

## DIVISION OF NUTRITIONAL SCIENCES

### ADMINISTRATION

Patrick Stover, director

Charles McCormick, director of undergraduate studies

Cha-Sook You, assistant director of undergraduate studies

Charles McCormick, director of graduate studies, field of nutrition

### THE DIVISION

Nutritional science draws upon the chemical, biological, and social sciences to understand the complex relationships between human health, nutritional status, food and lifestyle patterns, and social and institutional environments. Understanding these relationships includes the study of the metabolic regulation, biochemistry, and function of nutrients, nutrient requirements throughout the life span, the role of diet in reducing risk of chronic disease, the nutritional quality of foods, and interventions and policies designed to promote the nutritional health of individuals, communities, and populations.

This broad field of study at Cornell is in the Division of Nutritional Sciences, which brings together specialists from many disciplines. Faculty members are involved in undergraduate and graduate teaching, research, and extension of research-based knowledge throughout New York State, the nation, and the world.

The division is affiliated with both the College of Human Ecology and the College of Agriculture and Life Sciences. The undergraduate program in Nutritional Sciences is offered to students enrolled in both colleges. The undergraduate program in Human Biology, Health, and Society is offered through the College of Human Ecology. A program of study in nutrition for biological science majors is offered in collaboration with the undergraduate program in biology. Graduate study in the field of nutrition is administered by faculty members throughout the university.

### FACILITIES

Most of the faculty members of the division work in Savage Hall, Kinzelberg Hall, Martha Van Rensselaer (MVR) Hall, and Weill Hall. In addition to housing offices, classrooms, and seminar rooms, these buildings contain research facilities, specialized laboratories, a human metabolic research unit, and computer facilities. Savage Hall has a graduate reading room and undergraduate student room.

### UNDERGRADUATE MAJOR PROGRAMS

The Division of Nutritional Sciences (DNS) offers three programs leading to a B.S. degree:

**Nutritional Sciences (NS-CHE)**, College of Human Ecology: this program provides students with a strong foundation in the broad field of nutritional sciences as well as thorough training in chemistry and biology. Strong preparation in biology, chemistry, and math is required. Students may prepare for a variety of career interests, including medicine and other health careers, research, fitness and sports nutrition, nutrition counseling, clinical nutrition, dietetics, nutritional biochemistry, community nutrition, and nutrition education.

**Nutritional Sciences (NS-CALS)**, College of Agriculture and Life Sciences: this program provides students with strong training in human nutrition combined with supportive course work in food systems, agriculture and the life sciences. Strong preparation in biology, chemistry, and math is required and prepares students for a variety of careers as mentioned above. Students in the NS-CALS program supplement the core nutrition curriculum with courses in areas such as food policy, food science, animal and plant sciences, business and economics, and environmental sciences as described below.

**Human Biology, Health, and Society (HBHS)**, this program gives students a strong foundation in biology, and fosters the exploration of human health issues from the perspectives of both biology and the social sciences. Students complete a rigorous curriculum in the natural sciences and then, choosing from a wide array of courses offered in the College of Human Ecology, focus their studies on health issues of their choice. Students can explore such topics as gene expression and metabolism related to disease states, biological and social aspects of growth and development, and policies and programs influencing health.

The division also offers the **Program of Study in Human Nutrition for biological sciences majors** who may be enrolled in the College of Agriculture and Life Sciences or College of Arts and Sciences. The Program of Study in Human Nutrition offers biology majors courses on the nature and biochemical function of essential and nonessential nutrients, nutrient requirements, the role of nutrients in gene expression, and the role of diet in both risk of chronic disease and treatment of existing disease states. Students in this program of study are encouraged to complete a diverse set of advanced courses that afford a perspective on current knowledge of nutrient requirements and function and how this knowledge can be put to use. With the exception of a core course in the structure and function of nutrients, the course requirements are unspecified.

Faculty advisors work with individual students to develop a curriculum that fits the students' interests. As part of their program, students are encouraged to obtain laboratory experience either through course work or

research. Honors research programs are also available and encouraged for students meeting program criteria. After graduation, many students choose to continue their education in medical or graduate school and pursue careers in the applied aspects of nutrition or in laboratory-based or epidemiological research.

### THE CURRICULUM

Undergraduate students in these programs complete the requirements of their colleges as well as the courses required by the program of their specific interest.

Both the NS and HBHS programs require a rigorous sequence of courses in chemistry and biology, including introductory chemistry and biology, organic chemistry, biochemistry, and physiology. A minimum competency in college algebra is required with an additional math and statistics requirement for all programs. Students in the HBHS major also complete a course in physics and two additional courses in advanced biology.

All students complete the introductory course NS 1150 Nutrition, Health, and Society. The NS program requires the completion of four other core courses: NS 2450 Social Science Perspectives on Food and Nutrition; NS 3450 Introduction to Physicochemical and Biological Aspects of Foods; NS 3310 Physiological and Biochemical Bases of Nutrition; and NS 3320 Methods in Nutritional Sciences.

NS-CHE students also complete 9 credits of advanced electives in nutritional sciences to complete their major requirements.

NS-CALS majors also complete 9 credits of advanced electives in nutritional sciences. Additionally, NS-CALS majors complete 9 credits of CALS electives that support the major but that are outside of nutrition and chosen from the following areas: Food Policy, Food Production and Marketing, Life Sciences, and Environment. Courses relevant to these areas are offered by the CALS departments of Applied Economics and Management, Food Science, Animal Science, International Agriculture, Plant Breeding, Development Sociology, Crop Science, International Agriculture, and Entomology. Course selections are made in consultation with the advisor and considering the interests of individual students.

The HBHS major requires 15 credits of advanced electives that explore health issues from primarily a biological or a social perspective. These courses are offered by faculty in several departments within the College of Human Ecology.

Undergraduate students in all programs have a faculty advisor with whom they meet at least twice a year. Advisors help students plan their course schedules and can suggest opportunities for individual study or experience outside the classroom.

In all undergraduate programs the correct sequencing of biology, chemistry, and/or nutrition courses is very important. Students considering these programs should obtain detailed information about course requirements from the division's Academic Affairs office, B21 Savage Hall. This office offers a wide range of advising materials to help students develop a program of study that matches their interests and needs.

## UNDERGRADUATE MINOR PROGRAMS

**Nutrition and Health:** The Division of Nutritional Sciences (DNS) offers the Nutrition and Health minor to Cornell students who are not in our major programs of NS-CALS, NS-CHE, HBHS, and Biological Sciences with a Program of Study in Nutrition. The minor allows students to choose from courses concerned with human health and nutrition, economic influences on human nutrition, epidemiology and public health, food quality and food service management, nutritional biochemistry, and the psychological and social influences on human nutrition. The minor consists of NS 1150 Nutrition, Health, and Society plus 9 credits of 2000-plus-level didactic NS courses. Several NS courses are excluded from use toward the minor. For details, please check [www.nutrition.cornell.edu/che/DNS/academic/minor-in-nutrition.cfm](http://www.nutrition.cornell.edu/che/DNS/academic/minor-in-nutrition.cfm). Enrollment is limited in some courses.

**Global Health:** The Global Health minor is intended to complement any academic major offered at the university and to provide students with basic knowledge about global health as well as the necessary skills and experience to begin to build their own unique global health career. The minor is open to all undergraduate students in all colleges. For more information about the minor, check the Global Health Program website: [www.human.cornell.edu/che/DNS/globalhealth/about/index.cfm](http://www.human.cornell.edu/che/DNS/globalhealth/about/index.cfm).

## CAREER OPTIONS AND COURSE PLANNING

Requirements for the programs are the minimum set of courses necessary for a bachelor's degree in these fields. Students should supplement their requirements with elective courses and other learning experiences that will prepare them for entry-level jobs or advanced study in their field(s) of interest. A summary of suggested electives for different career interests follows:

**Medicine and Other Health Careers:** Recommended courses for pre-med students include calculus and two semesters of physics. Specific information about medical school admissions requirements can be obtained from the university's Health Careers office, 203 Barnes Hall. Students interested in other health careers should acquire specific information about those requirements. Courses of interest may include those related to the biological and social determinants of health; human growth, development, and behavior through the life course; interpersonal communications; advanced biology; sociology; psychology; and ethics.

**Dietetics:** Students who wish to work in the areas of clinical nutrition, nutrition counseling,

sports nutrition, community nutrition or food and nutrition management should complete the academic requirements for The American Dietetic Association (ADA). The Didactic Program in Dietetics is accredited by the Commission on Accreditation of Dietetics Education and provides students with the course work necessary for application to an accredited supervised practice program (e.g., Dietetic internships). Students successfully completing didactic program requirements at Cornell are issued a Verification Statement. A one-time fee is involved to cover the cost of program materials and transcript evaluation. The Didactic Program in Dietetics policy and procedure for issuing verification statements can be found at [www.nutrition.cornell.edu/che/DNS/academic/dietetics.cfm](http://www.nutrition.cornell.edu/che/DNS/academic/dietetics.cfm). Upon completion of an accredited supervised practice, students are eligible to take the Registered Examination of the Commission on Dietetic Registration and become a Registered Dietitian (RD). Courses in foods, nutrition and disease, microbiology, food service management, and nutritional care are added to the courses required for the nutrition programs. For more information about meeting ADA requirements, contact the DNS Academic Affairs office, B19 Savage Hall.

### Exercise, Nutrition, and Health

**Promotion:** Students should complete a course in physiology and a course in anatomy after introductory biology. Students can complete the Applied Exercise Science Concentration at Ithaca College, which includes courses in kinesiology, exercise physiology, and biomechanics. Students who wish to apply to graduate schools to study physical therapy should complete a year of introductory physics, a course in statistics, a course in ethics, and three courses in psychology. Students should check the specific requirements of their schools of interest. For information about the Applied Exercise Science Concentration, contact the DNS Academic Affairs office, B21 Savage Hall.

### Biomedical Research/Nutritional

**Biochemistry:** Recommended electives include calculus, physics, genetics, advanced biology and chemistry, toxicology, and nutritional sciences courses related to the physiology, biochemistry, and metabolism of different nutrients and disease states.

### Public Health and Community Nutrition:

Suggested electives include courses in communications, education, human development, policy analysis and management, maternal and child nutrition, geriatric nutrition, nutrition and disease, and food economics.

### Nutrition, Food, and Business:

Recommended electives include courses in management, marketing, economics, communications, hotel administration, and food science.

**Nutrition and Agriculture:** Recommended electives include courses in food science, animal science, plant sciences, international agriculture, agricultural economics, biological sciences, and development sociology.

**International Nutrition:** Recommended electives include courses in language, anthropology, agricultural economics, policy, economics, development sociology, international agriculture, and nutritional sciences related to maternal and child health and problems of developing nations.

**Biology and Behavior:** Recommended electives include courses in psychology, human development, and neurobiology.

### Food, Nutrition, and Health Policy:

Recommended electives include courses in economics, sociology, government, policy analysis, and management.

## SPECIAL EXPERIENCES

Undergraduates can enhance their experiences by participating in structured field experiences or study abroad. Academic credit can be earned for field experiences in a community agency, health care facility, or business. The Urban Semester in the College of Human Ecology provides students with an opportunity to study and gain field experience in New York City. All students intending to spend a semester off-campus in field experience or study abroad must plan their courses well in advance to be sure that all program requirements can be met.

## INDEPENDENT STUDY ELECTIVES

Independent study courses (NS 4000, 4010, 4020) can be used to obtain credit for more diverse or intensive experience than the classroom can offer, whether this involves laboratory work, library research, or field study. Any student interested in independent study should obtain the sponsorship of a faculty advisor and the approval of the director of undergraduate studies or consider applying to the honors program.

## HONORS PROGRAM

The honors program, which leads to a B.S. degree with honors in the College of Human Ecology or a B.S. degree with distinction in research in the College of Agriculture and Life Sciences, gives official recognition to students who have demonstrated excellence in their academic work and their capacity for independent study.

In addition to fulfilling the requirements for a major, students in the honors program take seminars in designing and evaluating research (NS 3980), complete an original piece of research (at least 6 credits of NS 4990), and prepare an honors thesis. The honors project may be laboratory or field research or deal with policy and program development. For more information, students should contact Professor J. Thomas Brenna, B38 Savage Hall.

## COURSES RECOMMENDED FOR NONMAJORS

Courses in nutritional sciences can strengthen programs of study in biological sciences, biology and society, communications, food science, human development, human services, and other fields.

NS 1150 Nutrition, Health, and Society is open to all students. After NS 1150, nonmajors with limited backgrounds in chemistry and biology may elect NS 2450 Social Science Perspectives on Food and Nutrition; NS 2470 Food for Contemporary Living; NS 2750 Human Biology

and Evolution; NS 3060 Nutritional Problems of Developing Nations; NS 3150 Obesity and the Regulation of Body Weight; NS 3470 Human Growth and Development: Biological and Behavioral Interactions; NS 4500 Public Health Nutrition. Nonmajors with strong backgrounds in chemistry and the biological sciences may consider NS 3310 Physiological and Biochemical Bases of Human Nutrition, as well as many advanced nutritional sciences courses, such as NS 3450 Introduction to Physicochemical and Biological Aspects of Foods; NS 4310 Mineral Nutrition and Chronic Disease; and NS 4410 Nutrition and Disease.

## GRADUATE PROGRAMS

Graduate study is administered by the field of nutrition, a group of about 40 faculty members from throughout the university who have a common interest in nutritional problems. In the M.S./Ph.D. and Ph.D. degree programs, students may specialize in molecular and biochemical nutrition, human or animal nutrition, community nutrition, or international nutrition. Research is emphasized in all graduate programs. Field experience may be an important component of concentrations in community, international, and public health nutrition and nutrition education. Teaching experience and participation in the graduate student seminar (NS 7030) are important aspects of graduate training.

The specialties and interests represented by faculty in the field of nutrition provide almost unlimited opportunity for graduate study. Cornell's extensive laboratory and agricultural facilities ensure that students interested in experimental nutrition have exceptional choices and thorough training. As the largest faculty in the country devoted to the study of human nutrition, the field includes specialists in biochemical, metabolic, epidemiological, and sociocultural research. Opportunities to work with community and federal agencies are available to students interested in applied nutrition and public policy. Students in international nutrition are expected to conduct their thesis research abroad.

For more information about the graduate program, students should visit the web site or contact the director of graduate studies, field of nutrition, Cornell University, B19 Savage Hall, Ithaca, NY 14853-4401, 255-2628, nutrition\_gfr@cornell.edu, or www.nutrition.cornell.edu/che/DNS/academic/graduate.cfm.

## COURSES

### NS 1150 Nutrition, Health, and Society

Fall. 3 credits. S-U or letter grades. Evening prelim. D. Levitsky.

Discusses the facts and fallacies concerning the role that nutrition, exercise, and other health behaviors play in preventing disease, maintaining good health, and maximizing athletic performance. Emphasis is on understanding the biological mechanisms through which good nutrition and regular exercise affect psychological and physical health.

### NS 1160 Personalized Concepts and Controversies

Fall. 1 credit. Limited enrollment. Prerequisite: freshman or transfer standing. Corequisite: NS 1150. S-U grades only. J. Swanson.

Provides students enrolled in NS 1150 individualized assistance in many skills including using computers to analyze diets, finding and using scientific references, understanding and criticizing scientific articles, and reviewing material presented in lectures.

### NS 1200 Nutrition and Health: Issues, Outlooks, and Opportunities

Spring. 1 credit. Prerequisite: freshman, sophomore, or junior standing or permission of instructor. *Not* an introductory nutrition course for nonmajors. S-U grades only. C. You.

For students interested in exploring careers in the broad fields of food, nutrition, and health. Experts representing different areas discuss their work, focusing on current issues and trends as well as the requisite knowledge and skills. This course introduces many of the disciplines that are drawn upon in addressing human problems related to food, diet, and health. Students explore career opportunities through a variety of assignments.

### NS 1220 Nutrition and the Life Cycle

Spring. 3 credits. Prerequisite: one semester college biology or NS 1150. Letter grades only. V. Utermohlen.

Biology of the life cycle including development, growth, maturation, and aging and its impact on nutritional requirements of humans from the zygote to the elderly is considered. How to meet these nutritional requirements is discussed relative to the feeding issues and context of each major life stage. Course emphasizes the critical analyses of beneficial and adverse outcomes of various nutrient intakes and dietary patterns on the nutritional status and well-being through integration of nutrition and other health sciences in understanding nutritional needs during the life cycle.

### NS 2450 Social Science Perspectives on Food and Nutrition

Fall. 3 credits. Limited enrollment. Must be enrolled by third class meeting. Prerequisite: NS 1150. S-U or letter grades. C. Bisogni and J. Sobal.

Uses theories, concepts, and methods from the social sciences to examine food, eating, and nutrition. The food choice process model is used as a framework for examining the scope of social science aspects of nutrition. Assignments include examinations, short papers, and two research projects, one qualitative and one quantitative, for which students prepare proposals, collect and interpret data, and write papers to report data.

### NS 2470 Food for Contemporary Living

Fall and spring. 2 credits. Limited enrollment. Priority given to Dietetics students. Highly recommended: NS 1150. Students must attend first lab or placement is forfeited. S-U or letter grades. Lab coat required. E. Gier.

During this laboratory course, the understanding of food ingredients and techniques of food preparation is applied to positive nutritional practices and health promotion goals; basic food science and nutrition principles, food safety/sanitation, sensory evaluation, and social-cultural influences on food choices; food preparation, recipe modification, sensory evaluation (taste

testing required); basic cooking skills, techniques. Introduction to basic menu planning and meeting nutritional requirements while restricted to a budget. Lab performance and a lab practical factored into final student evaluation; attendance at all labs is expected.

### NS 2600 Introduction to Global Health

Spring. 3 credits. Limited enrollment. Letter grades only. Evening prelim. R. Stoltzfus and J. Moseley.

Explore contemporary issues, problems, and controversies in global health through an interdisciplinary perspective. Introduces the global burden of disease and then examines complex social, economic, political, environmental, and biological factors that structure the origins, consequences, and possible treatments of global health problems. A limited number of problems are explored in depth (e.g., HIV, maternal mortality, malaria).

### [NS 2750 Human Biology and Evolution (also ANTHR 2750)]

Fall. 3 credits. Prerequisite: college biology. S-U or letter grades. Offered alternate years; next offered 2011-2012. J. D. Haas and Z. Gu.

Examines the theories and mechanisms of modern evolutionary biology as they apply to humans using evidence from molecular biology, paleontology, and current biological diversity.]

### NS 3000 Special Studies for Undergraduates

Fall or spring. Prerequisite: permission of instructor. S-U or letter grades. DNS faculty. Special arrangements can be made to establish equivalency for courses not transferred from a previous major or institution. Students prepare a description of the study they want to undertake using a form available from the college registrar's office. The form, signed by both the instructor directing the study and the associate director for academic affairs, is filed at course registration or during the change-of-registration period.

### [NS 3060 Nutritional Problems of Developing Nations]

Fall. 3 credits. Prerequisite: NS 1150. S-U or letter grades. Offered alternate years; next offered 2011-2012. R. Stoltzfus.

Overview of the important nutrition problems facing low-income nations with an in-depth view of the nutrition problems of one case country or region. Instruction is through lectures, readings, and a group project.]

### [NS 3150 Obesity and the Regulation of Body Weight (also PSYCH 3150)]

Spring. 3 credits. Prerequisites: junior or senior standing; NS 1150, PSYCH 1101. S-U or letter grades. Offered alternate years; next offered 2011-2012. D. Levitsky.]

### NS 3200 Introduction to Human Biochemistry

Fall. 4 credits. Prerequisites: one year college biology; one year college general chemistry; and CHEM 1570 or 3570-3580; or permission of instructor. S-U or letter grades. Evening prelim. S. B. Qian and P. Stover.

Presents the principles of biochemistry within the context of human health and disease. Teaches the metabolism of carbohydrates, lipids, proteins, and selected micronutrients from a perspective that emphasizes their role in supporting the structure and physiological functions of the major organs of the body. Incorporates the concepts of enzyme catalysis,

enzyme regulation, hormone action, and bioenergetics within this framework. Covers the fundamental concepts of eukaryotic DNA structure, function, and gene expression with reference to their importance in regulating metabolism and the impact of a changing nutrient environment.

**NS 3220 Maternal and Child Nutrition**

Spring. 3 credits. Limited enrollment. Prerequisite: NS 1220 or permission of instructor. S-U or letter grades. Offered alternate years. P. Brannon.

Critical analyses of the impact of nutritional status on the mother, fetus, and young child in domestic and global contexts; advanced aspects of the biological bases of nutritional requirements for reproduction, growth, and development; and integration of nutrition with life and behavioral sciences in understanding these aspects are addressed.

**NS 3310 Physiological and Biochemical Bases of Human Nutrition**

Spring. 4 credits. Prerequisites: BIOMG 3300 or 3310, or NS 3200, or equivalent. S-U or letter grades. C. McCormick and L. Qi.

Examines the biochemical and physiological bases of human nutritional requirements. Uses an integrated approach to cover the digestion and metabolism of nutrients (carbohydrates, proteins, lipids, vitamins, and minerals). Metabolic and chronic diseases related to nutrition are discussed throughout the semester. Discussion sections and problem sets provide an opportunity to examine in greater depth selected topics from lecture.

**NS 3320 Methods in Nutritional Sciences**

Fall. 3 credits. Prerequisites: undergraduate biochemistry; NS 3450, NS 3310 preferred or concurrent registration. Letter grades only. Staff.

Laboratory introduction to principles and analytical techniques of nutritional research. Emphasizes analytical concepts and skills required to determine nutrient function and nutritional status of individuals. Topics include methods of nutrient, metabolite, and enzyme analysis in body fluids; methods for assessing individual food intake and nutritional status; and methods for assessing the composition of foods.

**NS 3410 Human Anatomy and Physiology**

Spring. 3 credits. Prerequisite: college biology. Priority given to DNS majors. Letter grades only. K. O'Brien.

Introduces human anatomy and physiology by detailing the structure and function of the human body and mechanisms used to maintain homeostasis. Emphasis is given to aspects relevant to the nutritional sciences and medicine. Content includes language of anatomy, cells, tissue, integumentary, respiratory, skeletal, muscular, digestive, nervous, cardiovascular, urinary, and reproductive systems. Clinical examples are provided to highlight perturbations and physiology of topics discussed. Evaluation is based on attendance, iclicker-based class interaction, weekly quizzes, and a midterm and final.

**NS 3420 Human Anatomy and Physiology Laboratory**

Spring. 2 credits. Corequisite: NS 3410. Priority given to DNS majors. Students registered for the course who are more than 10 minutes late for the first lab forfeit registration; no admittance after second week. M. Lujan.

Principles of human anatomy and physiology will be presented using anatomical models, drawings, dissections, and histology as well as interactive noninvasive assessment of physiological functions and review of clinical case studies. Weekly lecture will provide content connections with NS 3410. Emphasis will be on location, recognition, and description of anatomical structure and relation to function. Content includes human body orientation and language of anatomy, histology, and regulation of various organ systems. Evaluation based on attendance, two lab practicums, and lab written assignments.

**NS 3450 Introduction to Physicochemical and Biological Aspects of Foods (also FDSC 2000)**

Fall. 3 credits. Prerequisites: college-level courses in chemistry and biology. Letter grades only. Two evening prelims. R. Parker.

Comprehensive introduction to the physical, chemical, and nutritional properties of foods and to the principles and practice of food science and technology. Topics include chemistry and functionality of commodities and ingredients, chemical and physical phenomena that affect food quality, techniques of processing and preservation, microbiology and fermentation, food safety, regulation, and contemporary issues.

**NS 3470 Human Growth and Development: Biological and Behavioral Interactions (also HD 3470, BSOC 3471)**

Spring. 3 credits. Prerequisites: BIOG 1101 or 1109 or equivalent; HD 1150 or PSYCH 1101 or equivalent. S-U or letter grades. Offered alternate years. J. Haas and S. Robertson.

Discusses the interrelationships of physical and psychological growth and development in humans during infancy. Considers intrinsic and extrinsic causes of variations in growth including various forms of stimulation. Examines the consequences of early growth and its variations for current and subsequent behavioral, psychological, and physical development. The interaction between physical and behavioral or psychological factors is emphasized throughout the course.

**NS 3500 Epidemiology in Context**

Spring. 3 credits. Prerequisite: introductory statistics (e.g., PAM 2100, AEM 2100, ILRST 2100). Letter grades only. D. Pelletier.

Provides the conceptual tools to critically analyze the controversies related to a wide range of contemporary health and social issues in the United States and global context. Basic principles of epidemiology are illustrated via case studies of nutritional and biomedical interventions, environmental toxins, and social issues.

**NS 3980 Research in Human Nutrition and Health**

Fall. 1 credit. Requirement for students in honors research program sponsored by DNS. Open to all students. S-U grades only. J. T. Brenna.

Lecture course focusing on the structures and practice of professional research conducted in human nutrition and health, a field that encompasses questions ranging widely from subcellular components to population-level issues. Introduces the various approaches and methods used by researchers and addresses the topics of ethics and research controls. Describes the structure of scientific literature, preparation of research proposals, roles of

scientific organizations, and funding sources. Students are required to attend and report on research seminars on campus.

**NS 4000-4010-4020-4030 Special Studies for Undergraduates**

Fall or spring. Variable to 3 credits. S-U grades only for NS 4000-4010-4020; after completing 2 credits S-U with final grade of S for NS 4000-4010-4020, grading option may be S-U or letter for NS 4000-4010-4020; S-U or letter grades for NS 4030. DNS faculty.

For advanced independent study by an individual or group of students who want to study a field of nutritional sciences not otherwise provided through course work in the division or elsewhere in the university. Students prepare a description of the study they want to undertake on a form to be signed by the instructor directing the study and the student's faculty advisor. The form, available in B21 Savage Hall or in the Human Ecology registrar's office, is filed at course registration or within the change-of-registration period. To ensure review before the close of the course registration or change-of-registration period, students should submit the special-studies form to B21 Savage Hall as early as possible.

**NS 4000 Directed Readings**

S-U grades only; after completing 2 credits S-U with a final grade of S for NS 4000, grading option may be S-U or letter.

Study that predominantly involves library research and independent reading.

**NS 4010 Empirical Research**

S-U grades only; after completing 2 credits S-U with a final grade of S for NS 4010, grading option may be S-U or letter.

Study that predominantly involves data collection and analysis in laboratory or studio projects.

**NS 4020 Supervised Fieldwork**

S-U grades only; after completing 2 credits S-U with a final grade of S for NS 4020, grading option may be S-U or letter.

Study that involves both responsible participation in a community setting and reflection on that experience through discussion, reading, and writing. Academic credit is awarded for this integration of theory and practice.

**NS 4030 Teaching Apprenticeship**

S-U or letter grades.

Study that includes assisting faculty with instruction.

**NS 4130 Nutritional Genomics—Evolution and Environment**

Spring. 2 credits. Prerequisites: senior or graduate standing, BIOMG 2810 or permission of instructor. S-U or letter grades. Z. Gu.

Examines selected topics related to nutrition and genome biology. Discussion of nutrition and human evolution, such as human brain evolution, evolution of taste, population variation related with nutrition, and evolution of human diseases. Reading materials are from literature and participation in class discussion is required.

**NS 4210 Nutrition and Exercise**

Summer. 3 credits. Prerequisite: BIOAP 3110 or NS 3410; NS 1150 or NS 1220. S-U or letter grades. S. Travis.

Designed for nutrition students. Examines interactions between nutrition, exercise, and athletic performance and considers biological, psychological, and sociological perspectives.

Application is made to various sports through critiques of research studies and evaluation of popular sports nutrition claims. Educational strategies for communicating with athletes, coaches, and trainers are addressed.

**NS 4250 Nutrition Communications and Counseling**

Spring. 3 credits. Limited enrollment. Prerequisites: NS 1150, 1220, and 2450; junior or senior standing; priority given to senior dietetics/nutrition majors. Letter grades only. S. Travis.

Students learn the theoretical basis of effective health promotion communications and develop effective nutrition communication skills through application in a variety of settings. Provides hands-on experiences in counseling, educational program development, and oral and written communications.

**NS 4310 Mineral Nutrition and Chronic Disease**

Fall. 3 credits. NS 3310 preferred. S-U or letter grades. C. McCormick.

Evaluate the evidence from primary literature that dietary calcium, sodium, and iron play an important role in the development of osteoporosis, hypertension, and anemia, respectively. An additional goal of the course is to review the molecular processes that are involved in the homeostasis of each mineral and the recommendations for daily nutrient intakes. Class discussion of key research articles is conducted and evaluated.

**NS 4410 Nutrition and Disease**

Fall. 4 credits. Prerequisites: NS 3310 and physiology course. S-U or letter grades. M. Caudill.

Principles of nutrition, biochemistry, physiology, genetics, pathology, and pharmacology are combined to understand disease risk, prevention, progression, and management. Lecture offers opportunities for the class to engage in the discussion of original research articles on topics of high current interest in the area of nutrition and health. Topics include nutritional genomics, obesity, cardiovascular disease, diabetes mellitus, renal, neurological, and gastrointestinal disorders.

**NS 4420 Implementation of Nutrition Care**

Fall. 3 credits. Pre- or corequisites: NS 1150, NS 1220, NS 2470, NS 4410, or concurrent registration or equivalent background in courses. S-U or letter grades. Evening prelim. E. Gier.

Develop skills necessary to implement nutrition care. Application of the nutrition care process as it applies to clinical settings is emphasized. Students develop skills to perform nutrition assessment, nutrition diagnosis, nutrition intervention, monitoring, and evaluation. Content includes principles of MNT for acute and chronic diseases, menu planning for disease states, the role of other allied health practitioners in assuring nutritional health, and reimbursement and legislation in dietetics practice.

**NS 4450 Toward a Sustainable Global Food System: Food Policy for Developing Countries (also AEM 4450)**

Fall. 3 credits. Preferred: 6 credits in economics, applied economics, or sociology and 6 credits in nutrition and/or agricultural sciences. Letter grades only. P. Pinstrup-Andersen.

Comprehensive presentation and discussion of policy options for a sustainable global food system, with focus on developing countries. Topics include economic policy related to nutrition, health, consumption, production, natural resource management, trade, markets, gender roles, armed conflict, and ethics. A social entrepreneurship approach bases on case studies and active participation by students will be used.

**NS 4500 Public Health Nutrition**

Spring. 2 credits. Prerequisite: NS 1150. Students must attend first lec or placement is forfeited. Letter grades only. Evening prelim. K. Rasmussen.

Public health nutrition is the major professional career track for nutritionists outside of dietetics. It deals with efforts to improve the diets and nutritional status of whole populations by working at the community, state, and national levels. Course helps prepare students to work in public health nutrition by describing methods used in the assessment of nutrition problems, the development of nutrition-related policies, and the delivery of health, nutrition, and food assistance programs.

**[NS 4570 Health, Poverty, and Inequality: A Global Perspective (also ECON 4740)]**

Fall. 3 credits. Prerequisite: introductory microeconomics and statistics or permission of instructor. S-U or letter grades. Offered alternate years; next offered 2011-2012. D. Sahn.

Course focuses on global health challenges, and how they are related to poverty and inequality.]

**NS 4600 Explorations in Global Health**

Spring. 3 credits. Prerequisite: junior or senior standing with completion of all requirements for global health minor, or permission of instructor. Letter grades only. D. Pelletier.

Capstone course for global health minors assists students to explore their topical interests in global health and integrate these with their field experiences, core knowledge in global health, and personal values and ethical frameworks. Course content is driven largely by student topical interests and experiences, and selected guest speakers. Explorations are done through individual work, team projects, and classroom discussions.

**NS 4620 Seminar in Global Health and Development Issues: Tanzania**

Spring. 1 credit. Restricted to students in the Global Health and IARD Summer Session and Internship Program in Tanzania. S-U grades only. R. Stoltzfus and J. Moseley.

Seminar prepares students for the Global Health and IARD Summer Session and Internship Program in Tanzania during the summer. Students hear from Cornell faculty and other speakers on global health, agriculture, and development issues relevant to Tanzania. Course sessions also cover Tanzanian history, culture, language, and politics. Students will be actively engaged in reading, discussing, and presenting on key seminar topics.

**NS 4630 Global Health, Development and Policy Issues in Tanzania**

Summer. 4 credits. Prerequisite: NS 4620. Restricted to students in the Global Health and IARD Summer Session and Internship Program in Tanzania. Letter grades only. R. Stoltzfus and S. Langwick.

Engages Global Health minors, IARD majors, and Tanzanian medical students in problem-based learning in a cross-cultural small group context in Tanzania. Develop and justify policy recommendations to address a current issue related to global health, nutrition, food safety, or agriculture. Students will work in assigned teams of three to four, designed to mix Cornell and Tanzanian students.

**[NS 4750 Mechanisms Underlying Mammalian Developmental Defects (also BIOAP 4750)]**

Spring. 3 credits. Prerequisites: BIOMG 3300, 3310-3320 or 3330 (may be taken concurrently). Offered alternate years; next offered 2011-2012. D. Noden and P. Stover. For description, see BIOAP 4750.]

**NS 4880 Applied Dietetics in Food Service Systems**

Spring. 3 credits. Limited to Dietetics seniors. Prerequisites: HADM 1106 or intro food service management course, NS 2470, and BIOMI 2900. White lab coat required. Fee for special supplies/training and activities: approx. \$110. E. Gier.

Gain experience in facility design; equipment selection, use, and care; job analysis and evaluation; human resources planning; management of financial resources; recipe development and volume food production; computer-assisted management; employee training; and applied safety and sanitation standards. Through planning and executing a themed event, students develop skills required to operate/manage a food service program. Application of quality management in food service operations and facility management is stressed. Laboratories are arranged through Cornell Dining and other off-campus sites. Completion of a professional portfolio is required. ServSafe training and examination is conducted; successful completion results in ServSafe manager certification.

**NS 4900 Manipulating the Mouse Genome (also BIOMG 4900)**

Fall. 1 credit. Meets during first half of semester and provides background information for VTBMS/TOX 7010 Mouse Pathology and Transgenesis, which meets during second half. Students interested in both must register for them separately. Prerequisites: BIOMG 2800, 2810, or 2820, 3300, 3320 or 3330, or NS 3200. S-U or letter grades. P. Soloway.

Functional genomic analysis has benefited enormously from experimental manipulation of the genomes of many organisms. The mouse has been the model of choice for such studies in mammals. Explores the tools available for experimental manipulation of the mouse genome, including transgenesis, gene targeting, gene trapping, chemical mutagenesis, use of induced pluripotent stem cells, and cloning by nuclear transplant. Also discussed are use of recombinant inbred mice and genome-wide association studies for complex trait analysis. Readings from the scientific literature focus on seminal applications of these methods.

**NS 4990 Honors Problem**

Fall and spring. Credit TBA. Prerequisite: acceptance into honors research program. Students who have been accepted into the honors research program work on their projects under the guidance of their faculty mentors. Honors research students must complete a minimum of 6 credits of NS 4990, typically spread over two or more semesters. The student and the mentor determine the appropriate number of credits for each semester. Research activities may include reviewing the literature, writing a proposal, developing research methods, collecting data in the field or laboratory, analyzing data, and writing the honors thesis.

**NS 5200 Health and the Humanities**

Fall. 2 credits. Prerequisite: post-baccalaureate students only. Letter grades only. V. Utermohlen.

Review the roles of the humanities in the development of health care. Through readings, discussions, and field trips to locations on and off campus, you will acquaint yourself with the historical underpinnings of health care through their representations in the arts, and examine how the arts have influenced our understanding of health and illness.

**NS 5410 Integrative Health Sciences I**

Fall. 3 credits. Prerequisite: post-baccalaureate students only. Letter grades only. V. Utermohlen.

Case-based approach to disease and health maintenance, with an emphasis on integrating the student's knowledge of anatomy, physiology, metabolism, pharmacology, and nutrition in order to solve clinical problems. Classes consist of combined lectures and labs, with media-based exercises. Evaluation based on attendance, participation in discussions, quizzes, case study assignments, and a comprehensive final.

**NS 5411 Integrative Health Sciences II**

Spring. 3 credits. Prerequisite: post-baccalaureate students only. Letter grades only. V. Utermohlen.

Second semester of course sequence; NS 5410 Integrative Health Sciences I.

**NS 6000 Special Problems for Graduate Students**

Fall or spring. Credit TBA. Prerequisite: graduate students recommended by their chair and approved by instructor in charge. S-U or letter grades. DNS faculty.

Emphasizes independent advanced work. Experience in research laboratories in the division may be arranged.

**NS 6050 Molecular and Human Nutrition**

Fall and spring. 1 credit. S-U grades only. Molecular nutrition faculty.

Graduate seminar series that focuses on recent advances in molecular nutrition. Weekly presentations are made by faculty members, postdocs, and graduate students and are based on the primary literature. The presentations are followed by a discussion involving all participants.

**NS 6080 Epigenetics (also BIOMG 6080)**

Fall. 2 credits. Prerequisites: BIOMG 2810 and 3300, 3320, or 3330 or NS 3200. Letter grades only. P. Soloway.

Epigenetic effects refer to reversible alterations in chromatin structure that can stably and heritably influence gene expression. Changes include covalent modifications to DNA itself or to proteins bound to DNA as well as

noncovalent remodeling of chromatin. Course examines selected epigenetic phenomena described in several eukaryotes, mechanisms regulating these effects, and their phenotypic consequences when normal regulation is lost. Reading materials are from current literature, and participation in class discussion is required.

**NS 6100 Proteins and Amino Acids: Nutritional Regulation of Mammalian Protein Synthesis and Degradation**

Fall. 2 credits. Letter grades only. Offered alternate years. M. Stipanuk.

Basic biochemistry and cell biology related to processes involved in protein synthesis and degradation and the regulation of these processes. Scientific literature will be used to provide examples of regulation of each of these processes, selected for their relevance to human nutrition and metabolism.

**NS 6110 Molecular Toxicology (also TOX 6110)**

Spring. 3 credits. S-U letter grades. Offered alternate years. S. Bloom and B. Strupp.

Focuses on metabolism of drugs and environmental chemicals to toxic and mutagenic products and how they can induce developmental and reproductive alterations or carcinogenesis. Signaling pathways that regulate cellular responses to toxicant exposure are discussed. Also emphasizes molecular markers useful for assessment of human exposure to chemicals and radiation.

**[NS 6140 Topics in Maternal and Child Nutrition]**

Fall. 3 credits. Prerequisite: permission of instructor. Letter grades only. Next offered 2011–2012. K. Rasmussen.

Advanced course on the role of nutrition during pregnancy and lactation.]

**NS 6170 Teaching Seminar**

Fall or spring. 0 credits. Prerequisite: DNS graduate students or permission of instructor. S-U grades only. C. You and D. Way.

Individualized instruction focusing on development of teaching skills for guiding learning in lecture, discussion, and laboratory setting, and reflection on the impact of these skills on teaching and learning. Students identify the aspects of the specific teaching assignments they wish to develop and work with instructors on independent learning projects that may include preparation for lecturing, preparation of exams, efficient grading, and so on. Optional videotaping provides opportunities for practice and analysis.

**NS 6180 Teaching Experience**

Fall or spring. 0 credits. Prerequisite: DNS graduate students or permission of instructor. S-U grades only. C. You.

Designed to provide experience in teaching nutritional sciences by direct involvement in college courses under supervision of a faculty member. The aspects of teaching and the degree of involvement vary, depending on the needs of the course and the experience of the student.

**NS 6190 Field of Nutrition Seminar (also ANSC 6190)**

Fall or spring. 0 credits. S-U grades only. Faculty and guest lecturers.

Lectures on current research in nutrition.

**NS 6250 Community Nutrition in Action**

Fall. 3 credits. Prerequisite: dietetic interns. Letter grades only. Staff.

Provides students enrolled as dietetic interns with supervised, in-depth experiences in a community nutrition program and fosters the integration of research, theory, and practice. Through placements in community programs, students gain experience in program administration and in assessing, designing, implementing, and evaluating food and nutrition programs for targeted populations through public and private organizations. In weekly seminars (and other seminars and observations as arranged) students integrate theory and practice, reflect upon their placement experience, learn about community nutrition research, and explore the many issues facing community food and nutrition practitioners.

**NS 6300 Anthropometric Assessment**

Fall, five weeks. 1 credit. Prerequisite: NS 3310 or equivalent and permission of instructor. S-U or letter grades. Offered alternate years. J. Haas.

Topics in this lecture/lab course include biological basis of anthropometry for nutritional status assessment, quality control of anthropometric data, applications to special groups (infants, children, adolescents, pregnant women, and the elderly), statistical analysis and presentation of anthropometric data, reference standards and interpretation, measurement techniques of anthropometry, and body composition assessment.

**NS 6310 Micronutrients: Function, Homeostasis, and Assessment**

Fall. 2–4 credits. Prerequisites: intro biochemistry and NS 3310 (or equivalent) or permission of instructor. S-U or letter grades. C. McCormick, M. Caudill, K. O'Brien, and R. Parker.

Advanced course in nutrition that focuses on the function, homeostasis, and metabolism of the principal dietary micronutrients (vitamins and minerals). It expands on the principles of nutritional biochemistry provided in introductory courses. One goal is to provide the scientific basis and rationale for recommended Dietary Reference Intakes. The course will draw on primary literature of both past and contemporary research. This course is divided into two parts: minerals and vitamins (each for 2 credits) during the first and second 7-week periods, respectively.

**NS 6320 Regulation of Macronutrient Metabolism**

Spring. 4 credits. Prerequisite: NS 3310 or permission of instructor. S-U or letter grades. M. Stipanuk, P. Brannon, L. Qi, P. Soloway, T. Brenna, and R. Parker.

Course provides a comprehensive overview of macronutrient metabolism with an emphasis on issues relevant to human nutrition. Topics include regulation of macronutrient utilization by various tissues in response to food intake, energy stores, and energy expenditure; cellular pathways for integration of nutrient, growth, and stress signals; biological regulation of food intake and energy expenditure; the regulation of utilization of macronutrients for growth; dietary reference intakes for macronutrients; specialized functions of essential amino acids and essential fatty acids; lipoprotein and cholesterol metabolism; and the regulation, or dysregulation, of macronutrient utilization in various disease/physiological states.

**NS 6350 Introduction to Community Nutrition Research for Dietetic Interns**

Fall. 3 credits. Prerequisites: graduate standing and permission of instructor. Letter grades only. Staff.

Introduces the paradigms, concepts, methods, and issues involved in community nutrition research. Students design and conduct individual research projects to inform community nutrition programs. Lectures, readings, and class discussion support students as they conduct their research activities.

**[NS 6370 Topics in Nutritional Epidemiology]**

Spring. 3 credits. Prerequisites: graduate standing; NS 6520. S-U or letter grades. Offered alternate years; next offered 2011-2012. J. McDermid.

Selected topics will cover the application and extension of general epidemiological concepts and methods in the context of contemporary nutritional epidemiology research and practice.]

**NS 6400 Social Science Theories in Nutrition**

Fall. 3 credits. Limited enrollment. Prerequisite: graduate standing. Letter grades only. J. Sobal.

Social science theories from sociology, psychology, anthropology, economics, political science, geography, and history that contribute to understanding food, eating, and nutrition are discussed to understand how paradigms, theories, and models apply to nutrition topics, issues, and problems.

**NS 6420 Globalization, Food Security, and Nutrition (also AEM 6420)**

Fall. 2 credits. Prerequisites: permission of instructor, graduate standing, and basic understanding of economics and nutrition. Letter grades only. P. Pinstrup-Andersen.

Directed readings course with a weekly 50-minute discussion session. Course is aimed at graduate students in nutrition, agricultural economics, and other relevant fields, who wish to explore how globalization may affect poverty, food security, and nutrition in developing countries and how national policies and international agreements and institutions may influence the outcome. Discussion sessions are based on assigned readings for each week.

**NS 6440 Community Nutrition Seminar**

Fall and spring. 1 credit. S-U grades only. A. Gillespie.

Sponsored by the Cornell Community Nutrition Program. Graduate students and faculty learn about current research in the program and related fields within and outside Cornell and about community nutrition theories and research methodologies. The seminar also provides a forum to discuss participants' own research and current issues in community nutrition.

**NS 6520 The Foundations of Epidemiology**

Spring. 3 credits. Prerequisite: BTRY 6010 or equivalent. Letter grades only. P. A. Cassano.

Intend to train students to conduct epidemiologic research. Through lectures, classroom discussion, and project-based work, students will learn the principles of epidemiology, evaluate evidence from epidemiologic studies, and design studies to

investigate hypotheses of interest. Students will apply epidemiologic approaches to study questions in health-related specialties including clinical medicine, health services and health care management, and nutritional sciences.

**NS 6600 Special Topics in Nutrition**

Fall or spring. 3 credits max. each semester; because topics change, may be repeated for credit. Prerequisite: graduate standing and permission of instructor. DNS faculty.

Designed for students who want to become informed in any specific topic related directly or indirectly to nutrition. The course may include individual tutorial study, experience in research laboratories, a lecture series on a special topic selected by a professor or a group of students, and/or selected lectures of another course already offered.

**[NS 6800 International Nutrition Problems, Policy, and Programs]**

Spring. 3 credits. Prerequisite: permission of instructor. TBA. Offered alternate years. Staff.

Designed for graduate students who want to learn about the important nutritional problems of developing countries. The major forms of malnutrition related to poverty and their underlying causes are discussed. Emphasis is placed on programs and policies that can help poor countries and communities improve their nutritional and health status.]

**NS 6850 Empirical Methods for the Analysis of Household Survey Data: Applications to Nutrition, Health, and Poverty (also ECON 7711)**

Spring. 4 credits. Prerequisites: intermediate microeconomics, intermediate statistics or econometrics (through multiple regression and limited dependent variable models), or permission of instructor. Offered alternate years. D. Sahn.

Advanced seminar explores recent empirical research and evaluation literature on issues of health, nutrition, education and intra-household decision-making in developing countries.

**NS 6900 Trace Element and Isotopic Analysis (also CHEM 6280)**

Fall. 3 credits. Prerequisite: CHEM 2880 or 3900, 3020 or CHEM 2080 and MATH 1120, or permission of instructor. Primarily for graduate students and advanced undergraduates. S-U or letter grades. Offered alternate years. J. T. Brenna.

Survey course in modern high-precision isotope ratio mass spectrometry (IRMS) techniques and trace/surface methods of analysis. Topics include dual inlet and continuous flow IRMS, elemental MS, atomic, X-ray, and electron spectroscopies, ion and electron microscopies, and biological and solid state applications.

**NS 6980 International Nutrition Seminar**

Fall and spring. 0 credits. No grades given. Staff.

Consists of presentations by Cornell faculty and graduate students and invited outside speakers. Speakers cover a range of topics relating to nutritional problems, policy, and programs in nonindustrialized countries.

**NS 6990 Special Topics in International Nutrition**

Fall and spring. 3 credits max. each semester; because topics change, may be repeated for credit. Prerequisite: permission of instructor. Staff.

Designed for graduate students, mainly those with a concentration in international nutrition, who wish to become familiar with some specific topic related to international nutrition that is not adequately covered in an existing course. It consists of tutorial study on an agreed-upon topic.

**NS 7020 Seminar in Toxicology (also TOX 7020)**

Fall or spring. 1 credit. S-U grades only. Staff.

Covers varied topics in biochemical, genetic, nutritional, veterinary, and regulatory toxicology, ecotoxicology, and environmental chemistry. Includes presentations of basic research studies, fundamental concepts, and research activities involving environmental problems of a toxicological nature. Presentations are given by speakers from Cornell and visitors.

**NS 7030 Seminar in Nutritional Sciences**

Fall and spring. 1 credit. Prerequisite: for undergraduates, permission of instructor. S-U grades only. Staff.

Presentations of original articles pertinent to the nutritional sciences. Students read and learn how to critically analyze and interpret original articles published in a wide variety of journals. Students learn how to make professional presentations and how to critique the presentations given by others.

**NS 7040 Grant Writing**

Spring. 2 credits. Prerequisite: NS 7030. S-U grades only. P. Stover.

Interactive course that addresses the knowledge, approach, and professional skills (conceptual, technical, and writing) required to create a successful grant proposal and initiate a career in research. Format is focused around the development, execution, and evaluation of NIH-style grant proposals. Lectures will focus on the development of hypotheses, specific aims, and long term goals, as well as research design and methodology. Issues of human subject and animal experimentation, ethics, and research collaborators are also covered. Students are expected to develop a full-length grant proposal in consultation with their research advisor. Basic guidelines and approach to proposal evaluation and scoring are covered. Course concludes with a mock study section where all proposals are reviewed by the students.

**NS 8990 Master's Thesis and Research**

Fall or spring. Credit TBA. Prerequisite: permission of graduate committee chair and instructor. S-U or letter grades. DNS graduate faculty.

**NS 9990 Doctoral Thesis and Research**

Fall or spring. Credit TBA. Prerequisite: permission of graduate committee chair and instructor. S-U or letter grades. DNS graduate faculty.

## FACULTY ROSTER

Bensadoun, Andre, Ph.D., Cornell U. Prof.,  
Nutritional Sciences/Physiology, Emeritus

Bisogni, Carole, Ph.D., Cornell U. Prof.

Brannon, Patsy, Ph.D., Cornell U. Prof.

Brenna, J. Thomas, Ph.D., Cornell U. Prof.

Cassano, Patricia, Ph.D., U. of Washington.  
Assoc. Prof.

Caudill, Marie, Ph.D., U. of Florida. Assoc.  
Prof.

Devine, Carol M., Ph.D., Cornell U. Prof.

Dollahite, Jamie, Ph.D., U. of Texas. Assoc.  
Prof. and EFNEP Leader

Gillespie, Ardyth, Ph.D., Iowa State U. Assoc.  
Prof.

Gu, Zhenglong, Ph.D., U. of Chicago. Asst.  
Prof.

Haas, Jere D., Ph.D., Pennsylvania State U.  
Nancy Schlegel Meinig Professor in  
Maternal and Child Nutrition

Habicht, Jean-Pierre, Ph.D., Massachusetts Inst.  
of Technology. James Jamison Professor of  
Nutritional Epidemiology, Emeritus

Kazarinoff, Michael N., Ph.D., Cornell U.  
Assoc. Prof., Nutritional Sciences/  
Biochemistry, Molecular and Cell Biology

Latham, Michael, M.D., Harvard U. Prof.  
Emeritus, Nutritional Sciences

Levitsky, David A., Ph.D., Rutgers U. Prof.

Lujan, Marla, Ph.D., Queen's U. (Canada). Asst.  
Prof.

McCormick, Charles, Ph.D., North Carolina  
State U. Assoc. Prof. and Dir., Graduate and  
Undergraduate Studies

McDermid, Joann, Ph.D., U. of London (U.K.).  
Asst. Prof.

O'Brien, Kimberly, Ph.D., U. of Connecticut.  
Assoc. Prof.

Olson, Christine M., Ph.D., U. of Wisconsin.  
Prof.

Parker, Robert S., Ph.D., Oregon State U.  
Assoc. Prof.

Pearson, Thomas, Ph.D., Johns Hopkins U.  
Adjunct Prof.

Pelletier, David, Ph.D., Pennsylvania State U.  
Assoc. Prof.

Pelto, Gretel, Ph.D., U. of Minnesota. Prof.

Pinstrup-Andersen, Per, Ph.D., Oklahoma State  
U. H. E. Babcock Professor of Food,  
Nutrition, and Public Policy

Qi, Ling, Ph.D., U. of Maryland. Asst. Prof.

Qian, Shu-Bing, Ph.D., Shanghai Jiaotong U.  
(People's Republic of China). Asst. Prof.

Rasmussen, Kathleen M., Sc.D., Harvard U.  
Prof.

Sahn, David, Ph.D., Massachusetts Inst. of  
Technology. Prof.

Sobal, Jeffery, Ph.D., U. of Pennsylvania. Prof.

Soloway, Paul, Ph.D., Princeton U. Assoc. Prof.

Stipanuk, Martha H., Ph.D., U. of Wisconsin.  
Prof.

Stoltzfus, Rebecca, Ph.D., Cornell U. Assoc.  
Prof.

Stover, Patrick, Ph.D., Medical Coll. of Virginia.  
Assoc. Prof., DNS Director

Strupp, Barbara, Ph.D., Cornell U. Prof.

Utermohlen, Virginia, M.D., Columbia U.  
Assoc. Prof., Nutritional Sciences/  
Biochemistry, Molecular and Cell Biology

## Other Teaching Personnel

Blaze, Michael, Ph.D., U. of Louisville School  
of Medicine. Lec.

Gier, Emily, M.B.A., Binghamton U. Lec.

Swanson, Joy, Ph.D., Cornell U. Res. Assoc.

Travis, Sue, Ph.D., Cornell U. Lec.

You, Cha-Sook, Ph.D., Cornell U. Teaching  
Assoc. and Asst. Dir. of Undergraduate  
Studies

## Joint Appointees

Bauman, Dale, Prof., Animal Science/  
Nutritional Sciences

Miller, Dennis, Prof., Food Science/Nutritional  
Sciences