816. Reproductive and Perinatal Epidemiology
Spring of even-numbered years. (3-0-0)
P: HM 810 or concurrently. R: Open only to master's students in Epidemiology or approval of college.
Epidemiology of adverse health states in pregnancy and the puerperium. Impact of these health states on subsequent child development.

817. Epidemiology of Communicable Diseases
Fall of even-numbered years. (3-0-0)
P: HM 810. R: Open only to master's students in Epidemiology or approval of college.
Application of principles of epidemiology to research in communicable diseases relevant to public health in the U.S. and other countries.

818. The Epidemiology of Zoonotic Diseases
Spring of odd-numbered years. (3-0-0) Interdepartmental with Veterinary Medicine.
P: HM 810. R: Open only to master's students in Epidemiology or approval of college.
Human susceptibility to diseases of animals. Modes of transmission, surveillance, and strategies for prevention of specific zoonotic diseases.

819. Spatial Epidemiology and Medical Geography
Spring of even-numbered years. (3-0-0) Interdepartmental with Geography.
P: HM 810. R: Open only to master's students in Epidemiology or approval of college.

822. Cancer Epidemiology
Summer of odd-numbered years. (3-0-0)
P: STT 421, HM 810. R: Open only to master's students in Epidemiology or approval of college.

824. Injury Epidemiology
Fall of odd-numbered years. (3-0-0)
P: HM 810. R: Open only to master's students in Epidemiology or approval of college.
Injury epidemiology, control, and prevention.

825. Epidemilogic Modeling
Summer of even-numbered years. (3-0-0)
P: HM 810, STT 422. R: Approval of college.
Mathematical modeling of epidemics. Stochastic and chaotic systems approaches. Applications through pc software.

829. Design and Conduct of Epidemiological Studies and Clinical Trials
Spring, 3(2-2) Interdepartmental with Large Animal Clinical Sciences. Administered by Large Animal Clinical Sciences.
P: VM 553 or approval of department. R: Open only to graduate students in the colleges of Human Medicine, Osteopathic Medicine, or Veterinary Medicine.

890. Independent Study in Epidemiology
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course.
P: HM 810. R: Open only to master's students in Epidemiology or approval of college.
Independent study in areas relevant to epidemiology such as population genetics.

895. Master's Thesis Research
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 18 credits in all enrollments for this course.
P: Open only to master's students in Epidemiology.

HUMAN NUTRITION AND FOODS

Department of Food Science and Human Nutrition
College of Agriculture and Natural Resources
College of Human Ecology

159. Introduction to Nutrition and Food Science
Fall, Spring, Summer. 3(3-0) Interdepartmental with Food Science.
Food, human health, and food supply. Relationships of food choices to health and disease.

300. Experimental Approaches to Foods
Spring. 3(3-0)
P: CEM 143. R: Open only to majors in Dietetics and Foods: Technology and Management. Completion of Tier 1 writing requirement.

311. Principles of Human Nutrition
Spring. 3(3-0)
P: BCH 200.
A human ecological approach to identification, function and food sources of nutrients required by humans. Normal metabolism. Effects of deficiencies or excesses of specific nutrients on metabolism.

360. Basic Skills in Dietetic Practice
Spring. 3(2-4)
P: CPS 100 or CPS 130 or CPS 131; HNF 150 or HNF 311 or STT 315 or STT 421 or STT 464; HNF 200 or FSC 401. R: Open only to majors in Department of Food Science and Human Nutrition.

355. Food Consumption Behavior
Fall. 3(3-0)
P: EC 201 or EC 202; ML 362 or concurrently. R: Completion of Tier 1 writing requirement.
Introduction to consumer behavior relative to food and food services. Food consumption and expenditure trends. Factors influencing food consumption and expenditures. Consumer advocacy and consumerism.

375. Community Nutrition
Fall. 3(3-0)
P: HNF 150 or HNF 311.
Dietary and anthropometric assessment of population groups. Policies, programs and resources available to address community nutritional needs.

379. Basic Nutritional Counseling
Spring. 3(2-3)
P: HNF 150 or HNF 311. R: Not open to freshmen. Open only to students in Department of Food Science and Human Nutrition.

400. Art and Science of Food Preparation
Spring. 1 credit.
P: HNF 200.
Art and science of food preparation in relation to cost, health, and historical, regional, ethnic, and religious customs. Product evaluation using sensory techniques. Offered half of semester.

404. Food Product Development
Fall. 4(2-3)
P: FSC 401 or HNF 200. R: Open only to freshmen and sophomores.

410. Sensory Assessment of Foods
Spring. 3(2-2)
P: STT 300 or STT 315 or STT 421 or STT 464; HNF 200 or FSC 401. R: Open only to majors in Department of Food Science and Human Nutrition.
Discriminative, consumer and descriptive methods used to evoke, measure, analyze, and interpret sensory reactions to food characteristics.

440. Foodservice Operations
Fall. (3-0)
P: HNF 150 or HNF 311; HNF 200. R: Not open to freshmen and sophomores.
Principles, processes and control strategies in foodservice operations. Menu planning, procurement, and equipment storage and use. Production, consumer distribution, safety and sanitation.

441. Management of Foodservice Operations
Spring. 3(2-0)
P: CPS 100 or CPS 130 or CPS 131; HNF 440; MGT 310 or concurrently. R: Not open to freshmen and sophomores.
Fiscal management of human and material resources in food service operations. Application of manual and electronic data processing strategies to analyze and control costs.

444. Computerized Foodservice Management Laboratory
Spring. 1(0-3)
P: CPS 100 or CPS 130 or CPS 131; HNF 441 or concurrently. R: Open only to majors in Dietetics, Foods: Technology and Management, Human Nutrition, and Nutritional Sciences.
Use of prototype foodservice management software for inventory management, recipe adjustment, recipe and menu precasting, nutrient analysis, cost analysis, and other foodservice applications.
445. Foodservice Management Experience
Spring. 2 credits.
P: HNF 441 or concurrently; MIC 205. R: Open only to seniors in Dietetics and graduate students in Human Nutrition. Approval of department. Receipt, storage, preparation and service of foods. Safety and sanitation. Design, layout, and care of equipment. Costing. Meal ticket requirements. Offered half of semester.

450. Contemporary Cases from the Food Industry
Spring. 3(3-0)
P: HNF 350. R: Open only to seniors in the Department of Food Science and Human Nutrition. Analysis and interpretation of the consumer environment. Development of effective strategies and policies for the food industry. Case study approach.

460. Advanced Human Nutrition
Fall. 5(5-0)
P: BCH 200 or BCH 401; HNF 150 or HNF 311; PSL 250. Metabolism of carbohydrates, proteins, fats, vitamins, and minerals as related to dietary requirements and disease processes in humans. Recommended dietary allowances of nutrients. Metabolism of nutrients. Food sources of nutrients.

463. Nutrition and Human Development
Fall. 3(3-0)

470. Clinical Nutrition and Dietetics
Spring. 4(4-2)
P: BCH 200 or BCH 401; HNF 460; PSL 250 or PSL 431. R: Open only to freshmen and sophomores. Completion of Tier 1 writing requirement. Anatomical, physiological, and biochemical changes associated with diseases. Nutritional assessment. Use of modified diets as adjuncts to other therapies.

473. Interpretation of Clinical Laboratory Tests in Dietetics
Fall. 3(3-0)
P: HNF 460 or concurrently. Principles, procedures and interpretation of clinical laboratory tests. Interrelationships of nutrition and the biological sciences. Relationships of test results to total nutritional care.

474. Drug-Nutrient Interactions
Spring. 2(2-0)
P: HNF 460, one PSL course, one BCH course. R: Open only to juniors, seniors, and graduate students in the Department of Food and Human Nutrition. Reciprocal effects of foods, nutrients, and dietary constituents and pharmacologic agents. Drug-nutrient interactions in high risk groups including the elderly. Drug-nutrient counseling.

480. Concepts of Human Nutrition Research Methods
Spring. 3(3-0)
P: HNF 311 or HNF 460; FSC 458. R: Open only to seniors and graduate students. Completion of tier 1 writing requirement. Approval of department. Issues and techniques involved in nutrition research with human and animal. Guided laboratory experience plus independent project.

490. Independent Study
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to juniors and seniors. Approval of department. Individual study of selected topics in foods, foodservice management or nutrition.

490H. Honors Independent Study
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Not open to freshmen and sophomores. Open only to honors students. Approval of instructor. Individual study of selected topics in foods, foodservice management or nutrition.

494. Practicum
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to majors in Department of Food Science and Human Nutrition. Approval of department. Professional experience in settings and organizations under faculty supervision.

840. Human Nutrition and Chronic Diseases
Fall of odd numbered years. 3(3-0)
P: Open only to graduate students in Food Science, Human Nutrition, and Nursing. Dietary intervention and treatment of chronic diseases: obesity, cardiovascular disease, diabetes, gastrointestinal disorders and cancer.

843. Community Nutritional Assessment
Spring. 3(2-0)
P: Open only to graduate students in Food Science, Human Nutrition, and Nursing. Nutritional assessment of population groups in community settings. Interpretation of national and international health data.

890. Superseded Individual Study
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students. Current topics in applied and basic human nutrition.

910. Topics in Human Nutrition (MTC)
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students. Current topics in applied and basic human nutrition.

915. Nutrition Seminar
Fall, Spring. 1(1-0). A student may earn a maximum of 6 credits in all enrollments for this course. Presentations by students on current topics in nutrition.

984. Human Nutrition Practicum
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in Food Science and Human Nutrition. Students are limited to a combined total of 10 credits in HNF 890 and HNF 894. Approval of department. Experience in agencies or offices related to Human Nutrition. Field experience required.

889. Master's Thesis Research
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 20 credits in all enrollments for this course. R: Open only to masters students in Human Nutrition and Foods.

935. Nutrition: Lipid and Carbohydrate Metabolism
Fall of even numbered years. 3(3-0) Interdepartmental with Animal Science. R: Open only to graduate students in Food Science, Human Nutrition, Animal Science, and Nursing, and graduate-professional students. Regulatory aspects of lipid and carbohydrate metabolism as influenced by nutritional status.

936. Protein Nutrition and Metabolism

937. Mineral Nutrition and Metabolism
Fall of even numbered years. 3(3-0) Interdepartmental with Animal Science. Administered by Animal Science. Forms and locations of mineral elements in body, metabolic functions, deficiencies, and toxicities, interrelationships and quantitative requirements.

990. Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to doctoral students in Human Nutrition and Foods.

INTEGRATIVE MANAGEMENT
PIM
The Eli Broad College of Business and The Eli Broad Graduate School of Management

860. Managerial Skills
Summer. 1.5(1.5-0)
P: Open only to MBA students in the Program in Integrative Management. Approaches to effective group management in business organizations. Creating, maintaining, and leading work groups.

861. Firm Analysis
Fall. 1 credit.
P: Open only to MBA students in the Program in Integrative Management. Faculty supervised analysis of the student's employing organization. Organization and financial structure, information, accounting, operating, and marketing systems.