

Mann Library Collection Policy

Departmental Subject Narrative

Nutritional Sciences

1.0 TEACHING, RESEARCH AND EXTENSION PROGRAMS:

1.1 Mission and emphases of the department

Cornell's Division of Nutritional Sciences is among the largest academic units in the United States concentrating on human nutrition. It combines expertise in molecular biology, genetics, metabolism, physiology, community nutrition, international nutrition and food policy. The focus of the division's research, teaching and outreach is exclusively on human nutrition; work in animal nutrition takes place in the department of Animal Sciences and work in plant nutrition in the section of Plant Biology. The division is affiliated with both the College of Human Ecology and the College of Agriculture and Life Sciences.

1.2 Faculty research

The Division includes approximately 35 faculty and 30 research associates and extension specialists. The Cornell Food and Nutrition Policy Program assists Third World governments in nutrition policy analysis and development. The Program in Global Health and Nutrition conducts research and nutrition assessment intervention programs throughout the world. Cornell researchers are currently involved with projects in 25 nations spread over every continent, excepting the two polar regions. The Cornell Institute of Nutritional Genomics promotes multidisciplinary genomics research on the interrelationships between human nutrition and genetic variation in health and disease.

1.3 Graduate program

Graduate Study is administered through the Field of Nutrition, which includes faculty members throughout the university. There are 73 graduate students. Principal programs are Molecular Nutrition, Human Nutrition, Community Nutrition, and International Nutrition.

1.4 Undergraduate program

Two undergraduate programs-- Nutritional Sciences, and Human Biology, Health and Society -- are offered through the College of Human Ecology. An undergraduate program in nutritional sciences and the Nutrition POS for Biology Majors are also offered in the College of Agriculture and Life Sciences and the College of Arts and Sciences. Undergraduate nutrition majors, of whom there are 543, are prepared for careers in medicine and health careers, fitness and sports medicine, dietetics and clinical nutrition, nutritional biochemistry, and nutrition communications and community nutrition, consumer foods industry. There has been a recent surge in entrants to the program, especially students interested in premedical and allied health studies. Undergraduates are involved in research projects, but opportunities are limited because of the number of students in the program.

1.5 Extension activity

Both research and extension work are actively pursued. The nutritional needs of the citizens of

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N.Y.S. are addressed through such extension and research programs as Expanded Food and Nutrition Education Program and the New York State Nutritional Surveillance Program, as well as through such community-based activities as the WIC Program and corporate wellness programs. Cornell NutritionWorks provides online continuing education for nutrition and health professionals. Extension programs often involve integrating physical needs with dietary and lifestyle changes, such as in Small Steps and BCERF (for breast cancer patients.)

1.6 Noteworthy facilities (e.g. unique classrooms, laboratories, farms, etc)

The Human Metabolic Research Unit is a unique research facility for the conduct of controlled diet and nutrition research on human subjects.

2.0 SUBJECT DESCRIPTION AND GUIDELINES:

2.1 Subject definition:

1. The maintenance of an organism by the absorption of nourishment from nutrients.
2. The science and study of the reaction of living organisms to food utilization for maintenance of life, growth, the normal functioning of organs and tissues, and the production of energy.
3. Of humans, the science and study of how the body responds to changes in diet and consumption of food and to significant pathological or systemic factors (e.g., age health, and disease) and of the chemical reactions involved in the nutritional process. [From: Food Science Sourcebook, Part 1, AVI/VNR, N.Y. 199?]

2.2 Subject scope:

Nutritional sciences draws upon the chemical, biological, and social sciences 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 chronic disease, nutritional quality of foods, and interventions and policies designed to promote nutritional health of individuals and populations. Nutritional sciences is comprised of the following topical areas, all of which are collected at a research level:

Nutrition methods and analytical techniques

Analytical techniques and data analysis in studying nutrients and metabolites and their functions; analytical methods applicable to studies of food composition; measurement and interpretation of nutrient status of individuals; methods of assessing individual food intake and nutrition knowledge, attitudes and practice; assessing nutritional effect of methods of cooking, preservation and sterilization of foods; instruments and chemical and sensory methods in the measurement of food properties.

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Food composition, nutritive value and toxicology

Food composition studies of all types of foods, including compound manufactured foods; digestibility and nutritive value; food-drug incompatibilities; drug-induced nutritional deficiency; nutritional teratology. Effects of nutrients on gene expression and genome stability. Authoritative works on supplements (e.g., melatonin), pharmacologically active substances in foods (e.g., health-promoting compounds in garlic).

Physiological and biochemical bases for human nutrition

Food intake; digestion and absorption; nutritional aspects of blood, lymph and other body fluids, tissues, and endocrinology; vitamins; enzymes and intermediary metabolism; energy exchange; carbohydrates; protein and amino acids; dietary fiber; lipids; macro and micro minerals; metabolism of water; acid base equilibrium; growth; reproduction and lactation; senescence; nutrition and genetics; hunger and appetite; pica and ingestion of non-food items; starvation; physicochemical determinants aspects of food quality (appearance, flavor, odor, texture, nutritional value).

Human health and nutrition

Relationship of nutrition to: disease etiology and therapy (e.g., cancer, diabetes, dental caries, nutrient deficiency diseases, cholesterol metabolism, atherosclerosis, food allergy and immunity, human parasitic infections), behavior, growth, development, and aging; geriatric nutrition; dietetics; clinical nutrition; maternal and child nutrition; breastfeeding; obesity and regulation of body weight (including, biopsychology of eating behavior, genetics, role of activity and energy metabolism, psychosocial determinants, therapies, social discrimination); eating disorders; nutritional influences on behavior (e.g. sugar, food additives, malnutrition, dieting), and on cognitive dysfunction (e.g. amnesia, geriatric memory loss, Alzheimer's disease); nutrition and alcohol; parenteral nutrition. Trace element medicine and chelation therapy.

Community and international nutrition, nutrition education, nutrition intervention programs

Public health nutrition; nutrition in food service management; feeding programs, including school lunch program; anthropometric assessment; nutrition surveillance; planning, management and evaluation of impact of nutrition intervention programs; epidemiology of nutrition; nutrition education, theory and practice; communications in nutrition; professional education in nutrition; nutrition problems of developing nations (e.g., human parasitic diseases such as malaria, hookworm, ascaris, schistosomiasis, trichuriasis and their treatment); food economics; food and nutrition policy; role of improved nutrition in economic development; relationships among nutrition, poverty, food, health, and household behavior; dietary standards and guidelines; vegetarianism.

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Exclusions

Cookbooks, unless they have a medical focus.

2.3 Emerging trends in the subject area

A major growth area has been in social and behavioral sciences, not necessarily connected to food. Researchers hope to discover the triggers of behavior at a molecular level and their social implications. Other areas include: nutrigenomics, stem cell nutrition and genome programming, global health, epigenetics, nutrition in China, sub-Saharan Africa, Latin America, Eastern Europe. Gerontology and nutrition, food chemistry, eating disorders, vegetarianism, fitness and wellness, nutrition for the HIV-positive. "Food systems;" i.e., the intersection of food production systems and health, and the health impact of agricultural changes ("agri-health.") Functional foods, nutritional factors and disease risk, obesity, food choice, nutritional genomics, nutrition in children, Vitamin E, iron bioavailability.

3.0 SPECIAL INFORMATION NEEDS AND RESOURCES

3.1 Special information needs of those working in this subject area

Scholarly journals on all facets of nutrition, along with the journals in related areas (e.g. biochemistry, and physiology), are the most heavily used type of material. Subscriptions are maintained to all significant scholarly journals, which are typically accessed by faculty members online. Annual reviews, advances in..., and proceedings of scholarly conferences are also received on a standing order basis. IOM (Institute of Medicine) reports and WHO Technical Reports are important.

Substantive monographs on all aspects of nutrition are collected exhaustively. Upper division textbooks in English are represented in the collection.

Access to the bibliographic databases MEDLINE, AGRICOLA and CAB International (which contains Nutrition Abstracts and Reviews) is provided by the library. Dietary analysis programs are collected by the laboratory in the Division of Nutritional Sciences, which has its own site license.

The library needs to strengthen its collection in the health and medical area. Materials on chronic diseases, heart disease, cancer stroke, and diabetes, because of the connection between these diseases and nutrition, should be collected. The library should also improve access to materials on conditions within developing countries relating to infection, parasitism, diarrhea, and maternal and child nutrition. The library hopes eventually to have a seamless integration between resources at the Weill Medical Library in New York City and the Ithaca campus.

3.2 Special collections or noteworthy resources in the field

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Works on the history of food, and food and nutrition in relation to sociology and anthropology are collected heavily.

3.3 Endowment funds or special funding arrangements

Baylor/Biomedical Fund

Mann Fund - General biology

Bayern Fund - Animal nutrition

McCay Fund – Food and nutrition

Hauck Fund – History of nutrition

4.0 TYPES OF MATERIALS

4.1 Format

Heavily used food composition data may be more useful in electronic form. Diet analysis packages are selectively collected in microcomputer diskette form. At times, researchers pay for individual articles online if the library does not subscribe, especially if the researchers are running on a tight deadline. It would be useful to take a survey of journals accessed in this way in order to inform collection development choices.

4.2 Geographical guidelines

Government publications, domestic and foreign related to nutrition policy, status and programs are selectively collected from around the world. Publications of the United Nations are more useful than those from individual national governments.

4.3 Language guidelines:

Emphasis on English language, however important materials in all languages are considered.

4.4 Chronological guidelines:

Primarily current materials; retrospective collections on popular diet and foodways are collected.

4.5 Other:

Food/diet is one of the very few health factors over which people have real control in a technological society and the study of popular diet, and manifestations of food and culture, are of interest in a variety of disciplines, currently and in the future writing of history. In addition to scholarly publications in this area, a representation of popular literature on nutrition and diet, including food fads, is selectively collected to document changes and developments in: diet, food preferences and lore, American foodways,

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consumer food issues and perceptions, and diet and lifestyle. Interest in foodways should be specifically connected to agriculture, nutrition, food quality, obesity, or the notion of agricultural systems to support human health.

While we collect heavily in sports nutrition, the larger, related area of sports medicine and exercise physiology is not emphasized.

5.0 OTHER RELATED LIBRARY COLLECTIONS:

Lack of a clinical medicine collection on campus is acutely felt by researchers in DNS. The Veterinary Library is able to supply considerable material in this area, along with research materials in physiology, immunology, and gastroenterology. The inter-library loan agreement with the library of the Cornell Medical College is an important lifeline to the clinical medical literature. The exercise physiology and sports medicine collection at Ithaca College is useful to students and faculty in the Division, though no formal agreement exists between the institutions concerning collection coordination. Parasitology and gastroenterology are collected at a study level in Mann, but at a research level in the Veterinary Library. Food service management is collected at the Hotel Library, while nutritional aspects of food service management are collected at Mann. Hotel also collects materials on cookery and gastronomy.

6.0 POLICY QUESTIONS, COLLECTION NEEDS, FUNDING PROBLEMS OR OPPORTUNITIES:

7.0 PRINCIPAL LC CLASSES: QP 136 - 139, QP 141 - 185, RM 214-258 TX 341 – 641

8.0 JOURNALS WHERE NUTRITION FACULTY MEMBERS MOST FREQUENTLY PUBLISH:

The American journal of clinical nutrition

Analytical chemistry

Annual review of nutrition

Appetite

Biochemistry

Food and nutrition bulletin

Journal of biological chemistry

Journal of lipid research

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Journal of nutrition

Journal of nutrition education and behavior

Journal of physiology

Journal of the American Dietetic Association

Nutrition reviews

Pediatric research

Date: 22 January 1993

Completed by: Sam Demas, Edited by Henry Murphy

Revised by Linda Stewart, Gerald Combs and Sam Demas

November 27, 1996

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December 11, 2007