

DIVISION OF NUTRITIONAL SCIENCES

The Division of Nutritional Sciences 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 (<https://www.human.cornell.edu/>) and the College of Agriculture and Life Sciences (<http://cals.cornell.edu/>). The undergraduate majors in Nutritional Sciences and Global & Public Health Sciences are offered to students enrolled in both colleges. The undergraduate major in Human Biology, Health, and Society is offered through the College of Human Ecology. A concentration in Human Nutrition for Biological Sciences 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.

General Information

The Division of Nutritional Sciences (DNS) at Cornell University was established in 1974 and is jointly administered by the College of Human Ecology (<https://www.human.cornell.edu/>) (CHE) and the College of Agriculture and Life Sciences (<http://cals.cornell.edu/>) (CALS).

Our faculty and academic staff organize and orient their scholarly pursuits to fulfill three primary missions:

- Generating knowledge through scientific research
- Facilitating learning by teaching and mentoring the next generation of scholars, researchers, nutrition professionals and responsible citizens from a variety of disciplines through undergraduate, graduate and professional education
- Reaching outside the University in New York State, nationally and globally, to improve nutrition and human health and inform

Administration

- Sander Kersten, Director
- Marla Lujan, Director of Undergraduate Studies
- Laura Bellows and Kimberly O'Brien, Directors of Graduate Studies, Field of Nutrition

DNS Student Services

The Division of Nutritional Sciences Student Services office serves all current DNS students. Offerings include advising programming, advising appointments, and course and program coordination. The DNS Student Services office is located in the B36 Kinzelberg Hall suite. To contact the office, please email dnsstudentservices@cornell.edu.

Health Professions Advising

The Cornell Health Professions Advising Center (HPAC) is the University's home for pre-health advising. They provide students advising support, including pre-health requirements, professional school admissions, and career exploration within the health professions. While fulfilling major, college, and pre-health requirements, students may wish to include courses 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 in their studies. Information on the health field of Dietetics is included directly below.

Career Options and Course Planning

Requirements for the majors 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:

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 Registered Dietitian/Registered Dietitian Nutritionist (RD/RDN) credential. The Didactic Program in Dietetics is accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND) and provides students with the course work necessary for application to an accredited supervised practice programs (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 (DPD) policy and procedure for issuing verification statements can be found at on the DPD website. Upon completion of an accredited supervised practice program and, beginning 2024, completion of a graduate degree, students are eligible to take the Commission on Dietetics Registration (CDR) Examination for Dietitians and become an RD/RDN. Students who do not pursue supervised practice may opt to apply to sit for the Registration Examination conducted by CDR to become a Nutrition and Diet Technician, Registered (NDTR).

Courses in foods, nutrition and disease, microbiology, food service management, and nutritional care are added to the courses required for Division of Nutritional Sciences majors. The majority of states in the United States have enacted laws that regulate the practice of dietetics. State licensure and state certification are entirely separate and distinct from the registration or credentialing RDNs and NDTRs obtain from the CDR. Requirements for licensure or certification as a dietitian can be found on the CDR website. For more information about meeting undergraduate Dietetics requirements please contact the DPD Director, Dr. Erin Green and the DNS Student Services office, B36 Kinzelberg Hall, dnsstudentservices@cornell.edu. For information about graduate-level Dietetics options and requirements please visit the Dietetic Internship website (<https://www.human.cornell.edu/dns/academics/graduate/di/>).

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 epidemiology, 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.

Programs of Study

Undergraduate Majors

The Division of Nutritional Sciences (DNS) offers three majors with a B.S. degree in two different colleges: the College of Human Ecology and the College of Agriculture and Life Sciences:

Nutritional Sciences (<https://catalog.cornell.edu/programs/nutritional-sciences-bs/>)

(NS-CHE or NS-CALS)

A major in Nutritional Sciences focuses on the complex interrelationships of food patterns, nutritional status, and health. This field draws upon chemistry, biology, and the social sciences to understand questions such as: How are nutrients used by the body? What factors influence human food choice? What nutrients and dietary patterns are recommended to promote growth, maintain health, or reduce the risk of chronic disease? Students in this program may also fulfill the courses required for didactic training in dietetics toward becoming a Registered Dietitian, which will enable them to be employed as nutrition counselors, clinical nutritionists, sports nutritionists, or administrators of food and nutrition services. Students also may prepare for medical school and other types of advanced degree programs through this major. This major is offered by the Division of Nutritional Sciences. More information about this major can be found on the Division's webpage, which includes descriptions of all of the majors that are offered.

Human Biology, Health, and Society (<https://catalog.cornell.edu/programs/human-biology-health-society-bs/>)

(HBHS-CHE)

The Human Biology, Health, and Society (HBHS) major permits students to combine their interests in the biological sciences while exploring human health issues from the perspectives of both the biological and behavioral sciences. HBHS majors select the issues they want to explore in depth from Human Ecology courses that address health and the broad range of factors that influence human well-being. Issues that can be explored include biology and behavior; metabolism, genetics, and health; biology, growth, and development; and food and health policy and health promotion. Most students in this program will proceed to programs of advanced study to pursue careers related to health. This major is offered by the Division of Nutritional Sciences. More information about this program can be found on the Division's webpage (<https://>

www.human.cornell.edu/dns/), which includes descriptions of all of the majors that are offered.

Global & Public Health Sciences (<https://catalog.cornell.edu/programs/global-public-health-sciences-bs/>)

(GPHS-CHE or GPHS-CALS)

Public health is the prevention of illness and promotion of wellness in communities, both large and small. The Global & Public Health Sciences (GPHS) major teaches the tools of public health research and action. The major is intended for students who are motivated to identify health problems in communities and implement actions that will protect or improve the lives of large numbers of individuals and is especially appropriate for students who wish to pursue advanced study that would lead to leadership positions in governmental or non-governmental organizations that deal directly with current and emerging health concerns in the U.S. or internationally. In addition to completing core courses in public health, global health and epidemiology, students take a minimum of one advanced course in each of the areas of Social & Behavioral Health, Biological Aspects of Public Health, Environmental Health, and Health Policy & Management. Additionally, majors are required to complete a minimum of three credit hours of supervised experiential learning in a laboratory or community setting. This major is offered by the Division of Nutritional Sciences. More information about this program can be found on the Division's webpage (<https://www.human.cornell.edu/dns/>), which includes descriptions of all of the majors that are offered.

Concentration

The Division also offers the Concentration in Human Nutrition for Biological Sciences majors enrolled in the College of Agriculture and Life Sciences or the College of Arts and Sciences. The Concentration 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.

Undergraduate Minors

Nutrition and Health Minor (<https://catalog.cornell.edu/programs/nutrition-health-minor/>)

The Division of Nutritional Sciences (DNS) offers the Nutrition and Health minor to Cornell students who are not enrolled in DNS major programs of NS-CALS, NS-CHE, HBHS, GPHS-CALS, GPHS-CHE, and Biological Sciences with a Concentration in Human 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.

Global Health Minor (<https://catalog.cornell.edu/programs/global-health-minor/>)

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 Minor website, or contact the DNS Student Services office, B36 Kinzelberg Hall, dnsstudentservices@cornell.edu.

Applied Exercise Science Minor (<https://catalog.cornell.edu/programs/applied-exercise-science-minor/>)

Students should complete courses in physiology and anatomy (NS 3410 and NS 3420) after introductory biology. Division of Nutritional Sciences majors (only) may complete the Applied Exercise Science Minor at Ithaca College, which includes courses in kinesiology, exercise physiology, and biomechanics. For information about the Applied Exercise Science Minor, visit the DNS Applied Exercise Science Minor website, or contact the DNS Student Services office, B36 Kinzelberg Hall, dnsstudentservices@cornell.edu.

Special Academic Opportunities

Independent Study Electives

Independent study courses (NS 4000, NS 4010, NS 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. As a DNS prerequisite, students must first take the (specific NS independent study) course that they are interested in for at least 2 credits, S/U, and receive a passing grade of "S", before they may request enrolling in the (same NS independent study) course for a letter grade.

Honors Program

The Honors Program in the Division of Nutritional Sciences is an excellent opportunity for students who are highly motivated, interested in research, and wish to commit substantial time and intellectual energy to a project that will span about four semesters of their undergraduate tenure. Honors students enjoy the excitement of both participating in a project that generates new knowledge on an interesting topic and reporting their research findings. By working with faculty mentors and other researchers, they develop skills in research methods and data analysis. Students also learn that research projects are labor intensive and that writing research reports, such as the honors thesis, is a vital and time-consuming aspect of the research process. This intensive research experience is not suitable for all students, and those who desire a less intensive research experience may conduct research with a faculty member under NS 4010.

Application Procedures

The application procedure for the Honors Program is described briefly below. However, students interested in the DNS Honors Program should review program requirements in detail, because the explanation below does not include some important application details. For example, in some cases, DNS students may complete an honors thesis with a non-DNS faculty member. Regardless of faculty mentor, students should contact DNS Student Services (dnsstudentservices@cornell.edu) as soon as possible for important additional information about application procedures.

Students interested in the program typically spend the spring sophomore semester and fall junior semester exploring honors project opportunities with prospective faculty mentors. Students are responsible for contacting faculty members and applying to their research programs, although some guidance in this process will be provided in NS 3980 Research in Human Nutrition and Health. By the fall of the junior year, the student is expected to have identified their faculty member and be working with their on a proposal abstract. Applications to the DNS Honors Program are due during the Spring semester of a student's junior year. Most updated

details on dates, deadlines, and the application materials can be found on the Division's website.

In addition, it is strongly recommended that students take NS 3980 Research in Human Nutrition and Health—a requirement in the Honors Program—in the fall semester of their sophomore or junior year.

Honors Program Requirements

The Honors research project, through which students becomes intellectually engaged in the entire research process, is the major component of the honors program. It should be well-defined and sufficiently circumscribed to give students the opportunity to develop a research plan, execute the research, and write an acceptable thesis within the limited time available to students carrying full academic loads. The components of an Honors Thesis and the requirements for submitting them are described briefly below.

Typically, an Honors project is designed early in the junior year and conducted in the spring semester of the junior year and fall semester of senior year. Students may also arrange with their faculty mentor to work on the project during the summer. The spring senior semester is usually devoted to writing the thesis (at least 25 pages).

Honors Program students are required to:

1. Maintain a GPA of at least 3.2.
2. Pass NS 3980 (may not be taken S/U). Fall only. Highly recommended that students take this as early as possible.
3. Complete 6 credits of NS 4990. The six required credits are completed during senior year (3 credits per semester). How much time is spent on the project each semester will be the decision of the student and the faculty mentor. However, a faculty mentor typically assigns one hour of academic credit per 3-4 weekly hours of work. These hours include preparing the research plan and conducting the necessary library research (both of which are usually completed during the junior year) as well as implementing the research itself, conducting necessary analyses, and preparing and writing the honors thesis.
4. Meet all Honors Program requirements and deadlines. These are detailed on the Honors Program website and in materials provided by the DNS Honors Program Coordinator.
5. Complete a written thesis that reports the research. Minimum 25 pages. The student works with the faculty mentor to prepare a draft of the thesis, which is submitted before spring break to a second faculty member for evaluation. When comments are received from the reader, the student must revise the thesis to meet the criteria for acceptance.
6. Give an oral presentation of the project at the undergraduate honors symposium. The symposium is typically held at the beginning of the spring finals period.

Students should contact DNS Student Services (dnsstudentservices@cornell.edu) for important additional information about program deadlines and requirements.

Students may volunteer to publish their original honors research at eCommons Cornell University Library, as long as doing so does not interfere with other plans, such as patenting or publishing in a professional journal. A permission form to allow a thesis to be made available online at Mann Library can be obtained from the honors committee chair.

Courses Recommended for Non-majors

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 a large class and serves as a prerequisite for upper-level NS courses.

After NS 1150 Nutrition, Health, and Society, non-majors with limited backgrounds in chemistry and biology may elect to take classes that do not require chemistry and biology prerequisites, such as NS 2450 Social Science Perspectives on Food and Nutrition; NS 2470 Food for Contemporary Living; NS 3060 Nutrition and Global Health; NS 4500 Public Health Nutrition. Non-majors with strong backgrounds in chemistry and the biological sciences might consider NS 3310 Human Nutrition and Nutrient Metabolism, as well as many advanced nutritional sciences courses, including NS 3450 Introduction to Physiochemical and Biological Aspects of Foods; and NS 4410 Nutrition and Disease. Additionally, there are upper-level (3000, 4000, and 5000-level) courses in a variety of areas of nutrition, such as NS 3150 Obesity and the Regulation of Body Weight, NS 4200 Diet and the Microbiome, NS 4210 Precision Nutrition and Health, NS 4330 Nutrition and the Brain, NS 4480 Economics of Food and Malnutrition, and NS 4510 Nutrition and Health Equity. For a list of current-semester offerings, please review the Class Roster (<https://classes.cornell.edu>).

Graduate Programs

Graduate study is administered by the field of nutrition, a group of faculty members from throughout the university who have a common interest in nutritional problems. In the **M.S. degree program**, there are three tracks available: the Public Health Track, Dietetics (MS + Dietetic Internship), and the Individualized Track (flexible construction of your elective credits to create an individualized program of study). The M.S. program in nutritional science is recognized for its multidisciplinary approach and the breadth of its faculty. Students' courses of study may cover anything: from maternal and child nutrition, to obesity, chronic disease, or nutritional genomics.

In the **Ph.D. degree program**, students will concentrate in one of the following areas: Community Nutrition, Human Nutrition, International Nutrition, Molecular Nutrition. The Field also offers a combined Ph.D./R.D. program to meet the growing needs for transitional research expertise in both dietetics practice and policy and to enhance the effectiveness and impact of clinical and public health nutrition. The program is available to highly qualified applicants from any accredited Didactic Program in Dietetics (DPD) who have also earned a masters degree. Accepted students begin their doctoral studies in the Graduate Field of Nutrition in the first year, complete the dietetic internship in their second year, and then continue on their doctoral studies.

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 Seminar in Nutritional Sciences) 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.

For more information about the graduate program, students should visit the website, contact the current Field of Nutrition Director of Graduate Studies, contact DNS Student Services at dnsstudentservices@cornell.edu, or read more on the Division of Nutritional Sciences Graduate Studies page (<https://www.human.cornell.edu/dns/academics/graduate/>).

Faculty

A

Aydemir, Tolunay, Ph.D., U. of Florida, Asst. Prof.

B

Barré, Laura, M.D., R.D., Dartmouth U., Asst. Clinical Prof.

Barrow, Joeva, Ph.D., U. of Florida, Asst. Prof.

Bellows, Laura, Ph.D., Colorado State U., Assoc. Prof., Director of Graduate Studies.

Berry, Daniel C., Ph.D., Case Western Reserve U., Asst. Prof.

C

Cassano, Patricia, Ph.D., U. of Washington, Prof., Alan D. Mathios Professor in the College of Human Ecology.

Centeno Tablante, Elizabeth, Ph.D., Cornell U., Lec.

Cuningham, Paige, Ph.D., The Pennsylvania State University, Asst. Prof.

F

Field, Martha, Ph.D., Cornell U., Asst. Prof.

Figueroa, Roger, Ph.D., U. of Illinois, Asst. Prof.

Finkelstein, Julia, Ph.D., Harvard U., Assoc. Prof.

G

Gier, Emily, M.B.A., Binghamton U., Assoc. Prof. of Practice and Dietetic Internship Director.

Golan Maor, Yarden, Ph.D., RD., Israel Institute of Technology, Research Associate

Ghosh, Shibani, Ph.D., U. of Massachusetts, Amherst, Assoc. Prof.

Green, Erin, Ph.D., Cornell U., Lec. and Didactic Program in Dietetics (DPD) Director.

H

Hoddinott, John F., Ph.D., University of Oxford, H.E. Babcock Professor of Food & Nutrition Economics and Policy

J

Johnson, Elizabeth, Ph.D., Princeton U., Asst. Prof.

K

Kaur, Gunisha, M.D. and M.A., Weill Cornell Medical College, Visiting Asst. Prof.

Kersten, Sander, Ph.D., Cornell U., Schleifer Family Professor in the College of Human Ecology Division of Nutritional Sciences, Division of Nutritional Sciences Director.

L

Leak, Tashara, Ph.D., U. of Minnesota, Asst. Prof.

Lujan, Marla, Ph.D., Queen's U. (Canada), Assoc. Prof, Director of Undergraduate Studies.

M

Medina-Rivera, Melisa, Ph.D., SUNY Buffalo, Lec.

Mehta, Saurabh, M.D., Sc.D., Harvard U., Janet and Gordon Lankton Professor.

Milewski, Andrew, M.D., Weill Cornell Medicine, Ph.D., The Rockefeller U., Visiting Lec.

O

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

Odoms-Young, Angela, Ph.D., Cornell U. The Nancy Schlegel Meining Associate Professor of Maternal and Child Nutrition.

P

Poole, Angela, Ph.D., U. of Washington, Asst. Prof.

Q

Qian, Shu-Bing, Ph.D., Shanghai Jiaotong U. (People's Republic of China), James Jamison Professor.

Quinn, Kelly, MS, RDN, CDN, Lec.

S

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

V

Vacanti, Nathaniel, Ph.D., U. of California, San Diego, Asst. Prof.

W

Wang, Meng, M.D., Ph.D., U of Cambridge, Asst. Prof.

Wang, Yuhan, Ph.D., Oregon Health & Science U., Asst. Prof.

Other Teaching Personnel **Joint Appointees**