition, and Food Security Credits:
2 (2-0-0)
Course Description: Global and local food systems and their potential
fluence on nutrition and food security.
Prerequisite: FSHN 350.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

FHSN 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.

FHSN 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.
Term Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

FHSN 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.

FHSN 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.

FHSN 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.

FHSN 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.

FHSN 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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Course Description</th>
<th>Prerequisite</th>
<th>Registration Information</th>
<th>Term Offered</th>
<th>Grade Mode</th>
<th>Special Course Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSHN 509</td>
<td>Nutrition Counseling and Education Methods</td>
<td>3 (0-0-3)</td>
<td>Application of learning theories and nutrition counseling with individuals and groups in the community and clinical settings.</td>
<td>None</td>
<td>Admission to GP-IDEA program in dietetics. Offered as an online course only.</td>
<td>Fall</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FSHN 510</td>
<td>Pediatric Clinical Nutrition</td>
<td>3 (0-0-3)</td>
<td>Physiological, biochemical and nutritional aspects of disease processes relevant to infants and children up to 18 years of age.</td>
<td>None</td>
<td>Admission to GP-IDEA program in dietetics. Offered as an online course only.</td>
<td>Fall</td>
<td>Traditional</td>
<td>No</td>
</tr>
<tr>
<td>FSHN 511</td>
<td>Maternal and Child Nutrition</td>
<td>3 (0-0-3)</td>
<td>Behavioral, physiological and public health issues impacting dietary and nutritional factors that support growth and development.</td>
<td>None</td>
<td>Admission to GP-IDEA program in dietetics; written permission of instructor. Offered as an online course only.</td>
<td>Fall, Summer</td>
<td>Traditional</td>
<td>No</td>
</tr>
<tr>
<td>FSHN 512</td>
<td>Nutritional Aspects of Oncology</td>
<td>3 (0-0-3)</td>
<td>Relationships between nutrition and cancer including the role of nutrition in specific cancers, cancer prevention and patient management.</td>
<td>None</td>
<td>Admission to GP-IDEA program in dietetics. Offered as an online course only.</td>
<td>Spring</td>
<td>Traditional</td>
<td>No</td>
</tr>
<tr>
<td>FSHN 520</td>
<td>Advanced Medical Nutrition Therapy</td>
<td>3 (3-0-0)</td>
<td>Role of nutrition in etiology and treatment of selected disorders.</td>
<td>FSHN 550 or FSHN 551</td>
<td>Admission to GP-IDEA program in Dietetics. Sections may be offered: Online.</td>
<td>Summer</td>
<td>S/U Sat/Unsat Only</td>
<td>No</td>
</tr>
<tr>
<td>FSHN 525</td>
<td>Nutrition Education Theories and Practice</td>
<td>2 (2-0-0)</td>
<td>Examination of current theories, skills, and models used in nutrition education programs as preparation for research and practice.</td>
<td>FSHN 350</td>
<td>Offered as an online course only.</td>
<td>Fall</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FSHN 540</td>
<td>Nutrigenomics and Advanced Lipid Metabolism</td>
<td>3 (0-0-3)</td>
<td>How nutrients regulate gene expressions (nutrigenetics) and how genotype influences an individual's nutrient requirements (nutrigenomics).</td>
<td>None</td>
<td>Admission to GP-IDEA program in Dietetics. Offered as an online course only.</td>
<td>Spring</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FSHN 550</td>
<td>Advanced Nutritional Science I</td>
<td>3 (3-0-0)</td>
<td>Protein, vitamin, mineral metabolism; human studies, animal models.</td>
<td>(BC 351 or BC 403) and (FSHN 350).</td>
<td>Offered as an online course only.</td>
<td>Fall</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FSHN 551</td>
<td>Advanced Nutritional Science II</td>
<td>3 (3-0-0)</td>
<td>Carbohydrate, lipid, energy metabolism; human studies, animal models.</td>
<td>(BC 351 or BC 403) and (FSHN 350).</td>
<td>Offered as an online course only.</td>
<td>Fall</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FSHN 575</td>
<td>Nutrition Education for a Healthy Heart</td>
<td>1 (0-0-1)</td>
<td>Nutrition-related issues of atherosclerotic cardiovascular disease risk reduction and background in the art/science of facilitating behavior change.</td>
<td>None</td>
<td>Offered as an online course only.</td>
<td>Fall, Spring, Summer</td>
<td>Traditional</td>
<td>No</td>
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<tr>
<td>FSHN 586</td>
<td>Practicum-Advanced Clinical Nutrition</td>
<td>Var[1-3]</td>
<td>-</td>
<td>None</td>
<td>Offered as an online course only.</td>
<td>Summer</td>
<td>Instructor Option</td>
<td>No</td>
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<tr>
<td>FSHN 587A</td>
<td>Internship: Clinical Dietetics</td>
<td>6 (0-18-0)</td>
<td>-</td>
<td>None</td>
<td>Offered as an online course only.</td>
<td>Fall, Spring, Summer</td>
<td>Instructor Option</td>
<td>No</td>
</tr>
<tr>
<td>FSHN 587B</td>
<td>Internship: Community Dietetics</td>
<td>6 (0-18-0)</td>
<td>-</td>
<td>None</td>
<td>Offered as an online course only.</td>
<td>Fall, Spring, Summer</td>
<td>Instructor Option</td>
<td>No</td>
</tr>
</tbody>
</table>
FSHN 587C Internship: Food Service Management  Credits: 6 (0-18-0)
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

FSHN 590 Workshop  Credits: Var[1-18]
Course Description:
Prerequisite: None.
Term Offered: Summer.
Grade Mode: Instructor Option.
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, 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, 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.
Prerequisites: 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.
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 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, 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, 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, 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, Professional.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course 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 Course 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 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.
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: Yes.

FSHN 686A  Practicum: Counseling  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 686B  Practicum: 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: Yes.

FSHN 686C  Practicum: Food Services  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 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]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
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, Summer.
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 699B Thesis: Nutrition Credits: Var[1-18]
Course Description: None.
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall, Spring, Summer.
Grade Mode: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

FSHN 700 Cellular Nutrition Credits: 2 (2-0-0)
Course Description: Essential nutrient requirements of cells and organs.
Prerequisites: 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.
Prerequisites: FSHN 550 and FSHN 551.
Restriction: Must be a: Graduate, Professional.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

FSH 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.
Term Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

FSHN 799 Dissertation-Nutrition Credits: Var[1-18]
Course Description: None.
Restriction: Must be a: Graduate, Professional.
Term 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.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

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.
Term Offered: Fall.
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: 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: No.

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: 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: 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: 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: 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: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.