Human Biology, Health, and Society

Biology in the context of life

Program highlights: Biological and social aspects of growth and development | Biology and behavior | Biology and health promotion | Metabolism, genetics, and health

Overview

The College of Human Ecology’s Human Biology, Health, and Society (HBHS) major, offered through the Division of Nutritional Sciences, provides a strong background in human biology while preparing students to investigate health issues from a social science perspective. The biological bases of health and illness of individuals are critically examined in the context of how social, psychological, economic, cultural, design, and policy aspects affect individuals, communities, and populations. In addition, coursework in Nutritional Sciences allows students to comprehensively and holistically focus on health and wellness.

Innovations in health and a changing approach to its management are redefining the healthcare industry and the roles of health professionals. The breadth and depth of the HBHS major prepares students for work in this complex and dynamic environment.

Human Biology, Health, and Society is especially appropriate for students desiring careers as health care practitioners—physicians, physician assistants, nurse practitioners, dentists, wellness counselors, physical therapists, and genetic counselors. While all students pursuing this major will complete the coursework required for premedical studies, the program can also lead to careers in biomedical research, exercise science, pharmacology, toxicology, health communications, gerontology, or health education. Many graduates go on to advanced study to further their career goals.

Sample Courses

Introduction to Human Biology, Health, and Society (NS 1400) provides a foundational framework for the major as well as an introduction to disciplines involved in understanding, integrating, and improving human health from biological, behavioral, environmental, and public policy perspectives. Students will have the opportunity to explore these sub-disciplines and develop interests that will guide their future course choices as well as develop critical thinking skills, the ability to work in groups, communicate, reflect on social and cultural perceptions, and critically read scientific literature.

Obesity and the Regulation of Body Weight (NS 3150) involves a multidisciplinary discussion of the causes, effects, and treatments of human obesity. Topics include the biopsychology of eating behavior, the genetics of obesity, the role of activity and energy metabolism, the psychosocial determinants of obesity, anorexia nervosa, therapy and its effectiveness, and social discrimination.

Nutrition and Disease (NS 4410) covers the principles of nutrition, biochemistry, physiology, genetics, pathology, and pharmacology 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.

Public Health Nutrition (NS 4500) examines efforts to improve the diets and nutritional status of whole populations by working at the community, state, and national levels. This course helps prepare students to work in public health nutrition by describing the methods used in the assessment of nutritional programs, the development of nutrition-related policies, and the delivery of health, nutrition, and food assistance programs.
Research

Program research interests range in scale from molecular to population levels to understand the complex relationships among human health, nutritional status, food and lifestyle patterns, and social and institutional environments. Understanding these relationships includes the study of the metabolic regulation and function of nutrients, nutrient requirements through the life span, role of diet in reducing risk of disease, nutritional quality of foods, and interventions and policies designed to promote nutritional health of individuals and populations.

Undergraduates are active in the development, implementation, and analysis of research inquiries as participants on faculty research teams, as well as through independent research projects.

Research examples

- Potential associations between Vitamin D status and bowel health during pregnancy using national survey data
- Trends in the stigmatization of disabilities and overweightness using current and historical research
- Effect of carioca bean prebiotic extracts on iron-related brush border membrane proteins and intestinal bacterial populations in chickens

Honors program

The Honors Program is designed to challenge academically gifted students with a strong interest in undergraduate research. Students pursuing this Program take a seminar course in their junior year and plan an independent research project to be completed during the junior and senior years under the direction of a faculty member.

Experiential Opportunities

Beyond the required course work, students may take advantage of other engaged learning opportunities that provide valuable practical knowledge while testing students’ academic or career interests.

Study away options

Students can apply to study abroad through a Cornell University-sponsored program, overseas university, or a program sponsored by another institution. Off-campus study is also offered through one of Cornell’s internship-based programs such as Cornell in Washington in Washington, DC; the Capital Semester in Albany, NY; or Human Ecology’s summer program, Practicing Medicine: Health Care Culture and Careers in New York City.

Internship examples

- Community Outreach/Perinatal Health Intern, Stanford University
- Health Clinic Fellow, Mayor Potencial/Honduras
- Health Policy and Analysis Intern, Results for Development
- Hospital Volunteer, Crouse Hospital
- Intern, Southern African Institute for Policy and Research (SAIPAR)/Zambia
- Research Assistant, Mount Sinai Hospital

Professional Pathways

Many Human Biology, Health, and Society students go on to graduate or professional school in medicine, dentistry, health administration, nutrition, physical therapy, nursing, or other health sciences. The broad perspective of the program prepares them for the complex settings, organizations, and specialties they will encounter in their advanced study.

Students who seek employment immediately after graduation can apply their strong background in the biological and the social aspects of health to positions in research, communications, education, and business.

Graduate/Professional school

In recent years, graduates have been offered admission to numerous medical schools, including Cornell, Yale, Baylor, Vanderbilt, Mount Sinai, and Albert Einstein, as well as Harvard and Columbia dental schools.

Undergraduates interested in the College of Human Ecology’s Sloan Program in Health Administration are eligible to apply to this graduate program in their junior year for a five-year BS/MHA degree.

Sample career paths

- AIDS cellular immunology research, Harvard Medical School and Massachusetts General Hospital
- Doctor, Memorial Sloan Kettering Cancer Center
- Equity research analyst, Suffolk Capital Management
- Nutritionist, Women Infants and Children
- Physical therapist, Stanford Hospital
- Project manager, E-Commerce Group, Capital One
- Research analyst, Health Care Policy Practice, Lewin Group
- Senior counsel, Office of the Corporation Counsel, Law Department