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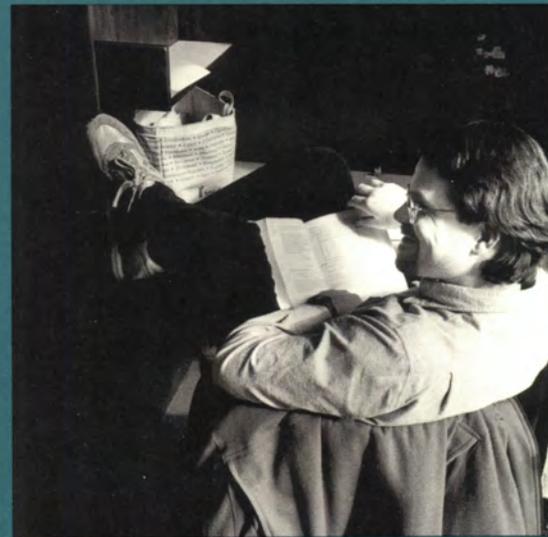
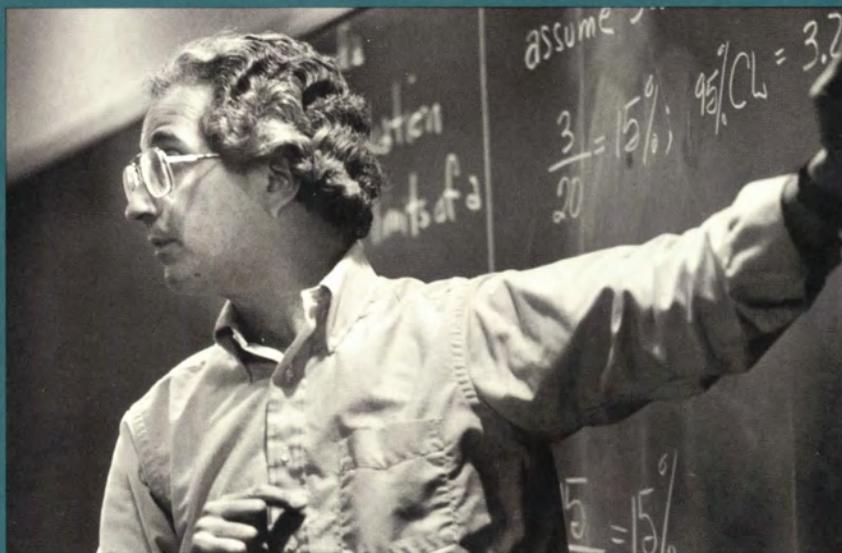
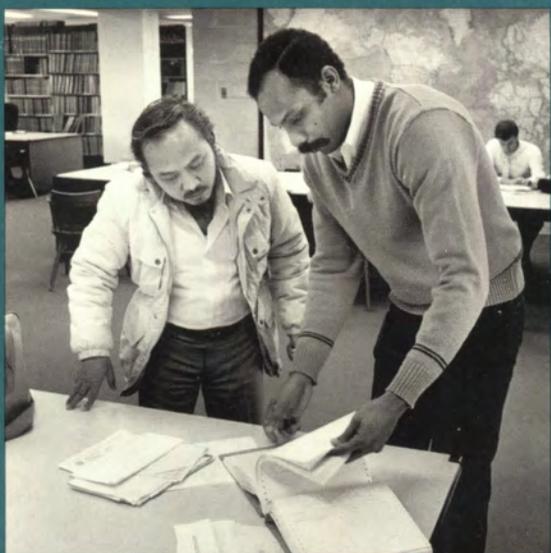
Boston University School of Medicine, School of Public Health: 1989-1990

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School of Public Health



■ Program Descriptions

■ Application Materials



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BOSTON UNIVERSITY
SESQUICENTENNIAL

Boston University School of Public Health

School of Medicine

Office of the Director

80 East Concord Street
Boston, Massachusetts 02118
(617) 638-4640



Dear Applicant:

We at Boston University School of Public Health pride ourselves on providing a modern educational program in a flexible format that is responsive to the needs of contemporary graduate students and pressing public health problems. Our students are able to earn the Master of Public Health degree or a doctorate on a full- or part-time schedule. Most of our courses meet in the afternoon or evening to enable students to continue to work. This innovative format permits students to obtain their degree in one and one-half to three years. Many of our students are active public health professionals, and the educational process for both students and faculty is enriched by their experiences. Our School's full-time faculty is supplemented by a diverse part-time faculty which adds a "real world" dimension to a unique educational experience.

The School has two major educational goals. The first is to offer an intellectually stimulating and comprehensive educational experience while exposing students to the broader dimensions of public health. Secondly, we seek to provide students with a thorough understanding of all aspects of their field of concentration. Such an education enables students to function more effectively in their work, and to move to new positions of responsibility.

Our School is a graduate school in the true sense of the term. We believe education should not only improve one's vocational skills, but also be intellectually expanding. And we expect that students not be passive learners, but actively engage in all aspects of graduate education, including research and writing.

We believe public health is a rewarding calling, one that contributes not only to the prevention of illness, but to the more efficient and equitable delivery of services and the improvement of public well-being. We welcome your interest in the Boston University School of Public Health.

Sincerely,

Norman A. Scotch, Ph.D.
Director

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The School of Public Health



The School of Public Health is an integral part of the Boston University Medical Center.

The School of Public Health, part of the School of Medicine, one of fifteen schools within Boston University, was established in 1976 and graduated its first class two years later. The School received preaccreditation from the Council on Education for Public Health in January 1981 and was fully accredited in October 1983. It is the twenty-second school of public health in the United States.

Purpose

The School of Public Health is designed to meet the educational needs of current and future public health professionals. The School offers both full- and part-time courses of study with most classes scheduled in the late afternoon or evening. This scheduling enables individuals to obtain a public health education while continuing their employment. Through its teaching and research programs, the School provides students with an interdisciplinary graduate education that offers an opportunity for both intellectual and professional advancement. Courses in the School assume either some previous exposure to the professional areas of health care or a professional education in a health-related discipline. The value of each student's education is enriched by the School's policy of selecting a heterogeneous class. (See page 58 for an overview of students' professions.) Students with this variety of experience and education are better

prepared not only to benefit from the School of Public Health but also to contribute in a substantial way to the education of other students.

A further purpose of the School is to conduct research in the area of public health and to provide service to the community.

Research

The School of Public Health conducts a variety of research projects. These projects are designed to evaluate the health needs of populations, and to investigate interventions that will lead to better health. A brief survey of some of the School's research activities includes:

- the effects of Massachusetts' seat belt laws;
- research on legal and ethical standards for informed consent to human experimentation using U.S. veterans;
- research on standards for experimenting with the artificial heart and new methods of noncoital human reproduction;
- a research project to develop highly sensitive methods to assess the exposure of people to environmental carcinogens;
- the effects of comprehensive community traffic safety programs;
- the effects of school education programs on adolescent knowledge and behaviors relevant to AIDS;

- statewide surveys of adults concerning knowledge and behavior relevant to AIDS;
- research into patterns of care of certain catastrophically ill patients;
- a study assessing the effect of a new model of primary medical care for disabled adults;
- a study of the medical care needs of Boston's nursing home residents;
- a planned intervention to prolong the duration of breast feeding among inner city new mothers;
- research assessing the corporate management of health risks;
- an analysis of proprietary ambulatory care centers and their implications for public policy;
- research on the legal and ethical issues of biological monitoring and medical surveillance of workers;
- a research investigation to determine the health effects of exposure to hazardous wastes;
- a study of the factors influencing compensation of workers with asbestos-related diseases;
- a multistate controlled trial assessing the efficacy of treatment for alcoholism in large industrial plants;
- a joint investigation into the effects of stilbestrol on breast cancer and other cancers among mothers who took DES during pregnancy;
- epidemiologic research into the risk factors for cardiovascular disease;
- an assessment of the effects temperature and humidity have on common oral drugs for primary care in the tropics;
- a study assessing the impact upon individuals of learning they have or do not have sickle-cell trait;
- the impact of drunk driving laws in Maine and Massachusetts, including an analysis of fatal and nonfatal accident rates;
- the extent to which maternal health habits are associated with adverse fetal development;
- a study of the efficacy of a local Boston program that teaches gays safe sex practices;
- a study of the ethical values of clinical geneticists in 19 countries;
- research on the use of medical evidence in occupational and environmental disease litigation;
- a laboratory investigation of genetic factors that contribute to the virulence of bacteria;
- an analysis of the financing of hospital care for uninsured citizens in Massachusetts;
- a study of the patterns and predictors of urban hospital closings; and
- a study to determine the relationship between environmental and occupational exposures and cancer in the upper Cape Cod area.

The Slone Epidemiology Unit, a part of both the School of Public Health and the School of Medicine, is considered to be in the forefront of the national effort to identify the occurrence (and non-occurrence) of drug-induced diseases. The Slone Epidemiology Unit is a multidisciplinary research unit with specialists in internal medicine, pediatrics, clinical epidemiology, biostatistics, computer

science, and administration. Some of their studies include:

- a multicenter case-control study of illnesses requiring hospital admission in relation to drug use;
- a multicenter study of myocardial infarction in relation to estrogen use in women;
- a study of major gastrointestinal bleeding in relation to analgesic use;
- the collection of data on over 8,000 malformed infants to serve as a resource for both the discovery of unsuspected drug-induced malformations and the study of hypotheses arising from other sources.

The Normative Aging Study is an interdisciplinary and longitudinal study of aging initiated in 1961 and conducted at the Veterans Administration Outpatient Clinic in Boston. Conducted with faculty from the Epidemiology and Biostatistics, Health Services, and Social and Behavioral Sciences Sections, the study has followed a cohort of 2,280 men — initially healthy — continuously since that time. The objectives of the study are to characterize biomedical and psychosocial parameters of the aging process. Major areas of investigation are biomedical and psychosocial changes related to the aging process, including clinical medicine, biochemical studies, body composition, cardiovascular and pulmonary function, special senses, memory and personality, work and retirement, smoking, drinking, and other behaviors.

The Data Coordinating Center

The Data Coordinating Center in the School of Public Health is a data processing resource center for the entire Boston University Medical Center community. The staff of the Data Coordinating Center is comprised of seven full-time data analysts who have backgrounds in statistics and epidemiology. The Data Coordinating Center's staff provides assistance with data processing at every stage of research from proposal preparation and the collection and analysis of data to the publication of results. Currently the Data Coordinating Center is involved in a wide range of research projects, including topics such as drunk driving and seat belt law evaluations, head and neck cancer screening, the effects of DES, a randomized trial of alcohol treatments, knowledge and attitudes about AIDS, and maternal health habits during pregnancy.

The Data Coordinating Center is also a valuable resource for Public Health students who are interested in pursuing research projects involving questionnaire design, data collection, data entry, analysis of data, and interpretation of results. The staff of the Data Coordinating Center is available to students to answer any questions about Boston University's IBM 3090 mainframe computer and to provide instruction on commonly used statistical packages.

Additional Educational Activities

In addition to teaching public health professionals, the faculty of the School is involved in a number of related teaching activities. As part of the School of Medicine, the School of Public Health plays an important role in the education of medical students. Its faculty teach courses in law and medicine, epidemiology and biostatistics, medical sociology and urban health care to first-year medical students. It also instructs residents in the Primary Care Residency Training Programs of the Departments of Pediatrics and Medicine at Boston City Hospital.

Faculty also have led continuing education courses for physicians, nurses, social workers, and other health professionals.

Public Health Graduate Study

Graduate education in public health is a phenomenon of the twentieth century. In the early years the focus was on infectious disease and on problems of occupational health. However, as the industrialized world became more complex and the practice of health care became more sophisticated, the subject matter changed dramatically. New professional groups were drawn to the problems of promoting health, and public health soon became a broad, interdisciplinary field.

By incorporating the contributions of many academic disciplines, the School's curriculum seeks to analyze not only the nature and context of public health problems, but also the organizational, behavioral, legal, and bureaucratic constraints to ameliorating these problems.

Exact characterizations of the public health field are elusive. Each professional group has its own conception of the total picture, and its own way of delimiting the subject matter. Public health education focuses on:

- developing and disseminating general health and illness knowledge in populations;
- recognizing the importance of psychological and social factors in illness and well-being;
- controlling and improving the physical environment in which populations live and work;
- interpreting and implementing the results of research investigations and other scientific and statistical information;
- understanding and influencing governmental health policy and regulation; and
- designing more effective and efficient methods for planning and delivering health care services.

The School of Medicine

In 1873, Boston University established the School of Medicine by merging with the New England Female Medical College, which had been founded in 1848 as the first medical college for women in the world. In 1962, the School of Medicine became a constituent member of the Boston University Medical Center. It is situated in the South End of Boston between Boston City Hospital and University Hospital.

The School of Medicine offers a four-year program leading to the Doctor of Medicine (M.D.) degree. In cooperation with the College of Liberal Arts, the School offers a six-year liberal arts/medical education program and an eight-year modular medical integrated curriculum (MMEDIC) program, both of which lead to the B.A. and M.D. degrees.

M.A. and Ph.D. programs in medical sciences are available through the Division of Medical and Dental Sciences of the Graduate School. A combined M.D./Ph.D. program is also available.

Boston University Medical Center

Boston University Medical Center, located in the South End of Boston, forms a semiautonomous but integral part of the University. It consolidates the resources and activities of the School of Medicine, the School of Public Health, the Goldman School of Graduate Dentistry, University Hospital, and units such as the Humphrey Cancer Research Center and the Cardiovascular Institute. More than twenty New England health institutions are affiliated with the Center. Boston University Medical Center was established with the belief that by combining resources and activities, the basic objectives of patient care, teaching, and research of its constituent institutions could be more effectively met.

Boston University

Boston University is an independent, coeducational, nonsectarian university. Its academic diversity meets the needs of one of the largest bodies of scholars in the world. Incorporated in 1869, the University today provides students with the advantages of a large, contemporary educational complex while maintaining traditional priorities. Its fifteen schools and colleges respond to students' career needs and the increasingly specialized demands they face in the contemporary world.

With a history free from racial and religious discrimination in the admission of students and hiring of faculty, Boston University is strongly committed to minority recruitment, equality of the sexes, and opportunities for the disabled. It was the first university to open all its doors to female students and it graduated the country's first black woman M.D. and first woman Ph.D.

Most of the University's schools and colleges line the south bank of the Charles River just west of downtown Boston. With the river as boundary to the north, this campus encloses a chain of peaceful waterway parks and esplanades. Architecturally, the University has grown with the city. Contemporary classroom and dormitory buildings sit comfortably among the older gothic structures and the bowfront town houses of Boston's Back Bay.

Program Descriptions and Degree Requirements



Students utilize the personal computers in the Laboratory for Instructional Technology for their course work.

The School of Public Health offers degree programs leading to the Master of Public Health (M.P.H.), the Doctor of Science (D.Sc.) in Epidemiology and the Doctor of Science in Environmental Health Sciences. The School also offers a Master of Arts (M.A.) and a Doctor of Philosophy (Ph.D.) in biostatistics jointly with the Mathematics Department of the Graduate School with the collaboration of the Division of Medical and Dental Sciences of the Graduate School. The five academic sections (Environmental Health, Epidemiology and Biostatistics, Health Law, Health Services, and Social and Behavioral Sciences) offer courses at the introductory and advanced levels so that students gain not only a broad education in public health but also a depth of knowledge in a particular concentration. Elective courses may be used to strengthen the student's concentration or to explore the contributions of other fields in public health.

Students may pursue the master's or doctoral programs on a part-time or full-time basis, and may move from one status to another upon notifying the Registrar. Part-time students usually take two courses each semester, and full-time students take four courses. The School follows a fall/spring semester schedule with a limited summer program. Approximately thirty-five courses are offered each semester. Courses are offered at the Medical Center campus in the afternoon and evening.

In addition to classroom instruction, students may choose to arrange a directed study or directed research project. These require faculty sponsors who assume responsibility for approving the projects and assigning grades. Nongraded full- and part-time internship opportunities are also available for interested students. Placements in the past have included hospitals, health maintenance organizations, state agencies, environmental organizations, and other health care facilities.

M.P.H. Degree Requirements

To earn the Master of Public Health degree, students must satisfactorily complete 48 credits of course work, including 16 credits of core courses, between 16 and 20 credits of concentration courses depending on the concentration, and the remainder in electives. In addition, all M.P.H. candidates must: (1) have a minimum cumulative grade point average of 3.0 and (2) earn at least a B- final grade (2.70) in each of the six core courses (or core course equivalents). The student who attains a grade of less than B- must contact the course instructor who may require the student to retake the course (at no additional charge), complete additional work, or meet other appropriate requirements.

Students are required to complete four 3-credit courses (Elementary Biostatistics, Introduction to Health Services, Epidemiology, and Behavioral Sci-

ences and Public Health) and two 2-credit courses (Introduction to Health Law and Introduction to Environmental Health). Environmental Health and Health Law concentrators complete the 4-credit version of their concentration's core course. These core courses provide the basic skills and knowledge necessary for a career in public health. Students must also satisfy the requirements of one (or more) of the following concentrations: Epidemiology and Biostatistics, Health Law, Health Services, Environmental Health, or Health Behavior, Health Promotion, and Disease Prevention. The remaining credits are elective.

Students must complete at least 32 credits of course work from among the course offerings as degree candidates in residence.

All the requirements for the degree must be completed within five calendar years after initial registration for the School. A degree candidate in good standing may request a leave of absence from the School. Leaves of absence will be included in this five-year period.

Entering M.P.H. students are strongly encouraged to complete the core courses as early as possible; many advanced concentration courses have at least one core course as a prerequisite. Most courses are offered once a year. However, some core courses may be offered more frequently (i.e., twice a year) while advanced courses may be offered less frequently. While students may complete their academic requirements by taking evening courses, to ensure maximum flexibility in course selection students should plan to take some of the courses offered in the afternoon. Students are encouraged to meet with their advisors to plan their curricula. For specific information and concentration course requirements, applicants should refer to each section's description in this catalogue.

Other Degrees

For full descriptions of the degree requirements for the master of arts and doctoral-degree programs, refer to the Epidemiology and Biostatistics Section and the Environmental Health Section (pages 13 and 8).

Programs in International Health

The Office of Special Projects offers three courses for health professionals from developing countries. These intensive courses are a major component in the international area of the School's curriculum.

Management Methods for International Health is a twelve-week, 275-contact-hour course that emphasizes the application of management principles in the public and private health sectors. Topics covered range from team functioning and team building in large organizations, to operations management and supervision in small public sector clinics where pay is inadequate and supplies limited, to issues of planning, control, and marketing in large regional or national health sector pro-

grams. The course is offered annually during the spring semester (January–April).

Summer Certificate Program in Health Care in Developing Countries is a twelve-week, 275-contact-hour course that carries up to 20 graduate credit hours toward an M.P.H. at Boston University. The program emphasizes effective application of epidemiologic principles and methods to primary health care and the impact of socioeconomic development and urbanization on health status and services delivery in countries where resources are severely constrained. It is offered annually during the summer.

Financing Health Care in Developing Countries is a twelve-week, 270-contact-hour course that carries up to 16 graduate credit hours. It emphasizes the application of economic and financial management principles to health services in the public and private sectors. A central theme is projecting, managing, and controlling operating/recurring costs, including assessing the impact of hard-currency availability on program content. The course is offered annually during the fall semester.

For additional information about these programs, please refer to the Office of Special Projects on page 34.

Peace Corps/M.P.H. Program

The Office of Special Projects and the United States Peace Corps have established a new joint program integrating Peace Corps Volunteer service in health projects with the M.P.H. degree at Boston University. If one is accepted by the Peace Corps and Boston University, the Peace Corps assures an assignment as a health volunteer to one of the following countries: Marshall Islands, Zaire, Togo, and Central African Republic. Each student's program at Boston University is closely coordinated with his or her Peace Corps assignment. Peace Corps experience can count for up to eight credits towards the M.P.H. degree. See page 39 for specific application procedures.

Dual-degree Programs

The School of Public Health offers dual-degree programs with the School of Law, the School of Social Work, the School of Medicine, and the Graduate School's Department of Economics.

J.D./M.P.H.

The J.D./M.P.H. dual-degree program is an accelerated four-year course of study leading to the award of both the J.D. and M.P.H. degrees. The program reflects the University's recognition of the interrelationship between the legal system and the delivery of health care services. The University's goal in drawing upon its outstanding teaching and research resources in the field of health law and public health to establish the Law and Public Health Program is to train graduates for leadership roles in contending with important and complex

issues related to the improvement of public health care. That goal is served by a program that offers a number of highly qualified individuals an opportunity to obtain rigorous training in both law and public health. Graduates of the J.D./M.P.H. dual-degree program will be especially well prepared to exercise leadership in both private- and public-sector decision making in this area of major social and economic significance.

Separate application and admission to the School of Law and the School of Public Health under the procedures and standards of the respective Schools is required for participation in the dual-degree program. Applicants may apply simultaneously to the two Schools, or, alternatively, students enrolled in the School of Law may apply during their first year of law study for admission to the School of Public Health M.P.H. degree program.

Students admitted to the J.D./M.P.H. Law and Public Health Program enroll in the School of Law for each of the first three years of study, but take two School of Public Health courses in both the second and third years of study for credit toward both the J.D. and M.P.H. degrees. The J.D. degree is awarded following the completion of three years of study, and the fourth year of study is in residence at the School of Public Health. The latter gives advanced-standing credit for four courses taken at the School of Law and awards the M.P.H. degree upon completion of the fourth year of course work.

For more information on the J.D./M.P.H. dual-degree program, students should write to the School they will apply to first.

M.S.W./M.P.H.

The M.S.W./M.P.H. dual-degree program is a three-year course of study leading to the award of both the M.S.W. and M.P.H. degrees. The program is based on the recognition that many social workers are involved in the health delivery system and are interested in taking a broader, population-based look at the system. In addition, new roles are evolving for social workers in the health sector. These include social work in the administration of health delivery systems and participation in the health policy process at local, state, and national levels.

Students are admitted to one of the two Schools and complete that School's basic course work. Before the end of the first year, application is made to the other school. Students are held, in each school, to the same admission standards as other students.

For further information on the M.S.W./M.P.H. dual-degree program, students should write to the School they will apply to first.

M.D./M.P.H.

The M.D./M.P.H. dual-degree program enables interested medical students to pursue both the M.D. and M.P.H. degrees during tenure at Boston University. This flexible program, usually completed in five years, combines traditional M.D. preparation with in-depth work in one of the following areas of public health: health services, environmental health, health law, epidemiology and biostatistics, and health behavior, health promotion, and disease prevention. Medical students are admitted to the program after successful completion of the first semester of their medical school year. They continue medical school courses concurrently with public health courses, especially during the fourth and fifth years of the program. Students must successfully complete all School of Medicine requirements and accumulate 48 credits in School of Public Health courses. A grade point average of at least 3.0 (on a 4.0 scale) in School of Public Health courses must be attained. Students may receive up to sixteen credits toward both the M.D. and M.P.H. degrees for courses taken in either School.

Interested students are advised to contact either Associate Dean Culbert in the School of Medicine or the Director of Admissions of the School of Public Health.

M.A./M.P.H.

The Graduate School's Department of Economics and the School of Public Health offer a dual-degree program for integrated graduate education in health economics and public health applied to developing countries. The basic program requires 24 months of continuous study and awards the degrees of Master of Arts with a concentration in Economic Policy (M.A.) and Master of Public Health (M.P.H.) with a specialization in health care in developing countries. Students may instead elect a 19-month program, which awards the M.A. with a specialization in health economics and a Certificate in Health Care in Developing Countries from the School of Public Health. Both the 24- and the 19-month programs prepare professionals to conduct economic analyses of projects and programs in the health sector of developing countries and to evaluate health services research as it becomes available in the future.

Interested students are advised to contact the Graduate School Secretary, Boston University, Department of Economics, 270 Bay State Road, Boston, MA 02215; 617/353-4454.

Environmental Health

David M. Ozonoff, M.D., M.P.H., Section Chief

The Environmental Health Concentration



Factors in the human environment are still the overwhelming determinants of health and illness in populations. Despite the advances in medical technology and organization, it is still the basic elements of air, water, food, and the natural environment that set the boundary conditions within which these advances operate and have their effect. The Environmental Health Concentration prepares health personnel for a wide variety of administrative and investigative roles in the field of environmental protection. People intending to work in state or federal agencies, local boards of health, environmental management in the private sector, or intending to do research on environmental hazards will find this concentration of interest.

M.P.H. Requirements

The basic courses in the Environmental Health Concentration are EH 765 Survey of Environmental Health and EH 768 Principles of Toxicology. These courses together survey the principal areas in environmental health and can be taken in any order. They are designed to familiarize all environmental health students with the general discipline

and are required of all concentrators. Environmental Health concentrators should **not** take EH 708 Introduction to Environmental Health since EH 765 fulfills the M.P.H. core requirement.

In addition to EH 765 and EH 768, concentrators must choose eight credits from the following courses:

- LW 757 Occupational Health and Safety Law¹
- LW 758 Corporate Management of Risks to Health, Safety, and Environment¹
- EH 764 Work and Health
- EH 767 Occupational Health Policy and Economics
- EB 801 Cancer Prevention as a Public Health Problem²
- EH 803 Waste and Wastewater
- EH 805 Scientific Basis of Environmental and Occupational Health Standards
- EH 806 Development and Environment
- EH 809 Parasites of Humans: A Public Health Perspective³
- EB 812 Infectious Disease Epidemiology⁴
- EB 819 Cancer Epidemiology⁴
- LW 852 Environmental Health Law¹
- EH 860 Municipal Sanitation
- EH 862 Radiation Protection
- EH 864 Environmental Microbiology
- EH 865 Food Sanitation and Safety
- EH 866 Seminar on Environmental Health Risk Assessment
- EH 867 Soil Pollution
- EH 869 Environmental Planning
- EH 961 Directed Studies in Environmental Health
- EH 962 Directed Research in Environmental Health

¹This course may also be applied to the Health Law concentration.

²This course may also be applied to the Epidemiology and Biostatistics and Health Behavior, Health Promotion, and Disease Prevention concentrations.

³This course may also be applied to the Health Services concentration.

⁴This course may also be applied to the Epidemiology and Biostatistics concentration.

D.Sc. Requirements

The objective of the doctoral program in environmental health sciences is to provide specialized training and research experience to graduate students interested in obtaining a D.Sc. degree in environmental health sciences.

Two different tracks are offered. The program's science track trains students to conduct independent research studies on the effects of physical, chemical, and biological factors on the health of human populations. This prepares them for roles as research scientists in environmental and occupational epidemiology, toxicology, or microbiology, as well as for management and staff positions in organizations concerned with environmental management and regulation. The environmental policy track trains students to perform independent research studies in environmental and occupational policy and to develop public policy affecting environmental or occupational health. Graduates are prepared for policy analysis, management and policy-making roles in environmental or occupational management and regulation. Students in both tracks are required to demonstrate a basic understanding of public health principles, of the scientific basis of environmental health, and of environmental health policy analysis.

Doctoral candidates will be admitted after completion of an M.P.H. or other appropriate master's degree, or directly after receipt of an undergraduate degree, in which case additional courses may be required. Applicants must demonstrate that they have received adequate preparation to pursue advanced studies and research in an area of environmental health sciences. Any academic deficiencies must be corrected either prior to admission, or, under special circumstances, in the first semester. Specific pre-admission requirements are different for the two tracks. They include:

For the environmental sciences track: Applicants should have taken undergraduate physics, organic, analytical, and physical chemistry, biology, biochemistry, molecular biology or genetics, and math through calculus.

For the environmental policy track: Applicants should have an undergraduate major in economics or political science, or law degree, or have taken an appropriate number of courses in one of these areas or areas of equal relevance. Applicants must have science training including, at a minimum, one year of calculus and four semesters (total) of courses in biology, chemistry, and physics. In order to receive the D.Sc. degree, candidates entering the doctoral program with an undergraduate degree must complete the equivalent of at least 20 graduate-level semester courses (80 credits). Those not completing the requirements for the M.P.H. degree can receive the D.Sc. without earning a master's degree. If the requirements for the Boston University M.P.H. degree are completed, this degree will be awarded. Candidates who have already earned the M.P.H. or a related master's degree must take eight graduate-level semester courses (32 credits) beyond the master's degree. Those with existing master's or doctoral degrees may receive credit for relevant graduate training prior to admission to the D.Sc. program. The courses to be taken will be determined by the degree candidates and their advisors, with the approval of the Environmental Health Doctoral Committee. The student's curric-

ulum is designed to assure: (1) substantial general public health knowledge, (2) a clear perception of the major scientific, legal, and policy issues in environmental health, and (3) a high degree of professional competence in the chosen field of concentration within environmental health. In order to achieve these goals, there are core course requirements for all doctoral candidates:

All doctoral candidates: Principles of Toxicology, Environmental Health, Epidemiology, Biostatistics, Scientific Basis of Public Health Standards, and either Environmental Law, Occupational Health Law or Occupational Health Economics.

Science track: Molecular Epidemiology and either Cancer Toxicology or Environmental Microbiology.

Policy track: Both Environmental and Occupational Health Law and Occupational Health Economics.

Doctoral candidates are required to demonstrate the ability to read scientific literature in English and at least one of the following languages: German, French, Spanish, Japanese, Russian, and Chinese.

There are two qualifying examinations. The first, a written examination, is given prior to choosing a dissertation topic. Students are required to demonstrate in-depth understanding of at least one of the following fields:

- Environmental or Occupational Toxicology
- Environmental or Occupational Microbiology
- Environmental or Occupational Law
- Environmental or Occupational Economics

In addition, they must demonstrate a firm foundation of understanding of public health in general and of environmental health science, law, and policy. The second, an oral qualifying examination, follows completion of course work and is based on a dissertation proposal.

The dissertation demonstrates to the Environmental Health Doctoral Committee that the degree candidate has designed, performed, and reported on substantial independent research in his or her chosen field. It is an original research effort judged to meet the publication standards of peer-reviewed journals in the candidate's field of concentration. The dissertation reports on original research that substantially contributes to the candidate's chosen field of specialization. After the dissertation has been approved by the student's dissertation committee, there is an oral defense.

The post-bachelor's program must be completed within ten years after the first registration for doctoral study. The post-master's program must be completed within seven years after the first registration for doctoral study.

Minimum residency requirements are the equivalent of two consecutive regular semesters of full-time graduate study at Boston University. Students who have completed their course requirements must register each subsequent regular semester as

continuing students and pay the continuing student fee, until they have completed all requirements for the degree. Authorized leaves of absence, approved by the Environmental Health Doctoral Committee, are the only means of waiving the residence and registration requirements.

SPH EH 708 Introduction to Environmental Health

Environmental factors are still the most important determinant of the health status of the community. This course surveys the broad areas of this discipline, touching on the fundamentals of air pollution, the provision of pure water and a healthful food supply, the basics of radiation protection, and the problems of solid and hazardous wastes. This core course does not carry concentration credit. Environmental Health concentrators substitute the concentration core course, EH 765 Survey of Environmental Health, for this M.P.H. core requirement. 2 credits. (Ozonoff and staff)

SPH LW 757 Occupational Health and Safety Law

This course is offered by the Health Law Section. See page 22 for course description.

SPH LW 758 Corporate Management of Risks to Health, Safety, and Environment

This course is offered by the Health Law Section. See page 22 for course description.

SPH EH 764 Work and Health

This introductory course in occupational health covers the nature and magnitude of work-related diseases and injuries in the United States, discusses sociopolitical aspects of occupational health, medical programs in the workplace, and career opportunities in occupational health. A medical/scientific background is helpful, but not required. The course includes at least one work-site visit. Written requirements include an occupational history, a site-visit report, a mid-term, and a final examination. 4 credits. (Patterson)

SPH EH 765 Survey of Environmental Health

This course surveys the broad areas of environmental health, including problems associated with contamination of air, water, food, and soil, and physical hazards such as radiation and thermal stress. This course is required of all Environmental Health concentrators. 4 credits. (Ozonoff)

SPH EH 767 Occupational Health Policy and Economics

Prereq: Consent of the instructor. This seminar introduces noneconomists to economic analysis of occupational health issues. Students learn to use the tools of economics to analyze public policies designed to affect the incidence of occupational injuries and diseases. The course focuses on selected issues, including the effectiveness of OSHA regulation, the use of cost-benefit analysis in occupational health, problems of compensating workers with occupational disease, and the adequacy of

workers' compensation incentives to reduce occupational hazards. No prior economics training is needed. 4 credits. (Boden)

SPH EH 768 Principles of Toxicology

This introductory course presents the basic concepts of toxicology, including dose-response relationships, biologic and chemical factors that influence toxicity, types of harmful effects, detoxification mechanisms, mechanisms of carcinogenesis, tumor promotion, mutagenesis, and the principles of testing for toxic effects. A risk assessment paper on a chemical of the student's choice is required. The course assumes basic knowledge of chemistry and biology. This course is required of all Environmental Health concentrators. 4 credits. (Groopman)

SPH EB 801 Cancer Prevention as a Public Health Problem

This course is offered by the Epidemiology and Biostatistics Section. See page 18 for course description.

SPH EH 803 Waste and Wastewater

Prereq: SPH EH 765 Survey of Environmental Health or consent of the instructor. This course provides the student with a background on wastes and wastewater as related to public health issues. Process streams including primary, secondary, and tertiary treatment of municipal wastewater, septage disposal, and sludge stabilization and disposal are presented along with current technologies and limitations. Overland flow, slow-rate infiltration, and other effluent land-treatment systems are described and discussed. Technologies involving solid waste disposal such as incineration, combustion with energy recovery, and landfilling are presented with particular emphasis on public health aspects. The course involves site/field visits and a paper. 4 credits. (Epstein)

SPH EH 805 Scientific Basis of Environmental and Occupational Health Standards

Prereq: SPH EH 765 Survey of Environmental Health; SPH EH 768 Principles of Toxicology and SPH EB 711 Epidemiology recommended. This course covers the relationship between scientific knowledge about health hazards and the development of public health standards to control exposure. Four standards are reviewed, covering hazards in the environment, at the workplace, and in the food supply. For each hazard, the relevant scientific literature is reviewed. Then, the legal basis of the standard is discussed. Finally, the relationship between scientific knowledge, the law, and the existing standard is analyzed. The course is designed so that students may apply their understanding of the scientific, legal, and economic principles of environmental health developed in other courses. 4 credits. (Boden)

SPH EH 806 Development and the Environment

Prereq: Consent of the instructor. This course focuses on environmental issues in developing countries in the context of modernization in the agricultural and industrial sectors. It examines the relations between industrialized, western countries and the developing nations, and explores the ways in which policies and regulations in one country have an effect on other countries. Specific examples that are discussed include: international trade in hazardous products, environmental impacts of industrialization, pest control strategies, information needs of developing countries, and activities of international organizations. 2 credits. (Shaikh)

SPH EH 809 Parasites of Humans: A Public Health Perspective

Prereq: Consent of the instructor. This course provides an in-depth exploration of the major diseases of humans that are caused by protozoans and helminths, and examines the role of arthropods as parasites and vectors. The format of the course is lecture and laboratory. Students are required to prepare and examine blood and stool specimens as well as examine and identify already prepared specimens. The course emphasizes the development of knowledge and skills important for the prevention and control of parasitic diseases in humans. 4 credits. (Duncan)

SPH EB 812 Infectious Disease Epidemiology

This course is offered by the Epidemiology and Biostatistics Section. See page 18 for course description.

SPH EB 819 Cancer Epidemiology

This course is offered by the Epidemiology and Biostatistics Section. See page 19 for course description.

SPH LW 852 Environmental Health Law

This course is offered by the Health Law Section. See page 22 for course description.

SPH EH 860 Municipal Sanitation

Prereq: SPH EH 765 Survey of Environmental Health or consent of the instructor. This course focuses on the fundamentals of large-scale urban sanitary systems, principally those providing water supply and wastewater disposal. The course covers water supply sources, processing, and distribution; wastewater collection, treatment, and disposal; water quality indices and water pollution; and rural water supply and waste disposal systems. 4 credits. (Staff)

SPH EH 862 Radiation Protection

Prereq: Basic knowledge of physics and biology, or consent of the instructor. This course provides an introduction to the basic physics of ionizing radiation, its measurement, and its biological effects.

The origin and sources of different types of ionizing radiation are covered, radiation units and associated measuring instruments are discussed and demonstrated, and the mechanisms and consequences of biological damage are presented. Radiation protection principles and techniques are covered in the context of public health and the regulatory framework. The emphasis is on radiation protection within medical institutions, although industrial and nuclear power applications are discussed. 4 credits. (Evdokimoff)

SPH EH 864 Environmental Microbiology

Prereq: College biology or consent of the instructor. This course covers basic concepts of microbial ecology, the roles of soil and water microorganisms in nutrient recycling and degradation of domestic hazardous wastes, and the impact of pollution on microbial communities. Topics to be discussed include waste treatment and disposal, biological pest control, food spoilage, the spread of disease organisms, and the potential benefits and hazards of new advances in biotechnology. 4 credits. (Foster)

SPH EH 865 Food Sanitation and Safety

Prereq: SPH EH 765 Survey of Environmental Health or consent of the instructor. This course explores the various aspects of food service sanitation, including vending. While it concentrates on the prevention and control of microbiological contamination of food in the institutional and retail food establishment, it also covers general aspects of food safety, including additives, processing, and the regulatory framework.

Students taking this course become certified in food service sanitation through the National Institute for the Foodservice Industry, are qualified to plan and manage a program of food sanitation, safety, and inspection, and are able to train and supervise others. 4 credits. (Balsam)

SPH EH 866 Seminar on Environmental Health Risk Assessment

Prereq: SPH EB 711 Epidemiology, SPH EH 765 Survey of Environmental Health, and SPH EH 768 Principles of Toxicology. This seminar teaches the practical application of risk assessment methods to various problems, especially hazardous waste sites. The seminar uses the term "public health risk assessment" to mean the fully quantitative characterization of the potential adverse health effects of human exposures to environmental hazards, with emphasis on potential human exposures to toxic organic and inorganic chemicals. The lectures present the strengths and weaknesses of risk assessment methods, the inherent uncertainties in each step, and the relationship between risk assessment and risk management. 4 credits. (Burmaster and Menzies)

SPH EH 867 Soil Pollution

Prereq: SPH EH 765 Survey of Environmental Health or consent of the instructor. This course examines the origin, movement, and fate of pollutants in the soil matrix. Proper on-site disposal of wastewater in septic systems depends on a knowledge of the nature of soil, its different types, and its topography. This course provides the basic background against which these factors can be understood and used in the proper design and evaluation of on-site disposal systems. The movement of chemicals in soil is also presented and the consequences for soil and hazardous waste disposal are given special emphasis. At least one other course in environmental health is required. There are one or more field visits to view local facilities. 4 credits. (Epstein)

SPH EH 869 Environmental Planning

Prereq: SPH EH 765 Survey of Environmental Health or consent of the instructor. Planning is basic to the medium- and long-range management of any environmental protection program. This course examines various theories of planning and

shows the student a variety of techniques that can be used in planning an environmental program. Practical examples are used throughout with a special emphasis on the hazardous waste problem. 4 credits. (Staff)

SPH EH 961 Directed Studies in Environmental Health

This course provides the opportunity for advanced students to explore a special topic of interest under the direction of a faculty member. Arrangements are made directly with the appropriate faculty member and the section chief. Variable credit.

SPH EH 962 Directed Research in Environmental Health

This course provides the opportunity for advanced students to undertake independently, or to become involved in, environmental health research of a public health nature. Arrangements are made with the appropriate faculty member and the section chief. Variable credit.

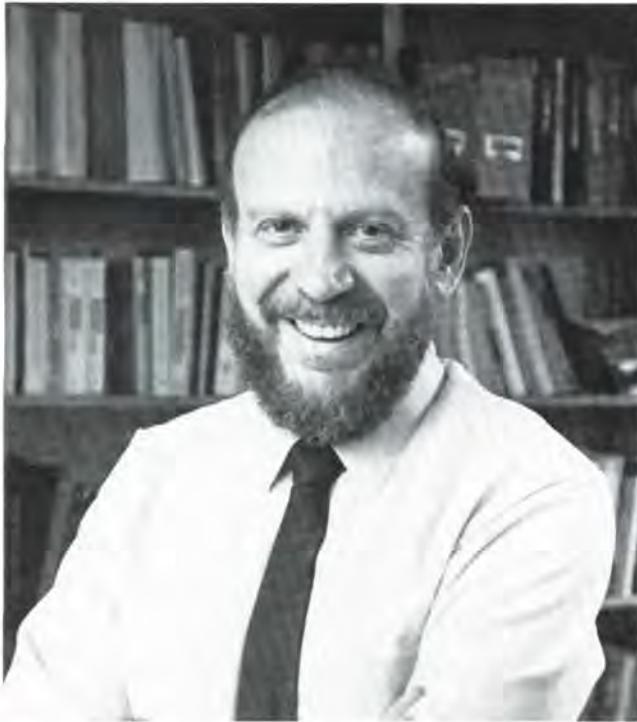


Tony Pikul, a research technician, analyzes human urine for DNA carcinogen adducts.

Epidemiology and Biostatistics

Theodore Colton, *Sc.D.*, *Section Chief*

The Epidemiology and Biostatistics Concentration



This concentration provides the student with the principles and methods of research in health. Emphasis is on quantitative approaches as manifested by the disciplines of biostatistics and epidemiology. The intent of this concentration is to equip the student with skills in the design, conduct, and analysis of research endeavors such as clinical trials, etiologic epidemiologic studies, medical surveys, and evaluation of health care programs. Within this concentration students may also choose to specialize in the development of new methodology in research design or in analysis of health data.

Under the auspices of a grant from the National Cancer Institute, the Epidemiology and Biostatistics Section has developed a program of course work with particular emphasis on Preventive Oncology. Students interested in this program should contact Dr. Marianne Prout.

An important component of the Section is the Slone Epidemiology Unit. The Epidemiology Unit is located at 1371 Beacon Street, Brookline, a 20-minute drive from the Medical Center. A small number of students may gain hands-on experience in working with faculty in the Epidemiology Unit on current epidemiologic research projects.

M.P.H. Requirements

Core Courses

The two courses for the Section are EB 701 Elementary Biostatistics and EB 711 Epidemiology. There are, however, alternatives to each of these core courses. These options are available to *all* students, including Section concentrators.

A student who has had some preparation or previous familiarity with biostatistics may take EB 703 Intermediate Biostatistics in lieu of EB 701 Elementary Biostatistics to satisfy the core requirements. All Section concentrators must take EB 703 Intermediate Biostatistics, regardless of which biostatistics course they choose to satisfy their core requirement. Consequently, Section concentrators may take *both* EB 701 and EB 703 or *EB 703 only*.

All students may choose from EB 711 Epidemiology or EB 712 Epidemiologic Methods to meet the core requirement. It is recommended, but not required, that Section concentrators take EB 712. This course provides a more in-depth introductory approach and is intended for students who anticipate use of epidemiologic methods in their health careers. Students may *not* take both EB 711 and EB 712.

Section faculty are available to counsel students on which of the biostatistics and epidemiology core course options best meet their academic needs and fit their backgrounds.

Concentration Requirements

Epidemiology and Biostatistics concentrators must take EB 703 Intermediate Biostatistics. In addition, the concentration requirement consists of a total of 16 credits from among the following courses:

EB	702	Introduction to Statistical Computing
EB	704	Topics in Data Analysis
EB	705	Intermediate Statistical Computing
EB	707	Methods and Principles of Clinical Research
EB	716	Physiology and Pathophysiology
EB	720	Applying Epidemiology to the Study of Aging
EH	765	Survey of Environmental Health ¹
EB	780	Analysis of Discrete Data
EB	801	Cancer Prevention as a Public Health Problem ²

EB	802	Reproductive Epidemiology
EB	803	Clinical Trials
EB	805	AIDS: Medical, Economic, Psychosocial, and Legal Issues
EB	806	Theoretical Epidemiology
EB	807	Genetic Epidemiology
EB	810	Psychiatric Epidemiology
HS	811	Health Services Research Methods ³
EB	812	Infectious Disease Epidemiology ¹
EB	813	Methods in Chronic Disease Epidemiology
EB	814	Research Methods in Public Health
SB	815	Program Evaluation Research ⁴
EB	816	Cardiovascular Epidemiology
EB	817	Practicum in Public Health Research
EB	818	Statistical Methods for Epidemiology
EB	819	Cancer Epidemiology ¹
EB	901, 902	Directed Studies in Epidemiology/Biostatistics
EB	911, 912	Directed Research in Epidemiology/Biostatistics
EB	914	Epidemiology/Biostatistics Research Seminar
EB	915	Research Methodology and Medical Literature

¹This course may also be applied to the Environmental Health concentration.

²This course may also be applied to the Environmental Health and Health Behavior, Health Promotion, and Disease Prevention concentrations.

³This course may also be applied to the Health Services concentration.

⁴This course may also be applied to the Health Services and Health Behavior, Health Promotion, and Disease Prevention concentrations.

Students should plan their concentration courses carefully, commensurate with their particular areas of interest and their career goals. The faculty of the concentration feel strongly that the students' interests should determine the course pattern. In planning courses, students should recognize that several courses entail prerequisites. In particular, students should be aware that intermediate and advanced level biostatistics courses (i.e. EB 704, EB 705, EB 780, EB 818) entail the prerequisite of EB 702 Introduction to Statistical Computing. Hence, students must plan their schedules in order to complete EB 702 or its equivalent prior to their enrollment in these courses. Illustrations of concentration course planning are as follows:

Students who are particularly interested in epidemiology might choose their four concentration courses from the following methodologic courses:

- Research Methods in Public Health
- Methods in Chronic Disease Epidemiology
- Introduction to Statistical Computing
- Topics in Data Analysis
- Statistical Methods for Epidemiology

and the following discipline-oriented specialty courses:

- Cardiovascular Epidemiology
- Cancer Epidemiology
- Infectious Disease Epidemiology
- Health Services Research Methods
- Reproductive Epidemiology
- Psychiatric Epidemiology

The discipline-oriented specialty courses emphasize the principles and methods of epidemiology that were briefly surveyed in the core epidemiology course. Greater stress is placed on the principles of the various epidemiologic research strategies, and the student pursues in some depth the substantive content of his or her specialty area. The methods courses provide the student with more specific skills in the design, conduct, analysis, and interpretation of epidemiologic studies.

Students especially interested in evaluation research (or in health care research) might plan to choose from:

- Introduction to Statistical Computing
- Topics in Data Analysis
- Program Evaluation Research
- Research Methods in Public Health
- Health Services Research Methods

A student may also choose a directed research course which allows him or her to pursue a particular research project that will serve to synthesize and apply the various facts and techniques learned during the student's tenure.

Electives

Depending on the core courses chosen, Section concentrators have a choice of from 11 to 15 credits in elective courses. A student has the option to include among his/her electives additional courses in the Section, specific courses in other Sections that will qualify the student to meet the requirements for a dual concentration, or a variety of courses in other Sections that provide a broad view of public health.

D.Sc. in Epidemiology Requirements

The D.Sc. program is intended for the health professional who seeks advanced graduate study to prepare for a career as a professional epidemiologist. It is anticipated that graduates of this program will obtain leadership positions in research, teaching, and administration. Applicants should hold a graduate degree in a field relevant to public health. Exceptional candidates without a graduate degree may apply, but will be required to complete additional course work.

Students complete at least 32 credits (eight courses) beyond the master's degree. It is expected that at least one half of these courses be from the Epidemiology and Biostatistics course offerings at the School of Public Health. Students may also

choose from other courses offered at the School and pertinent graduate courses at Boston University, such as those offered by the Departments of Mathematics and Computer Science and the Division of Medical Sciences. Under special circumstances, students may transfer a maximum of 8 credits with permission of the Doctoral Committee. The intent of the course work is to provide a firm foundation in epidemiologic principles and methods, biostatistical methods, and general public health knowledge.

Students must demonstrate proficiency in reading the epidemiologic literature in at least one of the following languages: French, Spanish, German, or Russian. International students may use English to fulfill the language requirement.

Upon completion of course work, each student *must pass a comprehensive written examination* that may be supplemented by an oral examination to evaluate the student's readiness to begin thesis research. Each student is required to develop a written dissertation proposal outlining the nature of the research. The proposal must be approved by the student's advisor and thesis committee. The dissertation is prepared and written under the direction of the candidate's principal advisor. The research usually involves collection, processing, and analysis of original data. Under special circumstances, the requirement of original data may be waived when a student proposes an innovative project involving analysis of an existing data set or a creative theoretical investigation of epidemiologic importance. When the dissertation is completed, the candidate defends his or her work before a five-member committee.

The post-bachelor's program must be completed within ten years after the first registration for doctoral study. The post-master's program must be completed within seven years after the first registration for the doctoral program.

Minimum residency requirements are the equivalent of two consecutive regular semesters of full-time graduate study at Boston University. Students who have completed their course requirements must register each subsequent regular semester as continuing students and pay the continuing student fee, until they have completed all requirements for the degree. Authorized leaves of absence, approved by the Epidemiology Doctoral Committee, are the only means of waiving the residence and registration requirements.

M.A. in Biostatistics Requirements

The M.A. program is intended primarily for the student with the equivalent of a B.A. who wishes to pursue advanced study in the theory and methods of biostatistics. To earn the M.A. degree, students are expected to complete 32 credit hours and earn a cumulative grade point average of at least 3.0. Course work must include the following five biostatistics core courses (20 credits): SPH EB 712

Epidemiologic Methods; SPH EB 818 Statistical Methods for Epidemiology; CLA MA 581 Probability; CLA MA 582 Mathematical Statistics; and CLA MA 575 Applied Regression and Analysis of Variance. These core courses provide a theoretical background in biostatistics and the basic skills necessary for applications in public health. The remaining courses are selected from designated courses in biostatistics and epidemiology at the School of Public Health or the Mathematics Department. The master's student must pass two comprehensive written examinations demonstrating proficiency in the material covered in the five core courses. See the Graduate School bulletin for other M.A. requirements.

Ph.D. in Biostatistics Requirements

The Ph.D. program in Biostatistics is intended primarily for the graduate student who seeks a career as a professional, academic, or industrial researcher in the biomedical and epidemiologic sciences. The program meets the needs of (1) the health professional who wishes to continue with public health training and achieve a higher and more specialized degree and (2) the statistician who wishes to specialize in statistical methods for biomedical and epidemiologic applications. Students in the Ph.D. program entering with only a bachelor's degree must complete 64 credits. These must include the eight biostatistics core courses and at least four of ten designated courses in biostatistics and epidemiology, including at least one each from the Department of Mathematics and the School of Public Health. Students select remaining credits from courses suggested by the Program Committee. Students entering the Ph.D. program with master's degrees may be accepted into 32-credit programs. However, they may be required to take extra courses if there are deficiencies in their background. The intent of the course requirement is to provide a firm foundation in biostatistics and mastery of a broad range of applied techniques.

Students must demonstrate their ability to read the biostatistical literature in at least one foreign language. Foreign students may use English to fulfill their language requirement.

Upon nearing the completion of coursework, the doctoral student must pass three comprehensive written examinations. Two of these require proficiency in the foundation areas covered in the eight core courses and one is based on selected courses in biostatistics and epidemiology. Before embarking on dissertation research, the student must develop a dissertation proposal outlining the nature of the research to be undertaken. The dissertation provides documentation of the student's creative scholarship and ability to design, conduct, and report on independent, original research in biostatistics. The dissertation research consists of the development of statistical methodology for biomedical or epidemiologic applications. This original methodology should in general be applied

to data collected by the student or to already existing data sets collected by other investigators. The student must present an oral defense of the dissertation to a five-member committee.

The curriculum for the master's and doctoral programs in biostatistics consists of the following combination of courses at the School of Public Health and the Mathematics Department of the Graduate School.

Biostatistics Core Courses

CLA MA 581	Probability
CLA MA 582	Mathematical Statistics
CLA MA 575	Applied Regression and Analysis of Variance
SPH EB 712	Epidemiologic Methods
SPH EB 818	Statistical Methods for Epidemiology
CLA MA 684	Multivariate Analysis
GRS MA 781	Estimation Theory
GRS MA 782	Hypothesis Testing

Biostatistics and Epidemiology Courses

SPH EB 813	Methods in Chronic Disease Epidemiology
SPH EB 780	Analysis of Discrete Data
SPH EB 803	Clinical Trials
SPH EB 914	Epidemiology/Biostatistics Research Seminar
SPH EB 705	Intermediate Statistical Computing
SPH HS 811	Health Services Research Methods
CLA MA 587	Sampling Design: Theory and Methods
CLA MA 584	Survival Analysis
CLA MA 589	Reliability Methods
CLA MA 685	Advanced Topics in Applied Statistical Analysis Directed Study

See the Graduate School bulletin for a description of GRS and CLA courses and other Ph.D. requirements.

SPH EB 701 Elementary Biostatistics

This course is for students who have not had prior experience with statistics. Topics include: the collection, classification, and presentation of descriptive data; the rationale of hypothesis testing; experimental design; t-tests; simple correlation analysis; and analysis of contingency tables. Special attention is directed to the ability to recognize and interpret statistical procedures in articles from the current literature. 3 credits. (Kayne)

This course (or SPH EB 703) is required for all M.P.H. students.

SPH EB 702 Introduction to Statistical Computing

This course introduces students to statistical packages for both personal and mainframe computers. Focus is on manipulating data sets and basic statistical procedures such as t-tests, chi-square tests, and correlation. Conditions underlying the appropriate use of these statistical procedures are reviewed. Students use equipment and software

available through the Laboratory for Instructional Technology at the Boston University School of Medicine. This course is a prerequisite for SPH EB 704, SPH EB 705, SPH EB 780, and SPH EB 818. 4 credits. (Staff)

SPH EB 703 Intermediate Biostatistics

This course is for students who have had classroom or work-related exposure to biostatistics at the level of EB 701. Topics include: a review of aspects of EB 701; analysis of variance and multiple comparisons; block, factorial, and repeated measures experimental designs; multiple correlation and regression; covariance adjustment. Focus is on interpretative skills and reading the literature critically rather than on mathematics. 4 credits. (Kayne)

Epidemiology and Biostatistics concentrators must take EB 703, although they may take EB 701 first.

SPH EB 704 Topics in Data Analysis

Prereq: SPH EB 701 Elementary Biostatistics, SPH EB 702 Introduction to Statistical Computing or consent of the instructor. This course covers topics in sample size and power calculations, categorical data analysis, and survival data analysis. The segment on sample size and power calculations focuses on comparison of two groups with continuous and discrete measures. Categorical data analysis covers the Poisson distribution, measures of association, and comparison of 2X2 tables. The survival data segment includes parametric models, life tables, comparison of survival distributions, and the proportional hazards model. Emphasis is placed on application of the techniques, including use of computerized statistical packages. 4 credits. (Cupples)

SPH EB 705 Intermediate Statistical Computing

Prereq: SPH EB 702 Introduction to Statistical Computing and SPH EB 703 Intermediate Biostatistics or consent of the instructor. This course is a sequel to EB 702 Introduction to Statistical Computing. Topics cover file manipulation, such as joining or merging two or more data sets and use of tape or disk storage for data sets. Statistical computation covers multiple regression, analysis of variance and covariance, repeated measure analysis of variance, and logistic regression. Computerized statistical packages considered are SAS and possibly SPSS or BMDP. 4 credits. (Cupples and Heeren)

SPH EB 707 Methods and Principles of Clinical Research

Prereq: Consent of instructor. This intensive course covers such topics as research design strategies; principles of biostatistics and epidemiology; practical problems in the conduct of research; flaws, fallacies, and pitfalls in research; critical evaluation of published studies; and how to write a research protocol. 4 credits. (Colton and Kayne)



Suzette Levenson, right, is Assistant Director of Research and Data Coordination at the School of Public Health. Her staff at the School's Data Coordinating Center assists students and faculty with all aspects of their research projects.

SPH EB 711 Epidemiology

The purpose of this course is to introduce the basic principles and methods of epidemiology and demonstrate their applicability in the field of public health. A further objective is to provide an introduction to the basic skills needed to critically interpret the epidemiologic literature relevant to public health professionals. 3 credits. (Aschengrau)

This course or EB 712 is required for all M.P.H. students.

SPH EB 712 Epidemiologic Methods

This course covers the same materials as the required EB 711 core course, but does so in greater depth, with more emphasis on methodologic issues, and with increased focus on critical assessment of *contemporary* substantive epidemiologic research. This course is intended for those students who have interest in a more intensive exploration of the basic principles of epidemiology, with greater rigor and with a more quantitative orientation. This course is recommended particularly for students who intend to concentrate in Epidemiology and Biostatistics and others whose public health interests entail quantitative skills. This course or EB 711 satisfies the core requirement in epidemiology; however, students may not take both this course and EB 711. 4 credits. (Buring)

SPH EB 716 Physiology and Pathophysiology

Prereq: Consent of instructor. This course is an overview of physiology and pathophysiology. It is intended for students with no background in biological science. 4 credits. (Kayne)

SPH EB 720 Applying Epidemiology to the Study of Aging

Prereq: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods or consent of the instructor. This course consists of lectures organized around topics of interest in geriatrics and gerontology. Each session (for each topical area) has three goals. First, the current status of knowledge obtained through epidemiologic studies is reviewed. Second, that status of current knowledge serves as a starting point for discussing the directions that future research should take. Finally, special consideration is given to the unique problems associated with conducting research in an elderly population. The review of such important methodologic issues leads to a practical discussion on how such research should be conducted in the future. 4 credits. (Kern)

SPH EH 765 Survey of Environmental Health

This course is offered by the Environmental Health Section. See page 10 for course description.

SPH EB 780 Analysis of Discrete Data

Prereq: SPH EB 703 Intermediate Biostatistics or consent of the instructor. This course examines the use of log linear, logistic, and proportional hazards models for analyzing counted data. Topics include the binomial, multinomial, and Poisson distributions, chi-square tests, measures of association, log linear models for contingency tables, survival analysis, and goodness of fit. The course emphasizes practical applications, making extensive use of computer packages for data analysis. 4 credits. (Glynn)

SPH EB 801 Cancer Prevention as a Public Health Problem

Prereq: SPH EB 701 Elementary Biostatistics, SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods, and consent of the instructor. By means of lectures, seminars, and student presentations, this course reviews multidisciplinary approaches to the application of cancer prevention knowledge to individuals and communities. Students analyze and present case examples of approaches to the control of a given cancer or a given carcinogen. 4 credits. (Prout and Koh)

SPH EB 802 Reproductive Epidemiology

Prereq: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods. This course surveys current knowledge concerning the epidemiology of reproductive outcomes and important exposures that affect reproductive health. Topics include infertility, miscarriage, infant mortality, alcohol use, and occupational hazards. The course emphasizes epidemiologic methods and gives the student experience in the critical review of epidemiologic studies in this area. 4 credits. (Aschengrau)

SPH EB 803 Clinical Trials

Prereq: SPH EB 701 Elementary Biostatistics and SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods or consent of the instructor. This course considers a range of issues in the design, conduct, and analysis of clinical trials, namely, planned experiments with patients to assess the efficacy of treatment regimens. The course provides practice in the design of such studies and in the critique of published investigations. Emphasis is placed on statistical principles that affect the size, structure, and duration of a trial, as well as the analysis and interpretation of its results. There is little emphasis on computational methods. 4 credits. (Ash)

SPH EB 805 AIDS: Medical, Economic, Psychosocial, and Legal Issues

Recommended: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods and SPH EB 812 Infectious Disease Epidemiology. Through a series of seminars and lectures by several experts from the Boston medical, legal, and economic communities, this course reviews the current AIDS epidemic, the microbiology of HIV infection, and the clinical spectrum and natural history of the dis-

ease. In addition, the legal, economic, and social impact of the disease is discussed. Students prepare a paper on an aspect of AIDS. Attention is given to examining the changing policy (health, legal, and economic) implications as the epidemiology of this rapidly changing infection becomes better defined. 4 credits. (Craven and Seage)

SPH EB 806 Theoretical Epidemiology

Prereq: SPH EB 703 Intermediate Biostatistics and SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods or consent of the instructor. This course examines principles of design, analysis, and interpretation of epidemiologic studies. Design issues to be considered include formulation of the occurrence relation, assessments of determinants and outcome, conceptualization of confounding, selection of study population, and methods of sampling. Analysis and inference issues to be considered include hypothesis testing, comparative analyses of rates, case-referent data, and regression analysis. 4 credits. (Glynn)

SPH EB 807 Genetic Epidemiology

Prereq: SPH EB 703 Intermediate Biostatistics and SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods or consent of the instructor. This course familiarizes students with general methods and principles of genetic epidemiology. Although a previous course in genetics is not required, students must be able to master, with little formal instruction, basic Mendelian and population genetics principles. Topics include pedigree analysis, linkage analysis in humans, twin studies, effects of inbreeding, genetics of common diseases, population-based studies of birth defects and chromosome abnormalities, and forensic genetics. The course emphasizes practical applications of existing methods to designing and executing genetic studies and to genetic counseling. This involves some critical evaluation of the scientific literature. 4 credits. (Farrer)

SPH EB 810 Psychiatric Epidemiology

Prereq: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods. This course applies the epidemiologic method to mental illness and health. The course examines major studies that have used data on treated cases as well as general population surveys. Special attention is given to methodologic issues in the design and implementation of these studies. Behavioral disorders during childhood and adult years are covered. 4 credits. (Galler)

SPH HS 811 Health Services Research Methods

This course is offered by the Health Services Section. See page 27 for course description.

SPH EB 812 Infectious Disease Epidemiology

Prereq: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods. This course presents the methods of studying common infectious diseases in populations. It includes the determinants of

these diseases, their distribution within populations, and their control. Primary focus is on the process of analysis of actual outbreaks of infectious disease with discussion of prepared homework. In addition, there is lecture presentation regarding specific diseases and agents. Domestic and some tropical diseases are included. Implications for social policy and preventive approaches are discussed. 4 credits. (Lamb)

SPH EB 813 Methods in Chronic Disease Epidemiology

Prereq: SPH EB 701 Elementary Biostatistics or SPH EB 703 Intermediate Biostatistics (or equivalent) and SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods. This course emphasizes the specific issues and methods involved in the design, analysis, and interpretation of epidemiologic studies of etiologic factors in chronic diseases. Specific methodology includes parameter estimation and hypothesis testing for simple and stratified analyses, as well as techniques for the evaluation and control of effect modification and confounding. Students analyze and interpret actual epidemiologic data and present written critical evaluations of published work. 4 credits. (Buring)

SPH EB 814 Research Methods in Public Health

Prereq: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods. Recommended: SPH EB 701 Elementary Biostatistics or SPH EB 703 Intermediate Biostatistics. This course stresses the theory and practice of conducting survey research in health fields. Classes are a mixture of lectures and skill exercises. Topics include research design, sampling, data collection methods, interviewing, coding, and data analysis. The course is appropriate for those who will do research as well as those who will be research consumers. 4 credits. (Mangione)

SPH SB 815 Program Evaluation Research

This course is offered by the Social and Behavioral Sciences Section. See page 32 for course description.

SPH EB 816 Cardiovascular Epidemiology

Prereq: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods. This course introduces students to the natural history of cardiovascular diseases such as hypertension and coronary heart disease. *It also focuses on the principal causes of cardiovascular disease, particularly those that can be modified to effect either primary or secondary prevention.* The course also reviews the important noninvasive and multivariate statistical methods that are used in obtaining and analyzing data from studies of cardiovascular epidemiology. The final segment of the course also includes reports of both clinical and community intervention trials. 4 credits. (Stokes)

SPH EB 817 Practicum in Public Health Research

Prereq: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods and SPH EB 814 Research Methods in Public Health. Recommended: SPH EB 701 Elementary Biostatistics or SPH EB 703 Intermediate Biostatistics. This course is a sequel to EB 814. It provides an opportunity for students to conduct a survey research project. Students work as a class on a research problem in the health area. Questionnaire design, sampling, data collection, analysis of data, and report writing are included. This course is appropriate for those who will do research in their careers. 4 credits. (Mangione)

SPH EB 818 Statistical Methods for Epidemiology

Prereq: SPH EB 702 Introduction to Statistical Computing, SPH EB 703 Intermediate Biostatistics, and SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods or consent of the instructor. This course covers study design and intermediate level data analysis techniques for handling confounding in epidemiologic studies. Confounding is carefully defined and distinguished from interaction. Course content covers stratification and multivariable techniques for controlling confounding in both matched and independent sample study designs, including analysis of covariance, logistic regression, and proportional hazards models. Students are required to apply these methods with the aid of computerized statistical packages. 4 credits. (Cupples)

SPH EB 819 Cancer Epidemiology

Prereq: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods. This course applies the principles developed in the introductory epidemiology course to the study of cancer. The course commences with a descriptive account of time trends and geographic and demographic patterns of cancer mortality and incidence rates. The concepts of hospital-based and population-based tumor registries are reviewed along with their respective merits and limitations. In regard to analytic epidemiology, the course focuses on contemporary issues in cancer etiology including occupation, the environment, lifestyles, drug usage, and genetics. Cancer control is addressed by a review of cancer screening and prevention. The course format consists of a series of lectures by both faculty and guests, seminar sessions, and directed readings from the current literature. 4 credits. (Colton)

SPH EB 901, 902 Directed Studies in Epidemiology and Biostatistics

These courses provide the opportunity for students to explore a special topic of interest under the direction of a faculty member. Arrangements are made directly with the appropriate faculty member and the section chief. Variable credit.

SPH EB 911, 912 Directed Research in Epidemiology and Biostatistics

These courses provide the opportunity for students to undertake independently, or to become involved in, epidemiology and biostatistics research. Arrangements are made with the appropriate faculty member and the section chief. Variable credit.

SPH EB 914 Epidemiology/Biostatistics Research Seminar

Prereq: SPH EB 701 Elementary Biostatistics or SPH EB 703 Intermediate Biostatistics, and SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods, and consent of the section chief. This course consists of a seminar series of presentations on recent developments and current research ac-

tivities in epidemiology and biostatistics. Speakers at the seminar include researchers both within and outside of the Boston University medical community as well as selected students in the course. The amount of credit for the course depends on the student's degree of participation. Although this course is intended for Epidemiology and Biostatistics concentrators and doctoral students, interested students who have completed their core course requirements in Epidemiology and Biostatistics may enroll. 2 credits.

SPH EB 915 Research Methodology and Medical Literature

Prereq: SPH EB 701 Elementary Biostatistics and SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods, and consent of the instructor. This course provides the student with a rigorous approach towards critical reading of the medical literature. Each week medical articles are reviewed in order to illustrate examples of strong and weak methods, results and conclusions. By the end of the course, the student is able to critique independently an article for a peer-reviewed journal. 2 credits. (Moskowitz)



Many students who complete the Summer Certificate Program in International Health in Developing Countries matriculate into the M.P.H. program.

Health Law

George J. Annas, J.D., M.P.H., Section Chief

The Health Law Concentration



Public health law is emerging as one of the most important aspects of public health. As an instrument of social policy, the law plays an increasingly significant role in the field of public health. It has a broad impact in such areas as institutional licensing, safety in the workplace, environmental protection, and inoculation — and a very personal impact in such matters as the right to die, personal privacy, individual licensing, and civil commitment.

This concentration is designed primarily for students with a broad interest in health policy and for those who intend to work for public agencies, private associations, and industrial firms. It may also be appropriate for those holding a J.D. who wish to pursue an academic or research career, who intend to specialize in health law, or who plan a consulting career in health policy. Public health law addresses the traditional legal issues of regulation and the allocation of rights and responsibilities as well as unresolved issues of major import for the future.

Health Law concentrators must take LW 751 Public Health Law I, LW 753 Public Health Law II, and two of the following courses. Health Law concentrators should not take LW 707 Introduction to Health Law since LW 751 Public Health Law I will fulfill the M.P.H. core requirement.

LW 754 Children at Risk

LW 756 Hospital Law¹

LW 757 Occupational Health and Safety Law²

LW 758 Corporate Management of Risks to Health, Safety, and Environment²

LW 852 Environmental Health Law²

LW 854 Mental Health Law

LW 951 Directed Studies in Health Law

LW 952 Directed Research in Health Law

¹This course may also be applied to the Health Services concentration.

²This course may also be applied to the Environmental Health concentration.

Public Health Law I is a prerequisite for most other courses within this concentration, and the faculty recommend that it be taken during the first semester of the concentrator's program.

SPH LW 707 Introduction to Health Law

This M.P.H. core course provides a general introduction to the role of law in the design and implementation of public health programs and the protection of the health interests of different sectors of society. It is designed for students who do not have prior experience or education in this field, and covers the structure, concepts, and process of decision making on health matters in legislative, administrative, and judicial bodies. Public Health Law I, a more in-depth introduction to health law, also satisfies the M.P.H. core course requirement. *Health Law concentrators, law students, and lawyers are required to complete Public Health Law I and should not take this course.* With the approval of the Director of the Office of Special Projects, students from developing countries may have this course waived. 2 credits. (Annas)

SPH LW 751 Public Health Law I

This course introduces students to the legal system and to major legal issues and problems confronting the public health professional. By analyzing judicial decisions, students learn about legal analysis and conflict resolution and avoidance. Thus they learn to see the legal system as a tool that can be used to advance, rather than impede, the implementation of specific public health policies. Topics covered include state public health powers, federal activity in public health, medical malpractice, privacy and confidentiality of medical information, mental health law, abortion and sterilization, patients' rights, emergency medical care delivery, legal status of allied health professionals, human experimentation, and rights of the terminally ill. This course is a prerequisite for most other Health Law courses. 4 credits. (Annas and Glantz)

SPH LW 753 Public Health Law II

Prereq: SPH LW 751 Public Health Law I. This seminar is designed to provide students with an

opportunity to explore selected topics in public health law in greater depth than was permitted in Public Health Law I. Topics selected change yearly, but all are concerned with issues relevant to the delivery of health care to large populations, such as mass immunization programs, AIDS, brain death statutes, organ transplants, new reproductive technologies, and mercy killing. The course is required for Health Law concentrators and provides participants with an opportunity to learn legal research techniques. A term paper is required, as is frequent use of the Law School library. 4 credits. (Annas)

SPH LW 754 Children at Risk

This course is an examination of children who are at risk in our society because of health-related problems (e.g., those who are abused, developmentally handicapped, mentally ill, or retarded) and of the effectiveness of services provided these children by existing institutions and by various professionals such as physicians, nurses, lawyers, psychologists, social workers, and educators. Attention is paid to the role of decision makers in determining priorities. Proposals for change, both medical and legal, are analyzed. A paper and an oral presentation are required. 4 credits. (Alpert and Glantz)

SPH LW 756 Hospital Law

Prereq: SPH LW 707 Introduction to Health Law or SPH LW 751 Public Health Law I. This course is designed to explore legal issues that affect the operation of hospitals and other health care facilities. It concentrates on legal issues that are generally not covered in other courses in either the health law or health services concentrations, such as staff privileges, antitrust issues, trustees' role and liability, the role of in-house counsel, determination of need and other state regulatory mechanisms, labor relations, hospital liability, occupational health in the hospital, and hospital obligations to the community, in both for-profit and not-for-profit institutions. 4 credits. (Mariner)

SPH LW 757 Occupational Health and Safety Law

Prereq: SPH LW 751 Public Health Law I, or LW 707 Introduction to Health Law. Workers' compensation law, tort law, and collective bargaining under the National Labor Relations Act are first addressed, followed by a review and analysis of OSHA regulatory programs. Right-to-know rules, sex discrimination, and other issues are also presented as they pertain to new corporate initiatives for screening and monitoring workers and job applicants. Emphasis is placed on chronic health risks (e.g., radiation, toxic chemicals, reproductive hazards). A term paper and participation in a simulated bargaining session are required. 4 credits. (Baram)

SPH LW 758 Corporate Management of Risks to Health, Safety, and Environment

Prereq: SPH LW 751 Public Health Law I, or LW 707 Introduction to Health Law. This seminar explores how large companies manage risks to consumers, workers, and the environment, including new uses of risk analysis and risk communication. Students develop an understanding of how relevant fields of law and their economic and other implications converge on management and influence the corporate response to risk — e.g., tort law, insurance law, consumer protection law, worker health law, and environmental law. Guests from industry and public interest groups provide insights. Emphasis is on the chemical, electronic, and petroleum industries. A term paper is required. 4 credits. (Baram)

SPH LW 852 Environmental Health Law

This course examines the use of common law and federal, state, and local regulation to protect human health and the environment. Agency regulatory procedures, the use/misuse of cost-benefit analysis and risk assessment in standard setting, judicial review, toxic torts, evidentiary problems, and the use of experts are considered as they pertain to air and water pollution, hazardous wastes, and toxic chemicals. Several short written assignments and a final term paper are required. 4 credits. (Baram)

SPH LW 854 Mental Health Law

Prereq: SPH LW 751 Public Health Law I or its equivalent. This course explores the interaction of the fields of law and psychiatry. Subjects discussed include an overview of clinical psychiatry, institutionalization, deinstitutionalization, the insanity defense, incompetence to stand trial, the right to treatment and the right to refuse treatment, involuntary commitment, dangerousness, the meaning of mental illness, the use of invasive treatments, psychotherapy, privacy, and professional ethics. Legal cases make up most of the course material. 4 credits. (Glantz)

SPH LW 951 Directed Studies in Health Law

This course provides the opportunity for advanced students to explore a special topic of interest under the direction of a faculty member. Arrangements are made directly with the appropriate faculty member and the section chief. Variable credit.

SPH LW 952 Directed Research in Health Law

This course provides the opportunity for advanced students to undertake independently, or to become involved in, health law research of a public health nature. Arrangements are made with the appropriate faculty member and the section chief. Variable credit.

Health Services

Robert J. Master, M.D., Section Chief

The Health Services Concentration



The Health Services Concentration is designed to meet the needs of students interested in the organization, delivery, financing, and regulation of health services — areas of major importance to the public's health. Courses address essential components of the United States' health care system, comparative aspects of international health care, and health care in developing countries. The roles of federal, state, and local government in planning, management, regulation, and finance are considered in detail. Students are encouraged to approach health services from the perspective of those who receive, provide, finance, and regulate services to promote inquiry into quality, efficiency, and appropriateness. Emphasis is placed on understanding both policy issues and the interaction among various components of the health system, particularly hospital care, long-term care, and ambulatory care. Course work relevant to developing countries focuses on the needs of women and children, as well as the special demands placed on health planners and managers as they grapple with the allocation and management of scarce resources within the context of balanced socioeconomic development.

Health Services concentrators develop the ability to identify and solve problems in a practical way

within a sound conceptual framework. Case studies are used to strengthen students' problem-solving skills.

Section courses offer students the opportunity for in-depth study of administration, finance, policy, ambulatory care, hospitals, long-term care, maternal and child health, mental health, international health, and health services research. Section faculty have developed suggested tracks of study focusing on each of these areas, and more specific information about the various tracks is offered in the *Advising Note* which the Health Services Section distributes to its concentrators each year. Students may, of course, choose to design their own courses of study in consultation with their advisors and other faculty. Students select courses in Health Services and other sections to prepare themselves for diverse career paths in such areas as planning, regulation, and service delivery, medical care, public sector management, aging and long-term care, and health care in developing countries.

The Section is currently designing additional courses in Maternal and Child Health (MCH) in developed and developing countries. New courses are also planned in technology assessment, health services administration, managed care, and insurance. It is anticipated that some of these courses will be introduced during the 1989 academic year.

Course offerings in the area of International Health are intended to prepare midlevel and senior planners and managers for leadership roles in their own countries, as well as to give students from the United States sufficient knowledge and skills to work effectively in overseas settings.

Directed studies and directed research projects are available to all students with the advice and guidance of a faculty member.

Students with limited professional experience in health care are encouraged to participate in internships. Section faculty and School staff assist students on an individual basis for domestic placements.

Students intending to concentrate in Health Services must successfully complete courses totaling 16 credits in Health Services beyond HS 702 Introduction to Health Services. These 16 credits must be selected from the following courses.

- HS 710 Nutrition and Public Health
- HS 715 The Impact of Insurance on Health Care
- HS 717 International Health: Introduction to Health Care in Developing Countries
- HS 725 Public Health and Clinical Aspects of Disease in Tropical Countries

- HS 726 Public Health Aspects of Disaster Management
- HS 727 Trends in Public Policy and Their Effects on Public Health and Health Care
- HS 728 Issues in Long-term Care for the Elderly and Chronically Disabled
- HS 730 Social-medical Perspectives on Aging and Old Age
- HS 731 Design and Strategy for Health Care Organizations
- HS 733 Principles of Health Program Management
- HS 734 Principles of Nonprofit Accounting
- HS 735 Health Care Finance
- HS 737 Introduction to Personal Computers
- HS 738 Health Services Marketing
- HS 740 Hospitals: Structures, Functions, and Issues
- HS 741 Consultation Techniques
- HS 742 Data Base and Communications
- HS 744 Introduction to Health Facility Planning and Design
- HS 747 Medical Care and Public Health in China
- LW 756 Hospital Law¹
- HS 780 Maternal and Child Health Services in the United States
- HS 785 Childhood Chronic Illness and Disability
- EH 809 Parasites of Humans: A Public Health Perspective²
- HS 810 Techniques of Political Analysis and Influence
- HS 811 Health Services Research Methods³
- SB 815 Program Evaluation Research⁴
- HS 816 Analytical Aids to Decision Making
- HS 825 Technology Assessment
- HS 833 Health Economics
- HS 834 Health Regulation and Planning
- HS 835 Hospital Policy and Issues: The Practitioner's Perspective
- HS 836 HMO Management
- HS 838 Health Politics and Public Policy
- HS 839 Mental Health System: Structure, Governance, and Current Issues
- HS 881 Population Studies and Family Planning
- HS 882 Health Care Utilization and Quality Management
- HS 884 Ambulatory Care
- HS 886 Comparative Health Systems
- HS 887 Maternal and Child Health in Developing Countries
- HS 888 Advanced Seminar in International Health Issues
- HS 931 Directed Studies in Health Services
- HS 932 Directed Research in Health Services

¹This course may also be applied to the Health Law concentration.

²This course may also be applied to the Environmental Health concentration.

³This course may also be applied to the Epidemiology and Biostatistics concentration.

⁴This course may also be applied to the Epidemiology and Biostatistics and Health Behavior, Health Promotion, and Disease Prevention concentrations.

SPH HS 702 Introduction to Health Services

This course provides a basic structural and functional understanding of the United States' health care delivery system. Selected comparative examples are included. Emphasis is placed on major trends in domestic health care: the process of health policy development at federal and state levels, human resources development, financing of health services, the role of third-party payers, the relationship of medical care and public health, alternative forms of service delivery, primary care, aging and long-term care, and the role of hospitals. 3 credits. (Section faculty)

This course is required for all M.P.H. students.

SPH HS 710 Nutrition and Public Health

Prereq: SPH HS 702 Introduction to Health Services. This course introduces basic nutritional concepts, the role of nutrition in growth and development, and the role of diet in the pathogenesis of infectious and cardiovascular disease as well as cancer. The impact of overall socioeconomic development on nutritional status, infectious diseases, health status, and public health policy in developed and developing countries is considered. 4 credits. (Vitale and Staff)

SPH HS 715 The Impact of Insurance on Health Care

Recommended: HS 702 Introduction to Health Services. This course examines the salient characteristics of insurance and its influence on the principal forms of health care. Particular attention is paid to the incentives created by the customary means of insurance payment, the conflicting goals inherent in the use of deductibles and co-payments, the effects of the use of surcharges, exclusions, and waiting periods, the impact on availability of services depending on the limitations of benefits in insurance policies, and the inclusion of benefits without efficacy reviews.

The course includes an examination of the effects of the movement by insurers into combining both financing and care-giving responsibility through health maintenance and preferred provider organizations. Finally, it considers the limitations on the influence of the private insurance system imposed by preemptive federal legislation permitting unregulated corporate self-insurance (ERISA) and the creation of the federal Medicare program. 2 credits. (Hiam)

SPH HS 717 International Health: Introduction to Health Care in Developing Countries

This course provides an orientation to health care systems, principles of socioeconomic development, and management in developing countries. Attention is paid to decision making, opportunity costs, and resource allocation in resource-poor environments; financing — public, private, and donor; the role of auxiliaries; the environment and its relationship to morbidity and mortality; nutrition; population dynamics and family planning; and preventive and curative services. The intent of this course is to assist the student in developing a good grasp of the basic determinants of health in developing countries, an understanding of alternative intervention strategies, and approaches to solving problems in health care. The format of the class is lecture/seminar, with ample opportunity for group discussion. The course concludes with a real problem-solving exercise designed to encourage application of techniques and principles learned during the course. 4 credits. (Bicknell and Degnan)

SPH HS 725 Public Health and Clinical Aspects of Disease in Tropical Countries

Prereq: SPH HS 702 Introduction to Health Services. This course examines diseases that are problems in developing countries. Most of these diseases were endemic to north temperate zone countries, but have disappeared as the countries developed. The reasons for their disappearance are discussed. The effect of the diseases on society, economic growth, education, etc. are considered. The diagnosis, prevention and treatment of each disease is discussed both from the standpoint of a person rendering primary health care and from the national health program position. The diseases include not only those that are commonly referred to as tropical diseases, but also other major infectious disease problems of tropical and developing countries. 4 credits. (Cadigan)

SPH HS 726 Public Health Aspects of Disaster Management

Prereq: SPH HS 702 Introduction to Health Services. This course introduces students to problems involved in both advance and immediate planning for disaster management with primary emphasis on the role of health professionals and public health organizations. The course uses domestic and foreign disasters as teaching examples and examines both national and international information and assistance resources. Students are required to participate in class by role playing in small group preparation of responses to historical or hypothetical disaster situations and by individual brief oral presentations on assigned subjects. 4 credits. (Cadigan)

SPH HS 727 Trends in Public Policy and Their Effects on Public Health and Health Care

The course reviews the major trends in American public policy, and the forces shaping those trends, with special emphasis on the period 1970–1986.

These trends, covered in two sessions, serve as the basis for examining a few key health policy issues receiving major attention in 1986 and likely to continue as major policy issues for the next few years. The objective of the course is to examine how the context of political and economic life affects the choices made about the health issues selected for close attention. 2 credits. (Morris)

SPH HS 728 Issues in Long-term Care for the Elderly and Chronically Disabled

Prereq: SPH HS 702 Introduction to Health Services. This course examines the demographic, social, and economic characteristics of the population of older people in the United States. This course also examines the major sources of long-term care, including nursing homes, home care, and case-managed social/health maintenance organizations. The objective of the course is to understand the target group for long-term care services, ways of organizing service delivery, mechanisms of payment, and approaches to monitoring quality. 4 credits. (Branch)

SPH HS 730 Social-medical Perspectives on Aging and Old Age

Recommended: SPH HS 702 Introduction to Health Services. This course considers the problems of aging in America and the nature of the older population. Students discuss and criticize the major health and social service programs that have been implemented to meet older people's needs. Course topics include physiological aging, the demography and epidemiology of aging, aging and industrialization, retirement and the economics of aging, housing, transportation, energy assistance programs, and alternatives in long-term care (nursing homes, home care, congregate housing, and ambulatory primary care). 2 credits. (Meyers)

SPH HS 731 Design and Strategy for Health Care Organizations

Prereq: SPH HS 702 Introduction to Health Services and Public Health or consent of the instructor. This course provides an interdisciplinary exploration of the complex nature of health care organizations. It enhances the skills of the learner in collaborative managerial problem-solving through a case study approach and through application of a conceptual framework for analyzing and proposing solutions to health-care organizational and managerial problems. These concepts focus on organizational strategy, design, and change. The course's underpinning is the belief in interdisciplinary education as a relevant and necessary approach to enhancing collaborative and team building skills among members of the health care professions. In addition to class discussion, course concepts are applied in a group project analyzing the strategy and design of a health care organization. 4 credits. (Charns)

SPH HS 733 Principles of Health Program Management

Prereq: SPH HS 702 Introduction to Health Services or consent of the instructor. This course is a presentation of the working principles and techniques of management including planning, organizing, leading, and controlling. This course also focuses on human resources management, leadership development, aspects of quality assurance, program evaluation, keys to effective teamwork, communication skills, and negotiation techniques. Emphasis is on "how to" rather than theory. Management styles of students are assessed, and workplace situations are discussed. The instructor stresses the viewpoint that the purpose of management is helping others achieve success. 4 credits. (Dann)

SPH HS 734 Principles of Nonprofit Accounting

This course combines didactic and case study approaches to the fundamentals of nonprofit accounting, with emphasis on health care institutions. Topics covered include accrual accounting, fund accounting, budgeting, and financial management control systems. Interpretation of accounting documents for decision making by the nonfinancial manager is stressed. 4 credits. (Staff)

SPH HS 735 Health Care Finance

Prereq: SPH HS 702 Introduction to Health Services or consent of the instructor. This course has three aims: to demystify the role of money in health care, to present a variety of useful analytical techniques, and to explore methods of using money to shape a more accessible, affordable, and effective health care system. To do this, we examine current financial crises and managerial problems in health care and their proposed solutions. No financial background is assumed. 4 credits. (Sager)

SPH HS 737 Introduction to Personal Computers

This course is an introduction to the uses of personal computers, exposing the user to four major functional areas: spreadsheet analysis, data base, communications, and graphics. The student is expected to complete a project in one of these areas in order to enhance practical experience. Students learn the taxonomy of computers, peripherals, and computer terminology. This course requires no previous experience. Students have extensive opportunity for hands-on experience with a Hewlett Packard personal computer. 2 credits. (Meyers; Paul)

SPH HS 738 Health Services Marketing

Prereq: SPH HS 734 Principles of Nonprofit Accounting. This is a marketing management course with specific applications to nonprofit and for-profit health organizations. The course provides basic marketing knowledge, particularly focusing on those aspects of marketing that are more relevant to health services and public health. The use of case analysis allows the examination of marketing tools, issues, programs, and institutions, as

well as the relationship of marketing to other health care management functions. In addition, cases are used to develop analytical and managerial decision-making skills. 4 credits. (Staff)

SPH HS 740 Hospitals: Structures, Functions, and Issues

Prereq: SPH HS 702 Introduction to Health Services. This course introduces the hospital with background information on the size of the health care market and recent developments in the hospital industry. Current hospital issues are analyzed in detail, with leaders in regulation and management discussing the financing and planning for care, questions of access, teaching costs, clinical decision making, labor relations, and corporate governance. Hospital Policy and Issues: The Practitioner's Perspective (HS 835) is a sequel to this introductory course and is scheduled so that the two can be taken in sequence as a one-semester, four-credit course on hospitals. 2 credits. (Dumbaugh)

SPH HS 741 Consultation Techniques

This course is designed to teach practical techniques and skills for health and mental health consultation, including the initiation, conduct, and conclusion of consultation assignments. The course also includes a detailed examination of different types of consultation techniques drawing from cases of hospitals, schools, and national programs as well as a discussion of common problems of consultants and consultees and how to solve them. The course is taught in seminar fashion, primarily utilizing case studies. 2 credits. (Scherl)

SPH HS 742 Data Base and Communications

Prereq: SPH HS 737 Introduction to Personal Computers or prior experience with personal computers. This course is a sequel to HS 737 Introduction to Personal Computers. It is designed for the health care professional who needs to be able to catalogue, track, select, and search for specific information or statistics. The course examines two specific data bases with hands-on experience provided in each. Also included is an on-line search of public data bases. Students design and create their own practical data base on a Hewlett Packard. 2 credits. (Meyers and Paul)

SPH HS 744 Introduction to Health Facility Planning and Design

This seminar introduces the relationship between health care and the process of shaping its architecture. Issues relevant to planning and designing diverse facility types in the U.S. and in less developed countries are explored. Featured are functional space programming, site selection and planning, costs and schedule, decision making, and a user-sensitive approach. 2 credits. (Monserud)

SPH HS 747 Medical Care and Public Health in China

Prereq: Certificate Program in Health Care in Developing Countries or consent of instructor. This

course introduces students to the organization, delivery, and financing of public health and medical care services in the People's Republic of China. Topics covered include planning and decision making in the health sector, the structure of health services, health personnel, and environmental and occupational health topics. Maternal and child health services, family planning, the evolution of the "barefoot doctor" and the relationship of traditional Chinese medicine to overall medical care are also considered. This course is taught jointly by School of Public Health faculty and visiting faculty from Wuhan Medical College. 4 credits. (Zhang and Bicknell)

SPH LW 756 Hospital Law

This course is offered by the Health Law Section. See page 22 for course description.

SPH HS 780 Maternal and Child Health Services in the United States

Recommended: SPH HS 702 Introduction to Health Services. This course provides an overview of: (a) the major issues involved in and (b) the content of maternal and child health services in the United States. The health care needs of pregnant women, mothers, and children of all ages are studied with particular attention being focused on services, policies, and societal and institutional forces that directly influence maternal and child health. The course highlights past successes, persistently unmet health needs, and future options for effectively meeting these maternal and child health needs. The weaknesses and strengths of our current health care system, federal programs, and policies for mothers and children are analyzed. 4 credits. (Weitzman)

SPH HS 785 Childhood Chronic Illness and Disability

Prereq: SPH HS 702 Introduction to Health Services. This course provides a basic understanding of the epidemiology and medical nature of the major chronic illnesses and disabilities of children in America, such as asthma, low birthweight, cystic fibrosis, diabetes, cerebral palsy, mental retardation, seizures, deafness, and learning disabilities. The unique needs of these children and families for multiple and specialized services and their persistently unmet needs are discussed in detail as are strategies for change of institutional and societal barriers at the local, state, and federal level. The course also reviews the changing role of families and the current emphasis on family-centered community-based care. 4 credits. (Anderson and Weitzman)

SPH EH 809 Parasites of Humans: A Public Health Perspective

This course is offered by the Environmental Health Section. See page 11 for course description.

SPH HS 810 Techniques of Political Analysis and Influence

This course focuses on the concepts of political power and influence. It examines select tools and techniques useful in political analysis and action including theories of the distribution of power and influence in public and private sector settings; theories of bargaining and negotiation; techniques of systematic analysis and cost/benefit and cost/effectiveness analysis; and strategies for political action. 4 credits. (Crane)

SPH HS 811 Health Services Research Methods

Prereq: SPH EB 701 Elementary Biostatistics and SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods. This course emphasizes a problem approach to the study of health care research. Emphasis is on definition of the problem, the scale of the study, and elucidation of the pertinent research methods and analysis. Among the possible topics for inclusion are quality review, health care management and evaluation methods, decision analysis, health status instruments and outcome, survey studies, and arthritis studies. 4 credits. (Kazis and Moskowitz)

SPH SB 815 Program Evaluation Research

This course is offered by the Social and Behavioral Sciences Section. See page 32 for course description.

SPH HS 816 Analytical Aids to Decision Making

Prereq: SPH HS 734 Principles of Nonprofit Accounting, SPH HS 735 Health Care Finance or consent of the instructor. This course provides exposure to the use of analytical tools in solving operational problems of health care institutions. Operational problems, as exemplified in cases, are explored through the use of analytical techniques such as cash flow analysis, and capital budgeting. This course is designed for those who wish to obtain a working knowledge of financial analytical techniques useful in the health care environment. 2 credits. (Katz)

SPH HS 825 Technology Assessment in Health Care and Public Health

Prereq: SPH HS 702 Introduction to Health Services or consent of the instructor. This course examines national policy on health care technology and methods of evaluating the costs and benefits of specific devices. Health technology policies and practices in other nations are explored. Topics include analyses of specific costly new technologies, technology in long-term care, and the problems of affordable technology diffusion. 4 credits. (Meyers and Sager)

SPH HS 833 Health Economics

Prereq: SPH HS 702 Introduction to Health Services or consent of the instructor. This course provides an understanding of basic principles and tools of economic analysis and their application to the production, pricing, and distribution of health

services. Methods of assessing resource allocation decisions through cost-benefit and cost-effectiveness analysis are explored. Although the main focus of the course is domestic health economics, some applications and special topics relevant to health economics in developing countries are included. 4 credits. (Cashman)

SPH HS 834 Health Regulation and Planning

Prereq: SPH HS 702 Introduction to Health Services or consent of the instructor. Are planning and regulation effective tools or bureaucratic tortures? To answer this question, students examine the successes and failures of recent efforts. Topics include methods of population-based planning, institutional planning, citizen participation, specific regulatory programs, how to use both competition and regulation as tools, and implementation techniques. 4 credits. (Sager)

SPH HS 835 Hospital Policy and Issues: The Practitioner's Perspective

Prereq: SPH HS 702 Introduction to Health Services or consent of the instructor. This course can be taken alone or as a sequel to HS 740 Hospitals: Structures, Functions, and Issues. It provides in-depth analyses of various operational aspects of hospitals: unions in health care, role of the medical staff, competition, mergers, prospective reimbursement, etc. The course is conducted as a seminar with area health care professionals providing insight into particular issues. Each student is expected to prepare a preliminary report on at least one seminar topic to prepare classmates for discussion. 2 credits. (Wathne)

SPH HS 836 HMO Management

Prereq: SPH HS 702 Introduction to Health Services. This course addresses HMO organizational structure, services, and costs. Also examined are marketplace issues, corporate philosophy and policy issues, benefit design and rate setting, planning, utilization controls, financial operations and budgeting, medical/management information systems, long-term care issues, case management, and systems engineering in a managed care setting. 4 credits. (Staff)

SPH HS 838 Health Politics and Public Policy

Prereq: SPH HS 702 Introduction to Health Services or consent of the instructor. This course examines selected major health policy issues affecting public and private health organizations. It discusses the political processes and institutions shaping these policies, and seeks answers to who gets what from whom, when, where, and why in health policy. 4 credits. (Crane)

SPH HS 839 Mental Health System: Structure, Governance, and Current Issues

Prereq: SPH HS 702 Introduction to Health Services. This course examines mental health and illness in historical perspective, analyzing the role of government, and the relationship of care provided in the public and private sectors. Treatment pro-

gram efficacy, governance, and staffing issues are also studied. 4 credits. (Staff)

SPH HS 881 Population Studies and Family Planning

Prereq: SPH HS 702 Introduction to Health Services or consent of the instructor. This course considers the causes of and problems associated with rapid population growth and international and domestic population issues. It includes sections on the dynamics of population; world population change and current trends; the determinants of human fertility; population growth and its social, economic, and health consequences. Attention is given to worldwide strategies for limiting population growth, with particular emphasis on family planning programs. Contraceptive methods, counseling, and delivery systems are included in the family planning component. 4 credits. (Olafson)

SPH HS 882 Health Care Utilization and Quality Management

Prereq: SPH EB 711 Epidemiology or SPH EB 712 Epidemiologic Methods or SPH HS 702 Introduction to Health Services, or consent of the instructor. A major challenge facing today's health care manager is improving productivity without sacrificing access to necessary health care services. This course is intended to prepare the health care manager to meet this challenge by providing a conceptual framework for the analysis of health care utilization management and quality assurance systems; investigating a variety of methods used by health care providers, payors, and review organizations to measure quality and appropriate use of medical care resources; and developing approaches for implementing systems to control utilization and quality by changing professional behavior, institutional operations, and third party payor policies. 4 credits. (Restuccia)

SPH HS 884 Ambulatory Care

Prereq: SPH HS 702 Introduction to Health Services. This course explores in substantial detail alternative models of ambulatory care delivery, including the several types of health maintenance organizations, solo and group practice, outpatient departments, neighborhood health centers, and proprietary ambulatory care centers. Principles of ambulatory care planning, management, and needs assessment are covered. The roles of the consumer and the community are highlighted. Additionally, students become familiar with the range and role of providers, with factors affecting utilization patterns, and with issues of marketing, financing, and federal policy in the ambulatory care arena. 4 credits. (Bicknell and Cashman)

SPH HS 886 Comparative Health Systems

Prereq: SPH HS 702 Introduction to Health Services and at least one other Health Services course, or substantial experience in health care services in the United States (or elsewhere) with consent of the instructor. For international students, experience may be substituted for HS 702

with consent of the section chief. This course critically examines the health care systems of the following developed countries: the United States, Canada, Germany, England, Sweden, and the Soviet Union. Brief descriptions of these countries' levels of development and political and economic structure provide the foundation for an analysis of the health care system. The following areas are explored in order to draw useful lessons for public health professionals: health care financing, cost containment, and regulation; health services provision in the public and the private sectors; quality of care; health system performance (particularly with regard to the health status and health care of less privileged groups); and the training and employment of professional and nonprofessional health workers. Substantial student participation in discussion is anticipated. 4 credits. (Dumbaugh)

SPH HS 887 Maternal and Child Health in Developing Countries

Prereq: SPH HS 702 Introduction to Health Services, SPH HS 717 International Health: Introduction to Health Care in Developing Countries, or consent of the instructor. This course examines the health needs of women and children in developing countries and the problems faced in providing maternal and child health services in both urban and rural areas. Theoretical and practical aspects of designing, administering, and evaluating these services are discussed. Specific topics include: nutrition and growth, immunizations, diarrhea and oral rehydration, traditional beliefs and practices, use of health auxiliaries, and primary health care. 4 credits. (Wolff)

SPH HS 888 Advanced Seminar in International Health Issues

Prereq: Certificate Program in Health Care in Developing Countries or consent of the instructor. This advanced seminar focuses on policy issues related to health care delivery in resource constrained environments and is intended for students who have extensive experience working as health professionals in developing countries. Each topic is selected for its importance in policy formulation and resource allocation and its pertinence to effective health care delivery, as well as its controversial nature. Students will be required to present and discuss issues from several perspectives: operational and organizational, social and cultural, political, economic, and ethical. The instructors are interested in presenting a forum for the analysis of current issues. 2 credits. (Bicknell and Degnan)

SPH HS 931 Directed Studies in Health Services

This course provides the opportunity for advanced students to explore a special topic of interest under the direction of a faculty member. Arrangements are made directly with the appropriate faculty member and the section chief. Variable credit. (Staff)

SPH HS 932 Directed Research in Health Services

This course provides the opportunity for advanced students to undertake independently or to become involved in health services research of a public health nature. Arrangements are made with the appropriate faculty member and the section chief. Variable credit. (Staff)



Assistant Professor Suzanne Cashman discusses principles of economic analysis with students in her course.

Social and Behavioral Sciences

Ralph W. Hingson, Sc.D., *Section Chief*

The Health Behavior, Health Promotion, and Disease Prevention Concentration



A major objective of the Social and Behavioral Sciences Section is to provide students with knowledge of the conceptual, empirical, and theoretical contributions of the social and behavioral sciences to public health. By understanding the social forces surrounding their professional work, students can participate more fully in societal decision-making concerning public health and become more effective public health practitioners.

Every M.P.H. student in the School of Public Health is required to take SB 721 Behavioral Sciences and Public Health. The course exposes students to important public health program initiatives via a life-cycle approach that draws on social and behavioral factors impeding or facilitating programs. The remaining Section courses reflect a mix of topics felt to be important in public health training, topics of special expertise among the Section faculty, and topics taught as part of the Section concentration.

The Social and Behavioral Sciences Section offers a concentration in Health Behavior, Health Promotion, and Disease Prevention. The major objectives of this concentration are to (a) provide a comprehensive understanding of the relationships among personal behavior, social structure, and health; (b) develop knowledge of major behavioral science principles and strategies to design and implement programs to prevent disease and promote health; and (c) provide skills to design rigorous evaluation of disease prevention/health promotion programs, including skills in translating the results of such evaluations into public health policy.

The concentration focuses on an array of disease prevention and health promotion activities, including, but not limited to, health education programs, behavior modification techniques, change in laws and organizational (occupational) and societal regulation and reform. Programs involving single institutions as well as larger local, state, and federal initiatives are considered.

Health Behavior, Health Promotion, and Disease Prevention concentrators take the following section courses: SB 820 Health Behavior/Health Education; SB 821 Principles and Strategies of Disease Prevention/Health Promotion; SB 815 Program Evaluation Research; and an additional 4-credit concentration course. It is also recommended that concentrators complete a 2-credit directed study/directed research project with a faculty member in the Section.

The concentration should be of interest to health professionals whose work involves the administration of or research in the design, evaluation, and use of health promotion/disease prevention programs.

The courses in this Section are as follows:

- SB 721 Behavioral Sciences and Public Health
- SB 723 Social Problems
- SB 724 Issues in the Implementation of Health Promotion/Disease Prevention Programs
- SB 725 Ethical Issues in Medicine and Public Health
- SB 726 History and Philosophy of Public Health
- SB 727 Stress, Life Satisfaction, and Health
- SB 728 Religion, Medicine and Public Health Policy
- EB 801 Cancer Prevention as a Public Health Problem¹
- SB 802 Public Health and Women: Social and Behavioral Approaches
- SB 804 Selected Topics in Psychology and Public Health
- SB 805 Contemporary Issues of Health Care for Minorities in the United States
- SB 806 Community Interventions Seminar
- SB 815 Program Evaluation Research²
- SB 820 Health Behavior/Health Education
- SB 821 Principles and Strategies of Disease Prevention/Health Promotion
- SB 823 Professions and Organizations
- SB 827 Public Health and Substance Abuse
- SB 921 Directed Studies in Behavioral Sciences
- SB 922 Directed Research in Behavioral Sciences

¹This course may also be applied to the Epidemiology and Biostatistics and Environmental Health concentrations.

²This course may also be applied to the Epidemiology and Biostatistics concentration and the Health Services concentration.

**School of Public Health
Boston University School of Medicine
80 East Concord Street, Boston, MA 02118
Application for Admission**

1. Name _____
Last First Middle

2. Application is for entry in January 19____ September 19____
 Full-time (12–20 credit hours per semester) Part-time (11.5 or fewer credit hours per semester)

Indicate the degree for which you are applying:

M.P.H. M.P.H./J.D. M.P.H./M.D. M.P.H./M.S.W. M.P.H./M.A. in _____
 M.P.H. / Peace Corps Doctoral Program in _____

If applying for M.P.H. or a dual degree program, check probable concentration:

Environmental Health Health Behavior, Health Promotion, and Disease Prevention
 Epidemiology and Biostatistics Health Services
 Health Law

3. Male Female 4. Date of Birth _____ 5. U.S. Social Security Number _____

6. Current Mailing Address _____
Street City

State Zip Code Home Telephone: () _____
 Work Telephone: () _____

7. Permanent Address _____
Street City

State Zip Code Telephone: () _____

8. **Foreign Applicants:** Citizenship (country) _____

If you are a resident alien living in the U.S., what type of visa do you hold? _____

Date on which you took or plan to take the Test of English as a Foreign Language (TOEFL) _____

9. If you wish to be identified as a member of a minority group, please specify which group _____

10. Date(s) on which you took or plan to take the Graduate Record Exam (GRE) _____

11. List in chronological order all colleges, graduate, and professional schools attended.

Institution	Campus/Location	Dates	Field of Concentration	Degree Granted or Expected (with date)

12. Academic or professional honors or awards (please list) _____

13. Specialty Board Certifications (please list) _____

14. Work experience (please list last five positions in chronological order)

Job Title	Employer	Location	Dates of Employment (Inclusive)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

15. **M.P.H. applicants:** Describe your motivation for pursuing graduate study. Please relate your interest in public health to your formal education, current employment, and career aspirations.

If you wish to explain or draw the attention of the Admissions Committee to anything concerning your candidacy, please write it briefly on an 8½" x 11" sheet and attach it to this application. Please include your publications on such an addendum.

16. **Doctoral applicants only:** Attach a statement describing your career goals, research interests, and justification for pursuing a doctoral degree program. Please include your curriculum vitae.

17. Please give names, titles, and complete addresses of three (3) persons to whom you have sent the enclosed assessment forms.

	Name and Title	Address
1.	_____	_____
2.	_____	_____
3.	_____	_____

Boston University prohibits discrimination against any individual on the basis of race, color, religion, sex, age, national origin, physical or mental handicap, marital, parental, or veteran status. This policy extends to all rights, privileges, programs, and activities, including admissions, financial assistance, employment, housing, athletics, and educational programs. Boston University recognizes that nondiscrimination does not ensure that equal opportunity is a reality. Because of this, the University will continue to implement affirmative action initiatives which promote equal opportunity for all students, applicants, and employees. Inquiries regarding the application of this policy should be addressed to the Director, Office of Equal Opportunity, 25 Buick Street, Boston, MA 02215 (617/353-4475).

Signature _____

Date _____

**Boston University School of Public Health
Letter of Assessment**

To the Applicant: This recommendation will become part of your Admissions file. It will not be disclosed to any unauthorized individual without your consent. If you matriculate at Boston University, you will be accorded access to its contents unless you voluntarily waive your right of access. Please check one of the boxes and sign the statement below.

I have read the information above and I hereby waive do not waive my right of access to this document should I matriculate at Boston University.

Degree for which you are applying: _____

Applicant's Signature

Date

To the Assessor:

Name of Applicant _____
Last First Middle Maiden

The person whose name appears above has applied for admission to the School of Public Health at Boston University. The Admissions Committee attaches great weight to an applicant's qualifications that are not adequately reflected in past academic records. Therefore, you can assist us in our evaluation of this applicant by responding frankly to the questions in this form.

Note: Under the 1974 Family Educational Rights and Privacy Act, the applicant named above will have access to this recommendation unless he or she has waived that right.

1. How long have you known the applicant?

2. Under what circumstances have you known the applicant?

3. What are the applicant's main strengths?

4. What are the applicant's main liabilities or weaknesses?

5. How well does the applicant communicate orally and in writing? (If English is not the applicant's native language how would you rate his/her oral and written proficiency in English?)

6. Please assess the applicant's analytical skills (compared to other professionals):

Unable to Judge

Poor

Average

Very Good

Exceptional
(This category is for truly outstanding individuals)

7. Are you familiar with the applicant's scholastic record? _____ Yes _____ No
(If yes, is the scholastic record an accurate index of the applicant's academic ability?)
____ Yes _____ No Please Explain:

8. On the scale below, please compare the applicant's intellectual ability with that of others of the same general background whom you have known during your professional career. Please indicate the reference group (students, employees, etc.) _____

Unable to Judge

Poor

Average

Very Good

Exceptional
(This category is for truly outstanding individuals)

9. Please assess the applicant's capacity for graduate study in public health and his/her potential for a responsible and successful professional career.

10. Summary Evaluation

- ___ I do not recommend this applicant for admission.
- ___ I feel that the applicant's qualifications are marginal, but if admitted he/she would greatly benefit from study in the program.
- ___ I recommend this applicant for admission and feel his/her performance should be comparable to that of most graduate students.
- ___ I strongly recommend this applicant for admission and feel that he/she has the capability to perform at a superior level.

Thank you for your cooperation and effort in providing this information.

School of Public Health
Boston University School of Medicine

Signature

Date

Name (Please print clearly or type)

Position

Organization

Address

After you have signed the form, please put it in the enclosed envelope, sign your name across the envelope seal, and return it to the applicant.

**Boston University School of Public Health
Letter of Assessment**

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I have read the information above and I hereby waive do not waive my right of access to this document should I matriculate at Boston University.

Degree for which you are applying: _____

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Very Good

Exceptional
(This category is for truly outstanding individuals)

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(If yes, is the scholastic record an accurate index of the applicant's academic ability?)
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8. On the scale below, please compare the applicant's intellectual ability with that of others of the same general background whom you have known during your professional career. Please indicate the reference group (students, employees, etc.) _____

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Average

Very Good

Exceptional
(This category is for truly outstanding individuals)

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- ___ I do not recommend this applicant for admission.
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- ___ I strongly recommend this applicant for admission and feel that he/she has the capability to perform at a superior level.

Thank you for your cooperation and effort in providing this information.

School of Public Health
Boston University School of Medicine

Signature _____ Date _____

Name (Please print clearly or type) _____ Position _____

Organization _____ Address _____

After you have signed the form, please put it in the enclosed envelope, sign your name *across the envelope seal*, and return it to the *applicant*.

**Boston University School of Public Health
Letter of Assessment**

To the Applicant: This recommendation will become part of your Admissions file. It will not be disclosed to any unauthorized individual without your consent. If you matriculate at Boston University, you will be accorded access to its contents unless you voluntarily waive your right of access. Please check one of the boxes and sign the statement below.

I have read the information above and I hereby waive do not waive my right of access to this document should I matriculate at Boston University.

Degree for which you are applying: _____

Applicant's Signature

Date

To the Assessor:

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Last First Middle Maiden

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6. Please assess the applicant's analytical skills (compared to other professionals):

Unable to Judge	Poor	Average	Very Good	Exceptional (This category is for truly outstanding individuals)
<input type="checkbox"/>				

7. Are you familiar with the applicant's scholastic record? _____ Yes _____ No
(If yes, is the scholastic record an accurate index of the applicant's academic ability?)
____ Yes _____ No Please Explain:

8. On the scale below, please compare the applicant's intellectual ability with that of others of the same general background whom you have known during your professional career. Please indicate the reference group (students, employees, etc.) _____

Unable to Judge	Poor	Average	Very Good	Exceptional (This category is for truly outstanding individuals)
<input type="checkbox"/>				

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- ___ I recommend this applicant for admission and feel his/her performance should be comparable to that of most graduate students.
- ___ I strongly recommend this applicant for admission and feel that he/she has the capability to perform at a superior level.

Thank you for your cooperation and effort in providing this information.

School of Public Health
Boston University School of Medicine

Signature Date

Name (Please print clearly or type) Position

Organization Address

After you have signed the form, please put it in the enclosed envelope, sign your name *across the envelope seal*, and return it to the *applicant*.

SPH SB 721 Behavioral Sciences and Public Health

This core course exposes students to contemporary public health program initiatives to lengthen life, reduce morbidity, or improve the quality of life. Students learn to diagnose a public health problem; assess proposed strategies; identify behavioral, cultural, and attitudinal factors affecting programs, and critically evaluate public health programs. 3 credits. (Section faculty)

This course is required for all M.P.H. students.

SPH SB 723 Social Problems

Recommended: SPH SB 721 Behavioral Sciences and Public Health. Various social problems, such as poverty, alcoholism, drug addiction, suicide, and mental illness, have immediate relevance for public health professionals. This course considers how a social problem is defined, its prevalence, and the role of social values and significant social groups in formulating solutions for social problems. Attention is given to the growing role of health institutions in defining problems and in developing solutions. Assessment of the relative effectiveness of solutions is undertaken. 4 credits. (Levine)

SPH SB 724 Issues in the Implementation of Health Promotion/Disease Prevention Programs

Recommended: SPH SB 721 Behavioral Sciences and Public Health. This course introduces the practical and operational aspects of implementing health promotion/disease prevention programs in a variety of settings. It focuses on the principles of program development as well as exploring the components of comprehensive health promotion programs. 4 credits. (Staff)

SPH SB 725 Ethical Issues in Medicine and Public Health

Recommended: SPH SB 721 Behavioral Sciences and Public Health. Through a series of case studies, this seminar examines ethical issues that confront health care providers and patients. The medical-scientific, moral, and socioeconomic bases of these issues and the decision-making processes that providers and patients engage in are analyzed. Topics include the bioethics movement; human experimentation; the concept and exercise of informed, voluntary consent; the role of institutional review boards; models of provider-patient relationships; abortion; genetic counseling and screening; amniocentesis and selective abortion; euthanasia; the allocation of scarce resources; and ethical issues in health promotion and disease prevention. 4 credits. (Grodin)

SPH SB 726 History and Philosophy of Public Health

An examination of the history of public health provides a useful framework for examining the social factors (philosophical, cultural, political, and economic) that have shaped and continue to shape public health policy. This course provides a cursory overview of the history of public health from antiquity to the eighteenth century, and then pays

more detailed attention to the historical underpinnings of three periods of public health activity in the United States: mid-eighteenth century to early twentieth century during the rise and fall of horrific rates of premature mortality from infectious disease; early twentieth century to the mid-1960s and the restructuring of public health orientation from sanitation to health care; and finally from the early 1960s to the present, where public health now faces the problem of high rates of chronic disease and multiple models of disease causation. 4 credits. (Staff)

SPH SB 727 Stress, Life Satisfaction, and Health

Recommended: SPH SB 721 Behavioral Sciences and Public Health. This course considers the role of stress in the etiology of such diseases as heart disease and stroke, and the development of such health problems as alcoholism and accidents. Although stress appears to be a very important variable, it is variously defined, and there are a number of conceptual problems in studying "stress." This course provides an introduction to and critical review of relevant theoretical and empirical literature in this field. Attention is also given to the conceptualization of "quality of life" as a dependent variable in health intervention strategies. 4 credits. (Levine)

SPH SB 728 Religion, Medicine and Public Health Policy

This course delineates multiple interrelationships among medicine, religion and public policy. Specifically, it broadens participants' understanding of the role which religious values and beliefs play as an integral part of one's personal and cultural context; enables recognition of the role(s) that religion and moral traditions play in shaping personal and public beliefs, attitudes, values and behaviors; identifies the perspectives which different religious traditions bring to patient care, disease prevention, health promotion and public health policy formu-



Assistant Professors Amaro, left, and Strunin, right, are faculty members in the Social and Behavioral Sciences Section.

lation; and seeks to derive principles from both health and religious perspectives which would contribute to the greater humanization of the medical care system and public health policy. 4 credits. (Merrigan, Grodin and Burton)

SPH EB 801 Cancer Prevention as a Public Health Problem

This course is offered by the Epidemiology and Biostatistic Section. See page 18 for the course description.

SPH SB 802 Public Health and Women: Social and Behavioral Approaches

Recommended: SPH SB 721 Behavioral Sciences and Public Health. This course focuses on public health concepts as they apply to the identification of special health needs of women and the design of health promotion and disease prevention strategies to meet these needs. The course combines theoretical and empirical readings with the application of concepts to existing health care programs. The objectives of this course are to investigate major causes of morbidity and mortality for women, discuss the impact of social and behavioral influences on women's health, and analyze the relationship of sociopolitical trends to women's health and health services for women. The course combines lecture and discussion formats with field work. 4 credits. (Amaro)

SPH SB 804 Selected Topics in Psychology and Public Health

This course selects materials from psychological theory, research, and practice that can be applied in designing, improving, and critiquing health promotion and disease prevention programs. Topics include cognitive and behavioral approaches to psychology, developmental psychology, the role and nature of emotions, and the significance of contextual factors in stress and social support. Applications include smoking, obesity, hypertension, and stress. 4 credits. (Ebert)

SPH SB 805 Contemporary Issues of Health Care for Minorities in the United States

Prereq: SPH SB 721 Behavioral Sciences and Public Health. This course focuses on public health and health concepts as they apply to important health needs of minorities of color. The course examines health status and health care needs of minorities in the United States. The objectives of this course are to increase students' understanding of minority populations, their utilization of health care, major trends in morbidity and mortality across ethnic groups, the policy trends that impact minorities, and the availability of care. The course combines lecture, discussion, and field site visits. 4 credits. (Amaro)

SPH SB 806 Community Interventions Seminar

Prereq: SPH SB 721 Behavioral Sciences and Public Health. Community interventions are designed to change risk behaviors for injuries or disease by focusing *simultaneously* on the individual and his or

her social environment. The programmatic and evaluation research dimensions of several well-known community-based interventions are presented and discussed. These include: North Karelia, the Stanford Three-community Project and the Minnesota Heart Study. At the completion of the course, participants should be able to: understand the conceptual or theoretical basis of community-based prevention; apply the strategies common to most community-based cardiovascular disease prevention programs (social learning, mass media, community organization) to other major health areas including cancer, substance abuse, adolescent pregnancy, injuries, and AIDS; and better understand the impact of community-based approaches on various endpoints including health-related attitudes, knowledge and behavior, as well as risk status, morbidity, and mortality. 2 credits. (Merrigan and Howland)

SPH SB 815 Program Evaluation Research

Prereq: SPH EB 701 Elementary Biostatistics (or SPH EB 703 Intermediate Biostatistics) and SPH EB 711 Epidemiology (or SPH EB 712 Epidemiologic Methods). This course provides an introduction to program evaluation research in public health. It focuses on the principles of designing, conducting, and using the results of research that evaluates the impact of public health programs, whether aimed at the public, patients, or professionals. Through a series of case studies, students acquire an understanding of the strengths and limits of different kinds of evaluation research. Attention is given to special problems in evaluating health programs; for example, when they use multiple providers and settings or target a variety of goals. Attention is given to the challenge of drawing causal inferences from quasi-experimental research. Practical issues are also addressed, such as how to obtain informed consent and approval of institutional review boards, and how to get the most out of limited resources. 4 credits. (Walsh and Hingson)

SPH SB 820 Health Behavior/Health Education

Prereq: SPH SB 721 Behavioral Sciences and Public Health. This course is devoted to the development of skills in the assessment of health education needs and program outcomes in clinical, community, and school settings. Selected diagnostic models for examining factors that predispose, enable, and reinforce health-related behavior are used to assist participants in setting priorities in their own health education programs. Case studies representing the application of selected theories of individual and group behavior change are presented in an effort to derive principles for the design of effective health education programs. The course examines several issues related to the theory and practice of health education. Behavior change strategies, ethical considerations, professional preparation and the role of the health educator with regard to social change, advocacy, and environmental protection are discussed. 4 credits. (Merrigan)



Assistant Professor Robert Ebert, left, and his class discuss the role of psychology in health promotion programs.

SPH SB 821 Principles and Strategies of Disease Prevention/Health Promotion

Prereq: SPH SB 721 Behavioral Sciences and Public Health. This course examines the literature with regard to the risk factors for heart disease, cancer, stroke, and AIDS. Specifically, it examines the relationship of these diseases to hypertension, physical inactivity, smoking, alcohol abuse, and unhealthy diet in addition to occupational and environmental exposures. The information on risk factors is critiqued with a particular emphasis on the role of epidemiology in the determination of the relative acceptability, efficacy, and costs/benefits of alternative health promotion/disease prevention strategies. 4 credits. (Merrigan and Gute)

SPH SB 823 Professions and Organizations

Recommended: SPH SB 721 Behavioral Sciences and Public Health. While health professions and organizations are major mechanisms to meet the health needs of the population, they also represent major impediments to the achievement of health goals and the provision of humanized health services. This course considers the culture and habits of such established health professionals as doctors, nurses, and social workers, as well as various emerging health professions. The interaction between organizational norms and professional norms is examined. The course also treats such topics as role definition, role conflict, and authority systems within the large, complex health organizations and the problems of coordinating personnel and avoiding goal displacement or the

departure from established health goals. The problem of appraising the organizational environment and the impact of the environment on the organization is also addressed. 4 credits. (Levine)

SPH SB 827 Public Health and Substance Abuse

Recommended: SPH SB 721 Behavioral Sciences and Public Health. This course provides an in-depth review of patterns of substance abuse in the United States, and examines the relationship between substance abuse and adverse health outcomes. Major theoretical formulations of substance abuse are examined. Attention is given to major public health efforts to prevent substance abuse and their assessed efficacy. Alcohol use and abuse is used as a case study. 2 credits. (Staff)

SPH SB 921 Directed Studies in Behavioral Sciences

This course provides the opportunity for advanced students to explore a special topic under the direction of a faculty member. Arrangements are made directly with the appropriate faculty member and the section chief. Variable credit.

SPH SB 922 Directed Research in Behavioral Sciences

This course provides the opportunity for advanced students to undertake independently or to become involved in behavioral/social science research of a public health nature. Arrangements are made with the appropriate faculty member and the section chief. Variable credit.

Office of Special Projects

William J. Bicknell, M.D., M.P.H., Director

International Health



The Office of Special Projects (OSP) works closely with other sections in the School and offers three intensive courses of particular interest to students who are either from developing countries or intending to work in international health. OSP also coordinates the joint Peace Corps/M.P.H. Program. Faculty and staff of the Office of Special Projects typically function as advisors to international students pursuing the master's degree. The Office of Special Projects also manages selected overseas and domestic research and service activities. Currently the Office of Special Projects maintains a network of affiliated schools of medicine and public health in Asia, the Near East, Africa, and the Caribbean. Affiliated institutions cooperate in teaching, service, and research activities and provide relevant field placements for public health and medical students.

Opportunities for 1–3 month structured field placements and directed studies are available with field supervision by adjunct faculty in selected countries including China, Colombia, Egypt, India, Indonesia, Nepal, Nigeria, The Philippines, St. Lucia, St. Vincent and the Grenadines, Turkey, Venezuela, Yugoslavia, and Zambia. Funding of travel

and expenses is the responsibility of the student or, in the case of international students, the student's sponsor. These placements are arranged by the Office of Special Projects.

The intensive courses offered by the Office of Special Projects are primarily intended for those with current or prospective professional responsibilities in the developing world. Courses are structured to encourage sharing of experiences through problem solving, case studies, and group discussion. Instructors have relevant, recent overseas experience and have taught in situations where English may be the second or even third language of participants.

The courses are offered annually according to the following schedule:

Spring: Management Methods for International Health

Summer: Certificate Program in Health Care in Developing Countries

Fall: Financing Health Care in Developing Countries

Each of these intensive courses has a practical-oriented focus.

Management Methods for International Health

A twelve-week, 275-contact-hour course in a seminar/workshop format that emphasizes the application of management principles in the public and private health sectors. Case method, practical hands-on problem solving and group discussions characterize the learning process. Class and case materials draw on actual problems and issues from countries at varying levels of development. The course is practical in emphasis and systematically exposes students to: operations management and marketing; human resources management; planning, evaluation, and financial management; and implementation methods. Participants are exposed to methods and issues in health care management in the United States through field visits. This course is offered annually during the spring semester.

Summer Certificate Program in Health Care in Developing Countries

Now in its seventh year, this twelve-week, 275-contact-hour course is offered every summer and carries up to 20 graduate credit hours toward the M.P.H. The course focus is on effective and affordable planning, design, implementation, and evaluation of primary care in severely resource-constrained environments. Course components include principles of health-program management concentrating on management by objectives; fundamentals of development economics; issues in population dynamics and family planning; envi-

ronmental factors affecting health; integration of traditional medicine into primary health care; health manpower planning and education of health workers; community participation; application of existing knowledge and appropriate technology; and essentials of managing selected diseases common to the developing world. The participants apply concepts developed during the program by completing projects specific to the improved management and implementation of activities directly relevant to their own responsibilities.

Financing Health Care in Developing Countries

This twelve-week, 270-contact-hour course is now in its third year. The focus is on practical methods for financial management of health programs and economic evaluation of health policy and program options. Topics covered include managerial accounting, budgeting, and financial planning; computer technology, with an emphasis on spreadsheet applications; management of health service operations; planning and evaluation of health programs; information systems, both manual and computerized; integrating program management and financial management; comparative national health finance; and methods for implementing organizational and social change. Central themes are projecting and controlling operating/recurrent costs and developing options for generating new sources of revenue. This course carries up to 16 graduate credit hours. The amount of credit allowed is influenced by a student's other course work and concentration.

In addition to the three intensive courses described above, the Office of Special Projects has oversight

responsibility for courses directly related to international health. The courses in international health are intended to prepare mid-level and senior planners and managers for leadership roles. Qualified Summer Certificate Program participants can continue in the M.P.H. program with admission to the degree program substantially contingent on performance during the summer. A separate application is required. The summer program has been designed to satisfy many of the core curriculum requirements of the M.P.H. degree program. Its content and timing is such that the courses offered by all the sections in the fall and spring semesters are much more relevant and available. Students who satisfactorily complete the Summer Certificate Program and who are admitted to and proceed directly into the M.P.H. program often complete their degree requirements in one calendar year. Students from developing countries who are planning to enter the M.P.H. program should seriously consider beginning their studies with the Summer Certificate Program.

Inquiries concerning the activities of the Office of Special Projects and requests for OSP brochures and applications for the spring, summer, and fall intensive courses should be addressed to:

Office of Special Projects
Boston University School of Public Health
Building A-310
80 East Concord Street
Boston, Massachusetts 02118-2394 USA

Telex 200191 BU UR Telephone 617/638-5234



Dr. William Bicknell observes participants working on a financial planning exercise in the Financing Health Care in Developing Countries course.

School of Public Health Courses

EH = Environmental Health Section (EH concentration)

EB = Epidemiology and Biostatistics Section (EB concentration)

LW = Health Law Section (LW concentration)

HS = Health Services Section (HS concentration)

SB = Social and Behavioral Sciences Section (HP concentration)

Environmental Health

Course No.	Title	Credits
EH 708	Introduction to Environmental Health	2
EH 764	Work and Health	4
EH 765	Survey of Environmental Health	4
EH 767	Occupational Health Policy and Economics	4
EH 768	Principles of Toxicology	4
EH 803	Waste and Wastewater	4
EH 805	Scientific Basis of Environmental and Occupational Health Standards	4
EH 806	Development and Environment	2
EH 809	Parasites of Humans: A Public Health Perspective	4
EH 860	Municipal Sanitation	4
EH 862	Radiation Protection	4
EH 864	Environmental Microbiology	4
EH 865	Food Sanitation and Safety	4
EH 866	Seminar on Environmental Health Risk Assessment	4
EH 867	Soil Pollution	4
EH 869	Environmental Planning	4
EH 961	Directed Studies in Environmental Health	variable
EH 962	Directed Research in Environmental Health	variable

Epidemiology and Biostatistics

Course No.	Title	Credits
EB 701	Elementary Biostatistics	3
EB 702	Introduction to Statistical Computing	4
EB 703	Intermediate Biostatistics	4
EB 704	Topics in Data Analysis	4
EB 705	Intermediate Statistical Computing	4
EB 707	Methods and Principles of Clinical Research	4
EB 711	Epidemiology	3
EB 712	Epidemiologic Methods	4
EB 716	Physiology and Pathophysiology	4
EB 720	Applying Epidemiology to the Study of Aging	4

EB 780	Analysis of Discrete Data	4
EB 801	Cancer Prevention as a Public Health Problem	4
EB 802	Reproductive Epidemiology	4
EB 803	Clinical Trials	4
EB 805	AIDS: Medical, Economic, Psychosocial, and Legal Issues	4
EB 806	Theoretical Epidemiology	4
EB 807	Genetic Epidemiology	4
EB 810	Psychiatric Epidemiology	4
EB 812	Infectious Disease Epidemiology	4
EB 813	Methods in Chronic Disease Epidemiology	4
EB 814	Research Methods in Public Health	4
EB 816	Cardiovascular Epidemiology	4
EB 817	Practicum in Public Health Research	4
EB 818	Statistical Methods for Epidemiology	4
EB 819	Cancer Epidemiology	4
EB 901, 902	Directed Studies in Epidemiology/ Biostatistics	variable
EB 911, 912	Directed Research in Epidemiology/ Biostatistics	variable
EB 914	Epidemiology/Biostatistics Research Seminar	2
EB 915	Research Methodology and Medical Literature	1

Health Law

Course No.	Title	Credits
LW 707	Introduction to Health Law	2
LW 751	Public Health Law I	4
LW 753	Public Health Law II	4
LW 754	Children at Risk	4
LW 756	Hospital Law	4
LW 757	Occupational Health and Safety Law	4
LW 758	Corporate Management of Risks to Health, Safety, and Environment	4
LW 852	Environmental Health Law	4
LW 854	Mental Health Law	4
LW 951	Directed Studies in Health Law	variable
LW 952	Directed Research in Health Law	variable

Health Services

Course No.	Title	Credits
HS 702	Introduction to Health Services	3
HS 710	Nutrition and Public Health	4
HS 715	The Impact of Insurance on Health Care	2
HS 717	International Health: Introduction to Health Care in Developing Countries	4
HS 725	Public Health and Clinical Aspects of Disease in Tropical Countries	4
HS 726	Public Health Aspects of Disaster Management	4
HS 727	Trends in Public Policy and Their Effects on Public Health and Health Care	2
HS 728	Issues in Long-term Care for the Elderly and Chronically Disabled	4
HS 730	Social-medical Perspectives on Aging and Old Age	2
HS 731	Design and Strategy for Health Care Organizations	4
HS 733	Principles of Health Program Management	4
HS 734	Principles of Nonprofit Accounting	4
HS 735	Health Care Finance	4
HS 737	Introduction to Personal Computers	2
HS 738	Health Services Marketing	4
HS 740	Hospitals: Structures, Functions, and Issues	2
HS 741	Consultation Techniques	2
HS 742	Data Base and Communications	2
HS 744	Introduction to Health Facility Planning and Design	2
HS 747	Medical Care and Public Health in China	4
HS 780	Maternal and Child Health Services in the United States	4
HS 785	Childhood Chronic Illness and Disability	4
HS 810	Techniques of Political Analysis and Influence	4
HS 811	Health Services Research Methods	4
HS 816	Analytical Aids to Decision Making	2
HS 825	Technology Assessment in Health Care and Public Health	4
HS 833	Health Economics	4
HS 834	Health Regulation and Planning	4
HS 835	Hospital Policy and Issues: The Practitioner's Perspective	2
HS 836	HMO Management	4
HS 838	Health Politics and Public Policy	4
HS 839	Mental Health System: Structure, Governance, and Current Issues	4
HS 881	Population Studies and Family Planning	4
HS 882	Health Care Utilization and Quality Management	4
HS 884	Ambulatory Care	4
HS 886	Comparative Health Systems	4
HS 887	Maternal and Child Health in Developing Countries	4
HS 888	Advanced Seminar in International Health Issues	2
HS 931	Directed Studies in Health Services	variable
HS 932	Directed Research in Health Services	variable

Social and Behavioral Sciences

Course No.	Title	Credits
SB 721	Behavioral Sciences and Public Health	3
SB 723	Social Problems	4
SB 724	Issues in the Implementation of Health Promotion/Disease Prevention Programs	4
SB 725	Ethical Issues in Medicine and Public Health	4
SB 726	History and Philosophy of Public Health	4
SB 727	Stress, Life Satisfaction, and Health	4
SB 728	Religion, Medicine and Public Health Policy	4
SB 802	Public Health and Women: Social and Behavioral Approaches	4
SB 804	Selected Topics in Psychology and Public Health	4
SB 805	Contemporary Issues of Health Care for Minorities in the U.S.	4
SB 806	Community Interventions Seminar	2
SB 815	Program Evaluation Research	4
SB 820	Health Behavior/Health Education	4
SB 821	Principles and Strategies of Disease Prevention/Health Promotion	4
SB 823	Professions and Organizations	4
SB 827	Public Health and Substance Abuse	2
SB 921	Directed Studies in Behavioral Sciences	variable
SB 922	Directed Research in Behavioral Sciences	variable

Admission Criteria and Application Procedures



Students are encouraged to get involved in the Student Advisory Committee which acts as an advisory group in the areas of curriculum, student activities, and academic policy.

The School of Public Health admits students in two categories: full-time degree status (12–20 credit hours per semester) and part-time degree status (11.5 or fewer credit hours per semester). Students may move freely between full- and part-time status upon notifying the Registrar of the change.

M.P.H. Applicants

Applicants to the School of Public Health should (a) hold a baccalaureate degree from a recognized institution of higher learning and have relevant experience in some field of health,* or (b) hold a postbaccalaureate degree in a health-related area or an advanced professional degree. On occasion the School will accept applicants with little or no relevant work experience, if the Admissions Committee determines the applicant to be well-qualified based on exceptional academic achievement.

All applicants **except** those holding an M.D., Ph.D., J.D., or other doctoral-level degree, must take the Graduate Record Examination General Test. (See below for scheduling details on the

GRE.) With prior approval from the Director of Admissions, applicants may submit Graduate Management Admission Test (GMAT), LSAT, or MCAT scores in lieu of GRE scores. Test scores should be less than four years old. The School of Public Health is most interested in accepting qualified, experienced health care professionals, and Graduate Record Examination scores are not the sole criteria for acceptance into the School.

Applicants from countries where English is not the language of instruction must submit TOEFL scores to the Office of Admissions.

Since there are often difficulties in evaluating transcripts from foreign universities, **international applicants** with doctoral-level preparation should seriously consider taking GREs. If there is any question, applicants should contact the Director of Admissions.

In reviewing applicants for admission, the Admissions Committee takes into account the following factors: (1) **Academic ability.** Students must be capable of graduate-level work in such areas as research methodology and policy analysis. Therefore, the applicant should have a previous academic average of approximately 3.0/4.0. Precise Graduate Record Examination norms have not been determined, but scores are considered in the evaluation of academic potential. (2) **Professional background.** This includes the professional education and expe-

* The requirement of health experience does not apply to M.P.H. students entering the Epidemiology and Biostatistics concentration or the Health Behavior, Health Promotion, and Disease Prevention concentration.

rience of the applicant as well as his or her employment record. Primary emphasis will be on the quality of the background. *In light of the School's stated goal of a heterogeneous student body, the specific nature of the applicant's professional background will be weighed in relation to the backgrounds of other applicants.* (3) **Potential for innovation, contribution, and achievement in public health.** The committee attaches particular significance to these characteristics. Applicants who have demonstrated these qualities will be given special consideration.

At times, the Admissions Committee finds it helpful in its assessment of a candidate to conduct a personal interview. In such instances, applicants will be notified by the Admissions Office.

In summary, the School of Public Health is interested in applicants with the academic ability for graduate study of a high caliber, the professional training and experience that will enable them to benefit from and contribute to their education, and the potential for leadership and achievement.

Peace Corps/M.P.H. Applicants

Applicants must follow both the Peace Corps and M.P.H. application procedures. Peace Corps applications may be obtained from the Office of Special Projects. Please note that your Peace Corps application should have the code "450A" in the upper right hand corner. Normally you are required to submit eight references to the Peace Corps and three references to Boston University. However, for this joint program, the references for Boston University may be substituted for three of the references required by the Peace Corps. These references should be job-related and/or academic. Boston University will forward copies of your academic transcripts to the Peace Corps. The completed Peace Corps application should be sent to:

New England Area Director
United States Peace Corps
10 Causeway St., Room 466
Boston, MA 02222-1099

Applications to the School of Public Health should be sent to the Office of Admissions as instructed on page 40.

D.Sc. Applicants in Epidemiology

In addition to the requirements for M.P.H. candidates, applicants for the doctoral program should have substantial health experience, hold an M.P.H. degree or its equivalent, and be capable of conducting original research. Exceptional candidates without a graduate degree may apply, and, if accepted, will have to complete additional course work. Applicants to the D.Sc. program should include a clear and concise statement of their career goals and commitment to epidemiology. An interview may be requested.

D.Sc. Applicants in Environmental Health Sciences

In addition to the requirements for M.P.H. candidates, applicants should include a statement of their career goals and interest in environmental health. An interview may be requested.

M.A. and Ph.D. in Biostatistics Applicants

Students applying to the M.A. or Ph.D. program are expected to have at least the equivalent of a baccalaureate degree. Previous course work must include one year of calculus and one course in linear algebra. Students must also demonstrate competency in computer programming and elementary statistical methods.

M.A. and Ph.D. in biostatistics applicants must apply to:

Boston University Graduate School
705 Commonwealth Avenue
Boston, MA 02215
Telephone: 617/353-2693

The deadlines for application to the Graduate School for September admission are February 1 (with financial aid) and July 1 (admission only). The deadline for January admission is November 1.

The Graduate Record Examination

The Graduate Record Examination General Test is scheduled for October 8 and December 10 in 1988, and February 4, April 8, and June 3 in 1989. Applicants should arrange to take the test as early as possible by writing to the following address:

Graduate Record Examination
Educational Testing Service
Box 955
Princeton, NJ 08541
Telephone: 609/921-9000

For those students who are unable to take the Graduate Record Examination at a regularly scheduled time, the Educational Testing Service has a Special Administration Service which offers the General Test on selected Saturday mornings. For further information write to:

Educational Testing Service
111 Washington St.
Brookline Village, MA 02146
Telephone: 617/739-2210

Educational Testing Service requires about six weeks to process and forward the scores.

Applicants should specify that scores be sent to the Boston University School of Public Health, using the code 3101.

Test of English as a Foreign Language

The TOEFL is administered at test centers all over the world. For more information write to:

Test of English as a Foreign Language
Educational Testing Service
P.O. Box 6151
Princeton, New Jersey 08541
Telephone: 609/882-6601

Application forms are also available at American embassies and consulates, offices of the U.S. Information Service, and binational centers abroad.

Guest Students

Students from other graduate programs and individuals of appropriate educational or professional background are permitted to enroll in specific courses without being admitted to the School of Public Health. Guest Students may take a maximum of eight credits and are expected to fulfill all course requirements (such as term papers and exams). Prospective Guest Students should contact the Director of Admissions.

A Guest Student who wishes to become a degree candidate must apply formally to the School. Courses taken by Guest Students will be applied toward their degree.

Dates for Application and Review

M.P.H. Applicants

The School of Public Health accepts M.P.H. students for January and September admission.

Applicants for September admission who submit completed applications by March 1 will be notified by April 15 of possible early admission.

Applications received by April 15 will be reviewed, and acceptances will be mailed by May 31.

Applications completed after April 15 will be reviewed, and admission will depend on available space.

Applicants for January admission who submit completed applications by October 25 will be notified by November 25. Applications will be accepted after October 25, but students will be admitted only on a space-available basis.

D.Sc. Applicants

D.Sc. applicants must apply by April 15 for September admission. Decisions will be announced by May 31.

There is January admission for D.Sc. applicants in Environmental Health Sciences only. The deadline for applications is October 25.

Instructions for Application

The admission process has been designed to ensure greater applicant control over the timely arrival of transcripts and letters of assessment. The process is completely dependent on your compilation and submission of the necessary documents. All documents (except GRE scores) *must be submitted together* to the School of Public Health; these include:

1. Application form
2. Letters of assessment (3)
3. Transcripts
4. Application fee.

Please follow these instructions:

1. Read all application materials thoroughly.
2. Fill in the application form completely. All applications *must be typed or printed clearly*. Additional information you would like to provide in support of your application must be typed or printed clearly on a separate sheet of paper.
3. Enclose the application fee. The application fee is a nonrefundable \$35. Please make checks payable to Boston University.
4. Arrange to take the Graduate Record Examination General Test and have the results sent to the School of Public Health at the address under item 8 below. Remember to specify our code number (3101).
5. Applicants from countries where English is not the language of instruction must arrange to have their TOEFL scores sent to the Office of Admissions.
6. Use the enclosed assessment forms and envelopes. Enclosed in this application packet are envelopes specially designed to enable you to maintain control over your application while ensuring confidentiality to assessors and school officials. Send the assessment forms and envelopes, with your name and address clearly printed on both the form and the envelope and the appropriate box checked on the back of the envelope, to those individuals from whom you are requesting a letter of assessment. The assessor will complete the form, type his or her name and title in the appropriate place at the end of the form, seal it in the enclosed envelope, and sign his or her name on the line across the envelope seal. This envelope is then returned to you.

Transcripts will be handled in a similar manner. Enclose one of the envelopes, with your name and address clearly printed on the front and the appropriate box checked on the back, with your transcript request. The school registrar will enclose the transcript in the envelope, seal the envelope, and enter his or her signature on the line across the envelope seal. This envelope will also be returned to you. Additional

envelopes may be requested from the address below. If for some reason a school registrar is unable or unwilling to send the requested credential(s) directly to you (1) notify the School of Public Health admissions office in writing prior to submission of your application and (2) advise the registrar to mail the requested credential(s) to the address below.

7. When you have received all the necessary assessments and transcripts, filled out the application form, and included the fee, your application will be complete.

8. Send your complete application to:
Office of Admissions
Boston University School of Public Health
Building A-403
80 East Concord Street
Boston, MA 02118

As soon as your application has been received, the Office of Admissions will verify receipt of your application in writing.



The Alumni Medical Library has a substantial collection in public health, as well as a computerized literature search service.

Financial Information

Tuition and Fees

Tuition and fees are to be paid in full at the time of registration. Preregistered students must pay by the deadline indicated on their tuition bills or by the first day of class in the School of Public Health Registrar's Office. Checks should be made payable to Boston University. Boston University also accepts MasterCard, VISA, DISCOVER, Guaranteed Student Loan, Academic Management Services Plan, and Boston University approved tuition remission. Payment can be made in any combination of the above.

The Trustees of the University reserve the right to change tuition rates or fees at their discretion whenever it is deemed advisable.

Tuition and Fees for 1988–1989

It has been and remains the policy of Boston University to withhold all diplomas, degrees, official transcripts, and other official recognition of work done at the University from students with respect to whom there are any outstanding overdue debts to the University, including, but not limited to, amounts owed in satisfaction of tuition, loan agreements, fees, and charges, as well as monies owed for occupancy in University-owned or -operated residence facilities and apartments and for food service. No student may withdraw from the University in good standing or graduate from the University unless all current obligations to the University are paid in full.

Part-Time Students

(1.0 to 11.5 credit hours)

Tuition per credit hour	\$400
Registration fee per semester	\$30
Activity fee—degree candidates only	\$5

Full-Time Students

(12.0 to 20.0 credit hours)

Tuition per semester	\$6,400
Activity fee per semester	\$5
Continuing student fee (doctoral candidates only)	\$800

These figures are for 1988–89 *only* and may not be accurate in subsequent years.

There is no registration fee for full-time students. All fees are nonrefundable. The student is assessed at actual cost for any breakage or damage to University property. Library fines are assessed by the librarian.

Medical Insurance

Costs for full-time students are:

U.S. citizens (optional): \$199 per year
International students (required): \$199 per year

Part-time students are also eligible to purchase medical insurance. For information, contact the Office of the Comptroller, 881 Commonwealth Avenue, Boston, MA 02215; 617/353-2269. International students should contact the International Student Office. A brochure on medical insurance is available from the Registrar. The insurance premium is subject to change.

Service Charges

Transcript: \$2 each

Late Registration Fee: A minimum of \$100 for full-time students and a minimum of \$50 for part-time students may be assessed to students who complete their official registration during the late registration period.

Reissue of photo I.D. card: \$10

Financial Aid

At present there are eight loan programs available to students enrolled in the School of Public Health: the Guaranteed Student Loan (GSL), the Massachusetts Education Loan Authority (MELA), The Education Resource Institute Supplemental Loan Program (TERI), and the PLUS and Supplemental Loans for Students (SLS) are available to students who are enrolled at least half time; the School of Public Health (SPH) Alumni Loan is available to all students; and the Perkins Loan and Health Education Assistance Loan (HEAL) are available to full-time students. GSL applications are available at participating banks; HEAL and PLUS/SLS applications are available in the School's Office of Student Financial Management. Inquiries about all programs and procedures should be made to the Office of Student Financial Management, L315, Boston University Medical Center, 80 East Concord Street, Boston, MA 02118; 617/638-5130.

International Students

Federal regulations restrict all federal funds to citizens or permanent residents of the United States. The Office of Student Financial Management is unable to offer scholarship aid to foreign students. Boston University therefore requires international students applying for admission to present evidence of sufficient funds to cover all tuition, fees, books, and living expenses for their study.

The Guaranteed Student Loan Program

Guidelines vary slightly from lender to lender, but the basic features of the Guaranteed Student Loan Program permit any student pursuing at least a half-time course of study toward a degree (i.e., two courses each semester) to borrow funds for educational purposes. A first-time borrower is not required to repay principal until six months after discontinuation of enrollment. Half-time graduate students may borrow up to the amount sufficient to cover direct expenses (tuition, fees and so on) not exceeding \$3,750 per year. Full-time graduate students (12–20 credits per semester) may borrow up to the amount sufficient to cover direct expenses not exceeding \$7,500 per year. No graduate or professional student may borrow more than \$54,750 including undergraduate borrowing.

The standard rate of interest for guaranteed loans is 7 percent and 9 percent for continuing borrowers and 8 percent for first-time borrowers plus a guarantee fee of up to 3 percent in most states. Borrowers receive a federal subsidy for the interest during enrollment of at least half-time. Thus, a needy student might borrow under the program without interest liability until six months (8 percent, 9 percent loans) or nine months (7 percent loans) after leaving school.

A loan origination fee of 5.0 percent is now charged on the principal amount of a loan and is deducted from the loan proceeds. A student submitting a GSL loan application must submit a need analysis form with the application. This can be accomplished by submitting an FAF to College Scholarship Service in Princeton.

Guaranteed Student Loans are available through local banks or other financial institutions. A student should inquire at his or her hometown bank about the program. Specific guidelines for the program vary from lender to lender, and students are advised to consult local banks to determine their eligibility and obligations under the program.

PLUS and Supplemental Loans for Students

PLUS and Supplemental Loans for Students (SLS) are federally guaranteed loans which are available to assist with the costs of higher education. PLUS loans are available to parents of *dependent* graduate and professional students. SLS loans (formerly ALAS) are available to *independent* and *dependent* graduate and professional students. The terms and conditions of PLUS and SLS loans are otherwise the same, with the exception of deferred payment options. The student or borrower for the student must be a citizen or permanent resident and the student must be enrolled or accepted for enrollment on at least a half-time basis. The annual maximum PLUS/SLS is \$4,000; the cumulative maximum for each loan is \$20,000. No loan can exceed the difference between the cost of attendance and any financial assistance. If all eligibility criteria are met, a dependent graduate student could take out a \$7,500 Guaranteed Student Loan and a \$4,000 SLS, and the parents could borrow \$4,000 in a PLUS. An independent graduate stu-

dent could take out a \$4,000 SLS in addition to any GSL he or she qualifies for. Commencing July 1, 1987, the interest rate is variable, equal to that of the 91-day Treasury Bill average plus 3.75%; the rate has been capped at 12%. Interest is charged from date of disbursement, but full-time students may defer principal and interest on the SLS; however, parents must begin repayment on PLUS 30 days after disbursement. Contact the Office of Student Financial Management if you cannot find a lender.

SPH Alumni Loan

This loan is funded by the donations of alumni and other interested persons and organizations. The amount of each loan is based on need. The interest rate is 2 percent in-school, 9 percent during repayment. Repayment varies from 1 year to 10 years maximum, with a minimum payment of \$50 principal monthly. Funds are awarded by the Office of Student Financial Management.

Perkins Loan

This low-interest (5 percent) loan is made directly to students demonstrating the greatest financial need to the school that has received federal money for this purpose. Eligible students may borrow up to an aggregate of \$18,000, including any amount borrowed as an undergraduate. There is a six-month grace period immediately after graduation before repayment begins. Funds are awarded by the Office of Student Financial Management.

Health Education Assistance Loan

A full-time student may borrow up to \$12,500 per academic year, \$50,000 aggregate total. The amount recommended each year by the Financial Aid Officer cannot exceed the difference between the school's expense budget minus the expected family contribution and other financial aid and loans. Loan proceeds may be used only for *reasonable* costs of education including tuition, fees, books, supplies and equipment, laboratory expenses, personal expenses, commuting and transportation costs, and interest and insurance premiums charged on the loan. If the student borrower changes enrollment to less than full-time during the academic year, any HEAL funds received in excess of the corrected expense budget must be repaid immediately to the HEAL lender.

There is no federal interest subsidy under this program. Interest is charged at the 91-Day Treasury Bill rate plus 3 percent. Interest may be paid on an ongoing basis or accrued until repayment begins. If interest is accrued, it will be compounded semiannually and added to the loan principal. An insurance premium, not to exceed 8 percent per annum, will be charged at the time an individual loan is processed.

Repayment will begin 9 to 12 months after all formal training has been completed, including that provided in accredited internship and residency programs. A deferment of up to 3 years will be granted to borrowers who return to full-time study

at an institution of higher education, train in an internship or residency program, or serve in the Armed Forces, Peace Corps, or specified programs under ACTION or the National Health Service Corps after the repayment period has commenced. Borrowers may take from 10 to 25 years to repay the loan once repayment commences.

Repayment will be carefully monitored. Under law, there will be no discharge of loans by bankruptcy during the first 5 years of the designated 10- to 25-year repayment period. Persons in professional practice who default on their loans may have payments for any federally supported health care service such as Medicare or Medicaid reduced by the amount of the loan default. If a borrower breaches obligations entered into under a federal payment for service contract, the United States Government will be entitled to recover damages.

Massachusetts Education Loan Authority

In an effort to provide more money for college students, several universities in Massachusetts, including Boston University, have instituted a new long-term, low-interest loan under the Massachusetts Education Loan Authority. The program is open to any U.S. citizen who is a full- or half-time student attending a participating college in Massachusetts.

Under this program, qualified students may borrow up to 100 percent of their total educational costs (minus any financial aid), with a minimum of \$2,000 (at 9.8 percent interest in 1986-87). Repayment begins 30 days after disbursement and extends over a 15-year period. Although parents must be credit-worthy and must demonstrate need, the qualifying needs test is less severe than for federal funds. It is expected that many students not eligible for the GSL may be able to receive funds under this new loan program.

TERI (The Education Resource Institute) Supplemental Loan Program

The TERI Loan is a tuition-financing plan designed for families and students who do not qualify for traditional financial assistance programs and for those who need additional funds to supplement financial aid awards. Any student enrolled in a TERI-approved school is eligible to apply. TERI offers annual loans from \$2,000 to \$15,000. The interest rate is variable and 2 percent above a participating lender's base or prime rate. You may take up to 15 years to repay the TERI loans, depending upon the total amount borrowed. The minimum TERI monthly payment is \$50. Principal and interest repayment generally begins 45 days after the school receives the loan funds. There are currently seven participating lenders and applications from most are available in the Office of Student Financial Management. You should select your lender carefully because the lenders may have different interest rates and policies for their TERI loans.

Traineeship Program

The School of Public Health cooperates with the U.S. Public Health Service in offering Public Health Traineeships to persons from a variety of professional backgrounds who wish to enter the field of public health. A traineeship is an award based on need which will help to defray part of a student's educational expenses. The recipient of a traineeship is not required to perform services for the School. To be eligible for an award a student must be matriculated full time or part time in a degree program. The availability of traineeships is entirely dependent on the receipt of federal funds, and they are therefore awarded solely on a yearly basis. Funds are awarded by the Office of Student Financial Management.

College Work-study

In this program funds come from a grant made to participating schools by the federal government. A student earns the CWS grant by working at an agency that is usually nonprofit, nonsectarian, and apolitical. The Work-study account pays a percentage of the wages and the employer pays a percentage. Awards are made to full-time students demonstrating the greatest financial need. Funds are awarded by the Office of Student Financial Management.

Summer Work-study

Depending upon fund availability, students demonstrating need are sometimes able to secure Summer Work-study funds. A separate application must be completed, usually in mid-January. Again, preference is given to students with the greatest financial need and who have been and will continue to be enrolled full time. Funds are awarded by the Office of Student Financial Management.

Veterans' Affairs Office

In cooperation with the Veterans' Administration, the University participates in numerous veterans' benefits programs, including educational assistance, work-study, rehabilitation, deferred payment, and tutorial programs.

If you are eligible for veterans' benefits or would like more information about VA rules and veterans' programs, contact the Boston University Office of Veterans' Affairs, 881 Commonwealth Avenue, Boston, MA 02215; 617/353-2390.

Administrative Policies



Students may pursue their degree on a part-time or full-time basis and may move from one status to another.

M.P.H.

Transfer of Credit

Requests for transfer of credit for the M.P.H. degree will be considered on an individual basis by the section chiefs. Transfer credits will normally be applied toward core or concentration requirements only. Under unusual circumstances, transfer credits may be applied toward elective requirements. Only courses taken within five years of the date of the request for transfer will be considered. No course will be considered for transfer credit if it has been or will be applied toward another degree. Students enrolled in a University-approved dual-degree program follow separate guidelines. Students who wish to take a course within another program at Boston University or at another institution and who plan to use that course toward the M.P.H. degree must get approval prior to enrolling in the course.

Waiver of Courses

Students may petition to have core courses in the School of Public Health waived on the basis of course work performed elsewhere or comparable professional experience. Students may be asked to demonstrate their proficiency in the courses to be waived. Such waivers will not reduce the overall number of course credits to be taken in the School of Public Health (48), nor will they be applied to courses other than core courses.

Transcripts

All students are entitled to transcripts of their records in either official or unofficial form. An official transcript bears the signature of the registrar and school seal. It is sent directly to a school, firm, or agency. A student may obtain an official transcript which is stamped "Official Transcript Issued to Student" or an unofficial transcript which does not have a signature or the school seal and is stamped "Unofficial Transcript."

All transcript requests should be made in writing to the Boston University Registrar, 881 Commonwealth Avenue, Boston, MA 02215. Each transcript (official and unofficial) costs \$2.

Withdrawals, Leaves of Absence, and Refunds

During a regular semester, up to the end of the fifth week, a student who reduces his or her course load and thus becomes responsible for a lower tuition charge than that which was initially assessed will receive a credit for the difference.

Students who find it necessary to withdraw or take a leave of absence must notify the School of Public Health Registrar in person or in writing. Mere absence from classes does not constitute an official leave nor does it reduce the student's fi-

nancial obligation or remove a final grade if the student is pre-registered for that semester.

Students who withdraw from a course after the fifth week of class will receive a grade of "W" (Withdrawn) on their permanent record card. Students may withdraw from a course at any time up to the 13th week of the semester; anyone withdrawing from a course after this point will receive a grade of "F" for the course. Students planning not to register for one or more semesters, but who are not withdrawing, must file an Official Leave of Absence Form with the School of Public Health during the normal registration period prior to the semester that the leave of absence will become effective.

Upon receipt of the Official Withdrawal Form from the School of Public Health, the Comptroller's Office will credit the student's account as follows:

- Prior to the start of classes: 100 percent of tuition and fees
- During the first two weeks of classes: 80 percent of tuition
- During the third week of classes: 60 percent of tuition
- During the fourth week of classes: 40 percent of tuition
- During the fifth week of classes: 20 percent of tuition
- After the fifth week of classes: 0 percent

Note: Tuition payments will not be refunded after the start of classes; rather, a credit will be made to the student's account. A credit balance in a student's account resulting from a withdrawal, overpayment, or adjustment will be refunded upon written request to the Office of Student Accounts. Registration fees and deposits are nonrefundable.

Absence for Religious Reasons

According to Chapter 151C of the General Laws, Commonwealth of Massachusetts, any student in an educational or vocational training institution, other than a religious or denominational educational or vocational training institution, who is unable because of his (or her) religious beliefs, to attend classes or to participate in any examination, study, or work requirements on a particular day shall be excused from any such examination or study or work requirement, and shall be provided with an opportunity to make up such examination, study, or work requirement which he (or she) may have missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon such school. No fees of any kind shall be charged by the institution for making available to the said student such opportunity. No adverse or prejudicial effects shall result to any student because of his (or her) availing himself (or herself) of the provisions of this section.

Suspension or Dismissal

Boston University, through its various faculties and appropriate committees, reserves the right to suspend or dismiss any student for failure to maintain a satisfactory academic record, acceptable personal behavior, or satisfactory standards of health. (See the School of Public Health Students' Handbook for a more detailed discussion of the grounds for termination or suspension. See also the University regulations on nonacademic grievances and arbitration.)

Grading System

Each student receives a point grade in each course. All M.P.H. students must earn at least a B- grade (2.70) in each of the six core courses (or core course equivalents) *and* have a minimum cumulative grade point average of 3.0 (based on the following grading system), in order to be recommended for the master's degree. M.P.H. candidates who fail to maintain a 3.0 cumulative grade point average will be required to receive additional advising and may be placed on academic probation. (See the School of Public Health Students' Handbook for the academic probation policy.)

A	= 4.0	C	= 2.0
A-	= 3.7	C-	= 1.7
B+	= 3.3	D	= 1.0
B	= 3.0	F	= 0.0
B-	= 2.7	I	= Incomplete
C+	= 2.3	W	= Withdrawn after five weeks
		X	= Unresolved status

Doctoral-degree candidates must maintain a minimum cumulative grade point average of 3.0.

Registration

Registration will be conducted by mail or in person for all students in the weeks preceding the beginning of classes. School of Public Health office hours are extended during the first week of classes for walk-in registration.

Late-registration and late-payment fees are charged if a student registers later than the official close of the registration period. Registrations may not be accepted without full payment. Students with pending loan applications or other aid must submit University-approved documentation. Students should contact the Boston University Office of Student Financial Management, Boston University Medical Center, to receive proper documentation.

Privacy Act (Buckley Amendment)

Under the provisions of the Family Educational Rights and Privacy Act, also known as the Buckley Amendment, students have the right to inspect the educational records kept by the University concerning them, to request correction of any inaccurate data, and to file complaints concerning any misleading information contained therein. Parents of dependent students may inspect their son's

or daughter's academic record after establishing proof of their dependency. Disclosures are restricted to those who are authorized and who have legitimate need for the data. The University safeguards against third-party redisclosure of personally identifiable information.

A semester notification of rights and the procedures for exercising them are printed on the University registration form. Copies of the University's Compliance Manual and forms for obtaining access to records are available at the Office of the University Registrar.

For further information contact your school or college office or the Assistant Registrar at the University Access Office, 881 Commonwealth Avenue, 617/353-3678.

Grievance and Arbitration Procedures Under Title IX

Students who believe they have been discriminated against because of their race, color, creed, religion, ethnic origin, sex, age, or physical disability may file a formal grievance in writing with the Director of the School. The statement should be as specific as possible regarding the action that precipitated the grievance: date, place, and people involved; efforts made to settle the matter informally; the remedy sought.

Within one week of receiving the statement, the Director of the School forwards a copy to the appropriate administrative head. Individuals whose actions or inactions are the subject of the grievance receive a copy from the administrative head and have an opportunity to respond in writing.

The administrative head will try to meet with all concerned parties within two weeks of receiving

the statement. He or she may receive both oral and written presentations and may make independent inquiry.

Within one week after such a meeting, the administrative head makes a decision as to the merits of the statement and the appropriate resolution of the grievance. Copies of this decision are sent to the student, the individuals whose actions are the subject of the grievance, the Director of the School, and the Provost. If dissatisfied with the decision, the student may appeal to the Director of the School and from there to the Provost.

A record of all formal grievances is kept in the office of the Director of the School. Copies of all written statements, letters, etc., relating to a grievance should be sent to that office.

Equal Opportunity Policy

Boston University prohibits discrimination against any individual on the basis of race, color, religion, sex, age, national origin, physical or mental handicap, marital, parental, or veteran status. This policy extends to all rights, privileges, programs, and activities, including admissions, financial assistance, employment, housing, athletics, and educational programs. Boston University recognizes that nondiscrimination does not ensure that equal opportunity is a reality. Because of this, the University will continue to implement affirmative action initiatives which promote equal opportunity for all students, applicants, and employees. Inquiries regarding the application of this policy should be addressed to the Director, Office of Equal Opportunity, 25 Buick Street, Boston, MA 02215; 617/353-4475.



Professor George Annas and his Public Health Law II students discuss organ transplantation.

University Facilities and Resources



Boston University campus, seen from the Charles River.

Libraries

The staff of the Boston University Libraries provides extensive service to the entire University community with a collection of more than 1.6 million volumes in paper and 2.4 million volumes in microfilm, 29,000 current journals, and access to hundreds of bibliographic databases.

The Alumni Medical Library is located at the Medical Center in the Instructional Building, 80 East Concord Street. It houses over 99,000 books, periodicals, and audiovisual materials. Services such as interlibrary loans are available on request. The library has a substantial collection in public health. Of particular interest to public health students are the American Statistical Index and the computerized literature search service with access to data bases such as Medline, Health Planning and Administration, Bioethics, Popline, and Toxline.

Mugar Memorial Library, 771 Commonwealth Avenue, is the central library of Boston University. It has a large collection of materials relevant to health systems, health planning, ethics, and the

behavioral sciences. The library maintains an audio listening area, a music library, an African studies library, and an excellent Department of Special Collections containing rare books and manuscripts.

Mugar Library also holds the personal papers of over 1,200 public figures in literature, journalism, theatre, film, music, politics, and diplomacy.

The department of Astronomy, the School for the Arts, the School of Theology, and the School of Law maintain their own specialized libraries. Additional libraries include the Science/Engineering Library, the Educational Resources Library, the Krasker Film Library, the Minority Research Library, the Career Resource Library, and the Gerontology Library.

An interlibrary loan system further enhances the resources, and a consortium arrangement enables graduate students to use the libraries of Boston College, Brandeis, M.I.T., Northeastern, Tufts, Wellesley, and the University of Massachusetts.

Academic Computing Center

The Academic Computing Center, located at 111 Cummington Street, houses a large cluster of IBM 3278 full-screen display and DEC VT220 terminals, local printers, the terminal assistance window, and the batch input/output window. The Center operates an IBM 3090-200VF computer for instructional programs and research activities throughout the University. The principal operating system, VPS, provides high-speed interactive and batch processing. VPS supports all popular programming languages (and many others as well) including Ada, APL, Assembler, BASIC, C, COBOL, FORTRAN, LISP, LOGO, Pascal, PL/I, SNOBOL, and XPL. A state-of-the-art commercial data base package and a full array of statistical packages and programs are also offered. Powerful text-formatting packages are available for word-processing applications.

The Center operates a sophisticated graphics laboratory for research and production. In addition, clusters of terminals are located in Mugar Library, and in the Science and Engineering Center. For those wishing to use their own terminals or personal computers, dial-in ports to the 3090-200VF are available.

A local area broadband network on campus allows high-speed terminal-to-computer and computer-to-computer communications. Boston University is also a charter member of the BITNET inter-

university electronic message and mail network which connects over 1000 universities and research centers internationally.

Boston University maintains a liberal policy toward computing. Any Boston University graduate student may obtain a nonfunded research account (NFR) under his or her advisor. Additional computer resources may be requested as needed. Students use the terminals on a first-come, first-served basis. Staff is available to answer questions about the system, terminal usage, and program syntax.

Laboratory for Instructional Technology

Students of the School of Public Health may use the Laboratory for Instructional Technology which is located in the School of Medicine. The Lab makes available to students a range of personal computer equipment—IBM-compatible, Macintosh, Hewlett Packard, Digital, and portable computers as well as dot matrix, thinkjet, and laser printers, plotters and interactive video systems. Portable computers can be checked out for a week at a time on a first-come, first-served basis. The software collection includes word processing, spreadsheet, data base, statistical, graphics, and instructional programs. Modems and terminal emulation software allow students to connect to the Academic Computing Center at the Charles River Campus and work with its collection of mainframe-based statistical packages such as SAS, SPSSX, and BMDP.

The Lab is open seven days a week during the school year. Lab monitors are on duty 40 hours a week to give students personal assistance in learning to use this technology.

Boston University Bookstore

The Boston University Bookstore, New England's largest bookstore, is located at 660 Beacon Street in Kenmore Square. The bookstore mall contains three floors of general, professional, technical, and academic books and three floors of shops.

A branch bookstore is located in the Medical Center. All School of Public Health textbooks as well as professional reference books, school supplies, and insignia merchandise are sold here.

Center for English Language and Orientation Program

CELOP, at 730 Commonwealth Avenue, offers intensive English courses and orientation programs for international students who wish to improve their English and prepare academically and culturally for college study in the United States.

Center for Law and Health Sciences

The Center for Law and Health Sciences, at 765 Commonwealth Avenue, is the component of the School of Law responsible for conducting research, educational, and public service programs related to selected health-care issues and systems. The Center serves both the Law School and other health affairs units of the University through its focus on the interaction of law and health.

Disability Services

Mainstreaming at Boston University means that physically impaired students can expect to use the same campus facilities (in some cases with enabling accommodations) as students who are not disabled. Therefore, most of the facilities and the programs described in this catalog make no mention of separate services for the disabled. Consultations with Disability Services staff are available to individuals or groups requesting assistance or having questions or concerns about campus accessibility. Auxiliary aids, such as interpreters for hearing-impaired students, are available for all of the University's educational programs. The Disability Services office is located in the King Center, 19 Deerfield Street.

George Sherman Union

The George Sherman Boston University Union, 775 Commonwealth Avenue, serves many of the social, cultural, and recreational needs of the University community. Special exhibits, lectures, recitals, films, gallery showings, and a comprehensive recreation program are some of the activities that take place here.

Gerontology Center

The University's commitments to research, education, and service in the field of aging are coordinated and augmented by the Boston University Gerontology Center, 720 Harrison Avenue, Suite 1101 (at the Medical Center), and 67 Bay State Road on the Charles River Campus, which promotes understanding and professional competence in dealing with the biological, medical, psychological, and social aspects of aging. The Center maintains a library that includes journals, directories, state-of-the-art information, statistical data, training aids, and governmental and legislative references. An updated listing is kept of local and nation-wide conferences.

In addition to sponsoring lectures, workshops, and conferences, the Center offers an annual Summer Institute in Gerontology, featuring both academic and continuing education courses.

The Center awards the Louis Lowy Certificate in Gerontological Studies, upon graduation, to students in any of the University degree programs who have completed a specified number of courses focusing on gerontology. The Center also awards

the Certificate of Recognition for the Study of Aging to nondegree students undertaking substantive study pertaining to gerontology.

Health Care Management Program

The Boston University School of Management offers a program leading to the MBA with a concentration in health care management. The program provides professional management training for a wide variety of employment settings in the health care industry, including hospitals, long-term care facilities, mental health and related human services, and prepaid group practices. The Health Care Management Program requires completion of sixteen 4-credit courses and can be pursued on either a part-time or full-time basis.

Health Policy Institute

The Health Policy Institute, located at 53 Bay State Road, is an umbrella organization for Boston University scholars and professionals engaged in the organization, delivery, and financing of health services in this country and abroad.

The Institute's national work focuses on assisting the private sector in evaluating existing programs and developing improved health care systems that are both cost effective and responsive to user and provider needs. This effort includes consultancies to corporations, funded studies, and the Pew Health Policy program, which offers a Ph.D. program in health policy and a fellowship program of specialized professional conferences for senior corporate managers.

The Institute's international division comprises the Office of Special Projects and the Center for Educational Development in Health. Their charge is to collaborate with universities and ministries of health in African, Asian, Caribbean, Latin American, and Middle Eastern countries on issues of organization, financing, and delivery of health services, as well as human resources and health curriculum development and evaluation.

The Health Policy Institute and the School of Public Health enjoy a close working relationship characterized by substantial joint research, service, and teaching activity.

International Students and Scholars Office

The International Students and Scholars Office (ISSO), 19 Deerfield Street, provides services to approximately 2,600 international students and scholars and 240 international faculty at the University, who represent 116 countries. The office informs students and staff about regulations concerning U.S. immigration, employment, taxes, and currency exchange.

Contact with ISSO is the last stage of the admissions process for international applicants. After an applicant is academically admitted, ISSO verifies

that the student has adequate proficiency in English and sufficient financial resources to cover the costs of studies in the United States. If these conditions are met, ISSO issues a Certificate of Visa Eligibility that allows the student to enter the United States with the appropriate visa.

To assist new students in adjusting to the University, Boston, and life in the United States, ISSO conducts special orientation programs every September and January. The Office also advises students on such matters as housing, cultural adjustment, and personal and financial problems. Other services include an International Hospitality Program, intercultural programs, monthly social events, and a week-long World Fair each spring. ISSO also publishes a newsletter, coordinates an emergency loan fund, and sponsors numerous activities to promote international awareness. Its basic mission is to act as a resource for the entire international population at Boston University.

King Center

Dedicated to the values and memory of alumnus Martin Luther King, Jr., the King Center, at 19 Deerfield Street, addresses the personal, educational, and career development needs of Boston University students. The Center is a centralized source of comprehensive professional services and programs for students seeking counseling, learning, career planning, or placement assistance. The Center also houses the Minority Affairs and Disability Services offices.

Off-Campus Housing Services

Off-Campus Services, located in the George Sherman Union, 775 Commonwealth Avenue, maintains listings of local, off-campus housing. New listings of privately owned apartments, houses, rooms, and people seeking roommates come in daily and generally cover the Allston/Brighton, Back Bay, Brookline, and Newton areas. Listings may be seen in the office during regular business hours. Also available is the *Off-Campus Housing Guide*, which is helpful in starting an apartment search.

The Office of Rental Property Management, 19 Deerfield Street, provides information on faculty, staff, and graduate student apartments.

Administration and Faculty



Assistant Professor Ann Aschengrau is currently researching environmental determinants of several types of cancer on Cape Cod.

Administration

John R. Silber, President of the University

Richard H. Egdahl, Director, Boston University Medical Center; Academic Vice President for Health Affairs, Boston University; Vice Chairman of the Board, University Hospital

Aram V. Chobanian, Dean, School of Medicine

Norman A. Scotch, Director, School of Public Health

Leonard H. Glantz, Associate Director, School of Public Health

John D. Grooman, Associate Director, School of Public Health

Dzidra J. Knecht, Assistant Director, Administration

Alison Primavera, Assistant Director, Academic Services

Barbara J. St. Onge, Director of Admissions

Rachel H. Paquette, Registrar

Anita C. King, Financial Coordinator

Janet P. Nickerson, Administrative Assistant to the Director

Faculty

Full-Time

Hortensia Amaro, Ph.D., M.A., University of California, Los Angeles. Assistant Professor of Public Health (Social and Behavioral Sciences). Assistant Professor of Pediatrics, Boston University School of Medicine. Research Staff, Department of Pediatrics, Boston City Hospital. Areas of interest: drug and alcohol use among women, adolescent pregnancy, reproductive attitudes and behavior, and ethnic and cultural differences in health behavior and health problems.

George J. Annas, J.D., M.P.H., Harvard University. Chief, Health Law Section, and Edward R. Utley Professor of Health Law. Areas of interest: patient rights, genetics, health care regulation, health law, human experimentation, science, and technology.

Ann Aschengrau, Sc.D., Harvard University. Assistant Professor of Public Health (Epidemiology and Biostatistics). Areas of interest: etiology of congenital anomalies, pregnancy loss, cancer, environmental epidemiology, and reproductive epidemiology.

M. Anita Barry, M.D., Columbia University College of Physicians and Surgeons, M.P.H., Boston University. Assistant Professor of Public Health (Epidemiology and Biostatistics). Assistant Professor of Medicine, Boston University School of Medicine, and Medical Director, Community Infectious Disease Epidemiology Program, City of Boston Department of Health and Hospitals. Areas of interest: infectious disease epidemiology and communicable disease control.

Alexa Beiser, Ph.D., Boston University; M.A., University of California, San Diego. Assistant Professor of Public Health (Epidemiology and Biostatistics). Area of interest: biostatistics.

William J. Bicknell, M.D., Duke University; M.P.H., University of California, Berkeley. Professor of Public Health (Health Services), and Director, Office of Special Projects, Boston University School of Public Health, School of Medicine, and Health Policy Institute. Areas of interest: the organization, delivery, and financing of health care; international health; health manpower and medical education; health and social services for the elderly; and public-private sector interactions.

Leslie I. Boden, Ph.D., Massachusetts Institute of Technology. Associate Professor of Public Health (Environmental Health). Areas of interest: occupational and environmental health, regulation, product liability, and workers' compensation.

Laurence G. Branch, Ph.D., Loyola University. Professor of Public Health (Health Services). Areas of interest: longitudinal studies; gerontology; organization, delivery, financing of health services; and functional status.

Suzanne B. Cashman, Sc.D., Harvard University; M.S., Cornell University. Assistant Professor of Public Health (Health Services), and Associate Director for Research, Office of Special Projects. Areas of interest: health manpower, organization and delivery of services, rural health, and health economics.

Theodore Colton, Sc.D., Johns Hopkins University; M.S., University of North Carolina. Chief, Epidemiology and Biostatistics Section, and Professor of Public Health (Epidemiology and Biostatistics). Areas of interest: biomedical research design, cancer epidemiology, and clinical trials.

Stephen C. Crane, Ph.D., M.P.H., University of Michigan. Assistant Professor of Public Health (Health Services). Assistant Academic Vice President for Health Affairs, Boston University; Director, Educational Programs (Pew Health Policy Doctoral Program), Boston University Health Policy Institute. Areas of interest: state health politics, health interest groups, manpower policy and utilization management.

L. Adrienne Cupples, Ph.D., M.A., Boston University. Associate Professor of Public Health (Epidemiology and Biostatistics). Areas of interest: biostatistics and survival analysis.

Robert R. Ebert, Ph.D., M.S., University of Wisconsin, Madison. Assistant Professor of Public Health (Social and Behavioral Sciences). Areas of interest: psychology and public health; stress, coping, and social support; and families of handicapped children.

Patricia L. Foster, Ph.D., Cambridge University; M.A., Harvard University. Assistant Professor of Public Health (Environmental Health). Areas of interest: mechanisms of bacterial mutagenesis, environmental microbiology, and the effects of environmental chemicals on the DNA of mammalian cells.

Leonard H. Glantz, J.D., Boston University. Associate Director, School of Public Health, and Professor of Public Health (Health Law). Areas of interest: patient rights, rights of children, legal

aspects of health care regulation, mental health law, and the legal aspects of AIDS.

Richard Goldstein, Ph.D., University of Pennsylvania. Professor of Public Health (Environmental Health). Director, Laboratories for Molecular Genetics, Molecular Epidemiology, and Electron Microscopy at the Maxwell Finland Laboratory for Infectious Diseases. Areas of interest: molecular biology, regulation of gene expression in plasmids and bacterial viruses, 'virulence factor' genes of bacterial pathogens, molecular epidemiology, construction and use of cloning vectors, and high resolution electron microscopy.

John D. Groopman, Ph.D., Massachusetts Institute of Technology. Associate Director, School of Public Health, Associate Professor of Public Health (Environmental Health) and Chairman of the Admissions Committee. Areas of interest: environmental health, chemical carcinogenesis, and biochemical/molecular epidemiology.

Alice J. Hausman, Ph.D., M.A., State University of New York, Binghamton; M.P.H., Harvard School of Public Health. Assistant Professor of Public Health (Social and Behavioral Sciences). Areas of interest: community-based health promotion projects: planning, implementation, evaluation, adolescent health, and intentional injuries.

Timothy C. Heeren, Ph.D., Boston University. Associate Professor of Public Health (Epidemiology and Biostatistics). Areas of interest: biostatistics and analysis of scaled data.

Ralph W. Hingson, Sc.D., Johns Hopkins University; M.P.H., University of Pittsburgh. Chief, Social and Behavioral Sciences Section and Professor of Public Health (Social and Behavioral Sciences). Areas of interest: patient-physician behavior, substance use and abuse, patient compliance, traffic safety, AIDS and adolescents.

Don C. Holloway, Ph.D., M.S., University of Wisconsin, Madison. Associate Professor of Public Health (Health Services). Director, Health Systems Engineering, Boston University Health Policy Institute. Areas of interest: incentive systems for improved hospital productivity, application of quantitative methods to health services delivery, and health services utilization management systems.

Jonathan Howland, Ph.D., M.P.H., Boston University; M.P.A., Northeastern University. Assistant Professor of Public Health (Social and Behavioral Sciences). Areas of interest: epidemiology of health services utilization, injury epidemiology, and public health history.

David W. Kaufman, Sc.D., M.Sc., Harvard University. Associate Professor of Public Health (Epidemiology and Biostatistics). Assistant Director, Slone Epidemiology Unit, Boston University School of Public Health. Area of interest: chronic disease epidemiology.

Herbert L. Kayne, Ph.D., M.S., University of Illinois. Associate Professor of Public Health (Epidemiology and Biostatistics). Associate Professor of Physiology and Biometrics, Boston University School of Medicine. Areas of interest: experimental design and data analysis.

Howard K. Koh, M.D., F.A.C.P., Yale University. Assistant Professor of Public Health (Epidemiology and Biostatistics). Assistant Professor of Dermatology and Medicine, Boston University School of Medicine. Areas of interest: cancer epidemiology and strategies for the early detection and prevention of cancer, particularly as it relates to malignant melanoma.

Samuel M. Lesko, M.D., Thomas Jefferson University; M.P.H., Yale University. Assistant Research Professor of Public Health (Epidemiology and Biostatistics). Areas of interest: drug epidemiology in premature infants and chronic disease epidemiology.

Suzette M. Levenson, M.P.H., M.Ed., Boston University. Assistant Research Professor of Public Health (Social and Behavioral Sciences). Assistant Director of Research and Data Coordination, Boston University School of Public Health. Areas of interest: traffic safety, alcohol and drug abuse, and maternal health habits during pregnancy.

Sol Levine, Ph.D., M.A., New York University. Professor of Public Health (Social and Behavioral Sciences). University Professor and Professor of Sociology, Boston University. Areas of interest: health organizations and social policy, social stress, social epidemiology, and quality of life. On leave 1988/89.

Wendy K. Mariner, J.D., Columbia University School of Law; LL.M., New York University School of Law; M.P.H., Harvard School of Public Health. Associate Professor of Public Health (Health Law). Associate Professor of Socio-Medical Sciences and Community Medicine, Boston University School of Medicine. Areas of interest: health care regulation, access to health care, drug and vaccine development and distribution, and product liability.

Robert J. Master, M.D., New York Medical College. Chief, Health Services Section, and Assistant Professor of Public Health (Health Services).

Daniel M. Merrigan, Ed.D., M.P.H., Boston University; M.Div., Th.M., Weston School of Theology. Assistant Professor of Public Health (Social and Behavioral Sciences). Areas of interest: health promotion and disease prevention, health education, substance use and abuse, evaluation research, spirituality and well-being, and health policy.

Allan R. Meyers, Ph.D., M.A., Cornell University. Associate Professor of Public Health (Health Services). Areas of interest: social gerontology, disability, long-term care, alcohol, and international health.

Allen A. Mitchell, M.D., Tufts University. Associate Professor of Public Health (Epidemiology and Biostatistics). Associate Director, Slone Epidemiology Unit, Boston University School of Public Health. Areas of interest: drug-induced birth defects and epidemiology of adverse drug reactions in children.

David M. Ozonoff, M.D., Cornell University; M.P.H., Johns Hopkins University. Chief, Environmental Health Section and Professor of Public Health (Environmental Health). Areas of interest: health effects of improperly managed toxic waste disposal, environmental carcinogens, history of public health, hazards of asbestos exposure, and risks and benefits of recombinant DNA technology.

Marianne N. Prout, M.D., Cornell University; M.P.H., Harvard University. Associate Professor of Public Health (Epidemiology and Biostatistics). Areas of interest: cancer prevention: social policy and societal attitudes.

Anthony Robbins, M.D., Yale University; M.P.A., Harvard University. Professor of Public Health (Environmental Health). Areas of interest: public health policy and practice, including recent work on the development of new vaccines.

Lynda M. Rose, B.A., Emmanuel College. Research Instructor in Public Health (Epidemiology and Biostatistics). Areas of interest: biostatistics and computer science.

Lynn Rosenberg, Sc.D., M.S., Harvard University; M.S., Boston University. Associate Professor of Public Health (Epidemiology and Biostatistics). Assistant Director, Slone Epidemiology Unit, Boston University School of Public Health. Areas of interest: drug-induction of disease, cardiovascular disease, and cancer.

Robert W. Ryder, M.D., Columbia University; M.Sc., London School of Hygiene and Tropical Medicine. Associate Professor of Public Health (Epidemiology and Biostatistics). Areas of interest: infectious disease epidemiology, diarrheal disease, liver cancer prevention, and AIDS. On leave 1988/89.

Alan Sager, Ph.D., Massachusetts Institute of Technology. Associate Professor of Public Health (Health Services). Areas of interest: equal access to effective acute and ambulatory care, hospital finance and configuration, and program design for long-term care.

Norman A. Scotch, Ph.D., Northwestern University; S.M.Hyg., Harvard University. Director, School of Public Health and Professor of Public Health (Social and Behavioral Sciences). Associate Dean (Public Health) and Chairman of Socio-Medical Sciences and Community Medicine, Boston University School of Medicine. Adjunct Professor of Anthropology, Boston Uni-

versity. Areas of interest: epidemiology of chronic disease, social stress, the dying patient, alcohol use and abuse, and applied genetics.

Samuel Shapiro, M.B.BCh., University of Witwatersrand Medical School, South Africa; M.R.C.P., London; F.R.C.P., Edinburgh. Research Professor of Public Health (Epidemiology and Biostatistics). Director, Slone Epidemiology Unit, Boston University School of Public Health. Area of interest: epidemiology.

Lee Strunin, Ph.D., Brandeis University. Assistant Professor of Public Health (Social and Behavioral Sciences). Areas of interest: sociocultural issues in health and health care, physician-patient interaction, adolescent sexuality, and beliefs, attitudes, and behaviors of adolescents and adults concerning AIDS.

Diana Chapman Walsh, Ph.D., M.S., Boston University. Professor of Public Health (Social and Behavioral Sciences). Associate Director, Boston University Health Policy Institute. Areas of interest: industry and health care, occupational health, health promotion, fertility-related health services, and alcoholism.

Part-Time

Ayorinde A. Ajayi, M.B., B.S., University of Ibadan Medical School, Nigeria; M.P.H., Boston University. Adjunct Assistant Professor of Public Health (Health Services). Regional Representative, The Pathfinder Fund, Nairobi, Kenya.

Carolyn M. Aldwin, Ph.D., University of California, San Francisco. Assistant Professor of Public Health (Social and Behavioral Sciences). Research Psychologist, Veterans Administration Normative Aging Study.

Joel J. Alpert, M.D., Harvard Medical School. Professor of Public Health (Health Law). Professor and Chairman, Department of Pediatrics; Professor of Socio-Medical Sciences and Community Medicine, Boston University School of Medicine. Pediatrician-in-Chief, Boston City Hospital.

Nicolas Argy, M.D., Boston University; J.D., Boston College. Adjunct Assistant Professor of Public Health (Health Law). Clinical Instructor in Medicine, Boston University School of Medicine. Resident in Radiology, City of Boston Department of Health and Hospitals and University Hospital.

Arlene S. Ash, Ph.D., University of Illinois; M.S., Washington University. Adjunct Assistant Research Professor of Public Health (Epidemiology and Biostatistics). Assistant Professor of Mathematics in Medicine, Boston University School of Medicine.

Nicholas A. Ashford, Ph.D., J.D., University of Chicago. Adjunct Associate Professor of Public Health (Environmental Health). Associate Professor of Technology and Policy, Massachusetts Institute of Technology.

Alan L. Balsam, Ph.D., Tufts University; M.P.H., Boston University; M.S., Framingham State College. Adjunct Instructor in Public Health (Environmental Health). Director, Food and Nutrition Services, Somerville/Cambridge Elder Services.

Michael S. Baram, LL.B., Columbia University. Professor of Public Health (Health Law). Professor of Law and Director, Center for Law and Technology, Boston University School of Law.

Louis P. Bertonazzi, M.A., Suffolk University. Adjunct Assistant Professor of Public Health (Health Services). Adjunct Assistant Professor of Socio-Medical Sciences and Community Medicine, Boston University School of Medicine. State Senator.

Ryan E. Bliss, M.A., University of Minnesota. Instructor in Public Health (Epidemiology and Biostatistics). Health Science Specialist, Veterans Administration Normative Aging Study.

Gary A. Borkan, Ph.D., M.A., University of Michigan. Adjunct Assistant Professor of Public Health (Environmental Health). Research Anthropologist, Veterans Administration Normative Aging Study.

Raymond Bossé, Ph.D., Boston University; M.A., Fordham University. Adjunct Professor of Public Health (Social and Behav-

ioral Sciences). Associate Director and Research Sociologist, Veterans Administration Normative Aging Study.

Glen R. Bouchard, Ed.M., S.M., Harvard University. Instructor in Public Health (Epidemiology and Biostatistics). Epidemiologist, Veterans Administration Normative Aging Study.

Nancy L. Bowles, Ph.D., M.A., New York University. Assistant Professor of Public Health (Social and Behavioral Sciences). Research Psychologist, Veterans Administration Normative Aging Study.

Julie E. Buring, D.Sc., Harvard University; M.S., University of Washington. Adjunct Assistant Professor of Public Health (Epidemiology and Biostatistics). Assistant Professor, Department of Preventive Medicine and Clinical Epidemiology, Harvard Medical School.

Howard H. Chauncey, D.M.D., Tufts University; Ph.D., M.A., Boston University. Adjunct Professor of Public Health (Health Services). Associate Chief of Staff/Research and Development, Veterans Administration, Outpatient Clinic, Boston.

George A. Clark, Ph.D., M.A., University of Massachusetts. Assistant Professor of Public Health (Health Services). Research Anthropologist, Veterans Administration Normative Aging Study.

Roberta N. Clarke, D.B.A., M.B.A., Harvard University. Assistant Professor of Public Health (Health Services). Associate Professor of Marketing, Boston University School of Management.

Donald E. Craven, M.D., Albany Medical College. Associate Professor of Public Health (Epidemiology and Biostatistics). Associate Professor of Medicine, Boston University School of Medicine; Associate Visiting Physician, City of Boston Department of Health and Hospitals.

Arthur J. Culbert, Jr., Ph.D., M.S., Boston University. Associate Professor of Public Health (Social and Behavioral Sciences). Associate Chairman and Associate Professor of Socio-Medical Sciences and Community Medicine; Associate Dean for Educational Programs and Director, Early Medical School Selection Program, Boston University School of Medicine.

Ralph B. D'Agostino, Ph.D., Harvard University; A.M., Boston University. Professor of Public Health (Epidemiology and Biostatistics). Professor of Mathematics and Chairman, Department of Mathematics, Boston University College of Liberal Arts and Lecturer in Law, Boston University School of Law.

William M. Dann, M.P.A., Cornell University. Adjunct Assistant Professor of Public Health (Health Services). President, Professional Growth Systems, Inc.

Lorraine O. deLabry, M.A., University of Hartford. Instructor in Public Health (Epidemiology and Biostatistics). Research Associate, Veterans Administration Normative Aging Study.

Daniel Deykin, M.D., Harvard Medical School. Professor of Public Health (Epidemiology and Biostatistics). Professor of Medicine, Boston University School of Medicine and Chief, Cooperative Studies Program, Veterans Administration.

Elaine R. Dibbs, M.A., Columbia University. Instructor in Public Health (Epidemiology and Biostatistics). Health Science Specialist, Veterans Administration Normative Aging Study.

James V. Divver, Ed.M., Boston University. Adjunct Assistant Professor of Public Health (Health Services). Assistant Commissioner, Health Care Systems, Massachusetts Department of Public Health.

Karin A. Dumbaugh, D.Sc., M.S., Harvard University; M.A., Case-Western Reserve. Adjunct Associate Professor of Public Health (Health Services). Consultant to the Health Care Industry.

Stewart Duncan, Ph.D., Boston University. Professor of Public Health (Health Services, and Environmental Health). Professor of Biology, Boston University College of Liberal Arts.

Richard H. Egdahl, M.D., Harvard Medical School; Ph.D., University of Minnesota. Professor of Public Health (Health Services). Director, Boston University Medical Center; Vice

Chairman of the Board, University Hospital; Academic Vice President for Health Affairs, Boston University; Professor of Surgery, Boston University School of Medicine; Director, Boston University Health Policy Institute.

David J. Ekerdt, Ph.D., Boston University. Associate Professor of Public Health (Social and Behavioral Sciences). Research Sociologist, Veterans Administration Normative Aging Study.

Victor N. Evdokimoff, Sc.M., Johns Hopkins University; Certified Health Physicist. Adjunct Assistant Professor of Public Health (Environmental Health). Radiation Protection Officer, Boston University Medical Center.

Lindsay A. Farrer, Ph.D., Indiana University. Assistant Professor of Public Health (Epidemiology and Biostatistics). Assistant Professor of Neurology, Boston University School of Medicine.

Robert G. Feldman, M.D., University of Cincinnati. Professor of Public Health (Environmental Health). Chairman and Professor, Department of Neurology and Professor of Pharmacology, Boston University School of Medicine.

David T. Felson, M.D., Johns Hopkins University; M.P.H., Boston University. Assistant Professor of Public Health (Epidemiology and Biostatistics). Assistant Professor of Medicine, Boston University School of Medicine.

Marie C. Felton, M.D., University of California, San Francisco; M.P.H., Harvard University. Adjunct Assistant Professor of Public Health (Health Services). Program Head, Independent Living Primary Care Program; Internist, The Urban Medical Group, Inc.

Neville Rex Edwards Fendall, M.B., B.S., University College and Hospital, London; D.T.M., University of Edinburgh; M.D., D.P.H., London School of Hygiene and Tropical Medicine. Visiting Professor of Public Health (Health Services). Professor Emeritus, Liverpool School of Tropical Medicine, United Kingdom.

Terry S. Field, M.S., Indiana University; M.P.H., Boston University. Instructor in Public Health (Health Services). Instructor of Socio-Medical Sciences and Community Medicine and Director of Special Educational Projects, Boston University School of Medicine.

Deborah A. Frank, M.D., Harvard Medical School. Assistant Professor of Public Health (Social and Behavioral Sciences). Assistant Professor of Pediatrics, Boston University School of Medicine. Pediatrician, Department of Pediatrics, Boston City Hospital.

Robert H. Friedman, M.D., Stanford University. Associate Professor of Public Health (Epidemiology and Biostatistics). Associate Professor of Medicine and Assistant Research Professor of Neurology, Boston University School of Medicine.

Hugh S. Fulmer, M.D., State University of New York, Syracuse; M.P.H., Harvard University. Adjunct Professor of Public Health (Health Services). Clinical Professor of Medicine and Adjunct Professor of Socio-Medical Sciences and Community Medicine, Boston University School of Medicine. Medical Director, Ambulatory and Community Services, Carney Hospital.

Janina R. Galler, M.D., Albert Einstein College of Medicine. Professor of Public Health (Epidemiology and Biostatistics). Professor of Psychiatry; Director, Center for Behavioral Development and Mental Retardation, Boston University School of Medicine.

Arthur J. Garvey, Ph.D., M.Ed., Boston College. Assistant Professor of Public Health (Epidemiology and Biostatistics). Research Statistician, Veterans Administration Normative Aging Study.

Donald R. Giller, M.S., Boston University. Adjunct Assistant Professor of Public Health (Health Services). Director, Marketing and Public Affairs, Boston University Medical Center.

Jerome Glickman, Ed.D., Boston University. Assistant Professor of Public Health (Health Services). Assistant Professor of Socio-Medical Sciences and Community Medicine; Director, Educational Media Support Center, Boston University School of Medicine; Manager, Television Systems, University Hospital.

Robert J. Glynn, Sc.D., S.M., Harvard University; Ph.D., M.A., Brandeis University; M.A., Boston College. Adjunct Assistant Professor of Public Health (Epidemiology and Biostatistics). Statistician, Epidemiology Unit, Massachusetts Eye and Ear Infirmary.

Willis B. Goldbeck, Adjunct Assistant Professor of Public Health (Health Services). President, Washington Business Group on Health.

Michael A. Grodin, M.D., Albert Einstein College of Medicine. Associate Professor of Public Health (Social and Behavioral Sciences). Associate Professor of Pediatrics and Associate Professor of Socio-Medical Sciences and Community Medicine, Boston University School of Medicine; Director of Program in Medical Ethics, City of Boston Department of Health and Hospitals; Medical Ethicist/Pediatrician, Department of Pediatrics, Boston City Hospital.

David M. Gute, Ph.D., M.P.H., Yale University. Adjunct Assistant Professor of Public Health (Social and Behavioral Sciences). Advisor on Science, Massachusetts Department of Public Health.

Warren T. Hansen, M.B.A., George Washington University. Adjunct Assistant Professor of Public Health (Health Services). Deputy Commissioner, City of Boston Department of Health and Hospitals.

Stuart C. Hartz, Sc.D., Harvard University; M.S., Columbia University. Adjunct Associate Professor of Public Health (Epidemiology and Biostatistics). Chief, Nutritional Epidemiology Program, Tufts University.

Jerilyn West Heinold, M.P.H., Boston University. Instructor in Public Health (Epidemiology and Biostatistics). Epidemiologist, Veterans Administration Normative Aging Study.

Charles H. Hennekens, M.D., Cornell University; Dr.P.H., M.P.H., M.S., Harvard University. Adjunct Associate Professor of Public Health (Epidemiology and Biostatistics). Associate Professor of Medicine and Preventive Medicine and Clinical Epidemiology, Harvard Medical School, Brigham and Women's Hospital.

John A. Hermos, M.D., Boston University. Associate Professor of Public Health (Social and Behavioral Sciences). Associate Professor of Medicine, Boston University School of Medicine. Staff Physician in Medicine and Chief, Section in Addictive Disorders, Veterans Administration Medical Center.

Imtiaz T. Kamal, M.A., Columbia University. Adjunct Assistant Professor of Public Health (Health Services). Country Representative, Pathfinder Fund.

William B. Kannel, M.D., University of Georgia; M.P.H., Harvard University. Professor of Public Health (Epidemiology and Biostatistics). Chief of Preventive Medicine and Epidemiology and Professor of Medicine, Department of Medicine, Boston University School of Medicine.

Jack Kasten, J.D., Boston College; M.P.H., University of Michigan. Adjunct Professor of Public Health (Health Services). Attorney.

Barbara F. Katz, J.D., Boston University. Adjunct Assistant Professor of Public Health (Health Law). General Counsel, Massachusetts Eye and Ear Infirmary.

L. William Katz, D.B.A., George Washington University; M.B.A., Dartmouth College. Adjunct Assistant Professor of Public Health (Health Services). Senior staff, Arthur D. Little, Inc.

William N. Kavesh, M.D., Albert Einstein College of Medicine; M.P.H., Harvard University. Adjunct Assistant Professor of Public Health (Health Services). Instructor in Medicine, Boston University School of Medicine; Acting Medical Director, Dimock Community Health Center.

Lindsey V. Kayman, S.M., Harvard University; Certified Industrial Hygienist. Adjunct Assistant Professor of Public Health (Environmental Health). Safety and Health Manager, Children's Hospital.

Lewis E. Kazis, Sc.D., Sc.M., Harvard University. Assistant Professor of *Public Health* (Epidemiology and Biostatistics). Assistant Research Professor of Medicine and Adjunct Assistant Professor of Socio-Medical Sciences and *Community Medicine*, Boston University School of Medicine.

Donald C. Kern, M.D., Tufts University; M.P.H., Boston University. Assistant Professor of Public Health (Epidemiology and Biostatistics). Assistant Professor of Medicine, Boston University School of Medicine; Associate Director, Boston Geriatric Research, Education, and Clinical Center, Veterans Administration.

Jon M. Kingsdale, Ph.D., University of Michigan. Adjunct Assistant Professor of Public Health (Health Services). Vice President for Planning, Tufts Associated Health Plan.

George A. Lamb, M.D., State University of New York, Upstate. Professor of Public Health (Epidemiology and Biostatistics). Professor of Pediatrics, Boston University School of Medicine; Director, Community Health Services, City of Boston Department of Health and Hospitals.

Joel H. Lamstein, S.M., Massachusetts Institute of Technology. Adjunct Assistant Professor of Public Health (Health Services). President, John Snow, Inc.

Slobodan Lang, M.D., University of Zagreb Medical School; D.Sc., M.P.H., A. Stampar School of Public Health, Zagreb, Yugoslavia. Adjunct Associate Professor of Public Health (Health Services). Associate Professor, Department of Social Medicine and Primary Care, A. Stampar School of Public Health.

Seymour Lederberg, Ph.D., University of Illinois. Adjunct Professor of Public Health (Health Law). Professor of Biology and Associate Dean for Graduate Studies in Biology and Medicine, Brown University.

Ruth I. Lederman, M.P.H., University of Michigan. Research Instructor in Public Health (Epidemiology and Biostatistics). Area of interest: epidemiology.

Michael R. Levenson, Ph.D., M.A., University of California, Irvine. Instructor in Public Health (Social and Behavioral Sciences). Research Health Science Specialist, Veterans Administration Normative Aging Study.

Robert A. Lew, Ph.D., M.S., University of Michigan. Adjunct Associate Professor of Public Health (Epidemiology and Biostatistics). Associate Professor of Biostatistics, Department of Pharmacology, University of Massachusetts Medical Center.

Daniel F. Liberman, Ph.D., University of Rochester; M.S., Washington University. Adjunct Assistant Professor of Public Health (Environmental Health). Biohazard Assessment Officer, Environmental Medical Service, Massachusetts Institute of Technology.

Joseph S. LoCastro, Ph.D., University of Maryland. Assistant Professor of Public Health (Social and Behavioral Sciences). Assistant Professor of Medicine, Boston University School of Medicine; Clinical Psychologist, Veterans Administration Medical Center.

Richard M. Lockwood, Ph.D., Massachusetts Institute of Technology. Adjunct Instructor in Public Health (Health Services). Technical Director, Lockwood Nutrition Service, Incorporated.

William I. Malamud, M.D., Boston University. Professor of Public Health (Health Services). Professor of Psychiatry, Boston University School of Medicine.

Thomas W. Mangione, Ph.D., M.A., University of Michigan. Adjunct Associate Professor of Public Health (Epidemiology and Biostatistics, and Social and Behavioral Sciences). Senior Research Fellow, Center for Survey Research.

Lawrence J. Markson, M.D., M.P.H., Boston University. Instructor in Public Health (Health Law). Research Coordinator, Geriatrics Section, Boston University Medical Center.

Ann Marshak-Rothstein, Ph.D., University of Pennsylvania. Associate Professor of Public Health (Environmental Health). Associate Professor of Microbiology and Director, Hybridoma

Laboratory, Hubert H. Humphrey Cancer Research Center, Boston University School of Medicine.

Robert J. McCunney, M.D., Thomas Jefferson University Medical School; M.P.H., Harvard University; M.S., University of Minnesota. Adjunct Assistant Professor of Public Health (Environmental Health). Corporate Medical Director, Cabot Corporation; Medical Director, Goddard Occupational Health Services.

Frances H. Miller, J.D., Boston University. Professor of Public Health (Health Law). Professor of Law, Boston University School of Law.

Marc D. Mitchell, M.D., Boston University. Adjunct Assistant Professor of Public Health (Health Services). Associate, Management Sciences for Health.

Susan D. Monserud, AIA; M.Arch., North Carolina State University. Adjunct Assistant Professor of Public Health (Health Services). Health Facility Planning and Programming Consultant, Roxbury, CT.

Daniel D. Moriarty, M.B.A., Clark University. Adjunct Instructor in Public Health (Health Services). Vice President, Information Systems Group, John Snow, Inc.

Mark A. Moskowitz, M.D., Albert Einstein College of Medicine. Associate Professor of Public Health (Epidemiology and Biostatistics, and Health Services). Associate Professor of Medicine, Boston University School of Medicine.

Freya Olafson, M.P.H., University of California, Berkeley. Adjunct Assistant Professor of Public Health (Health Services). Consultant.

A. Mead Over, Jr., Ph.D., M.S., M.A., University of Wisconsin. Adjunct Associate Professor of Public Health (Health Services). Economist, Population and Human Resources Department, The World Bank.

Victoria V. Ozonoff, Ph.D., Boston University. Adjunct Assistant Professor of Public Health (Health Services). Director, Health Resources Statistics, Massachusetts Department of Public Health.

William B. Patterson, M.D., University of Vermont. Assistant Professor of Public Health (Environmental Health). Assistant Professor of Socio-Medical Sciences and Community Medicine and Assistant Professor of Medicine, Boston University School of Medicine; Director, Occupational Health Services, Choate-Symmes Health Services, Inc.

Philip F. Paul, B.S., University of Southern California. Adjunct Assistant Professor of Public Health (Health Services). President, Philip F. Paul Management Consultants, Inc.

Lewis W. Pollack, M.S.P.H., University of North Carolina; M.Ed., Boston University. Adjunct Professor of Public Health (Health Services). Commissioner, City of Boston Department of Health and Hospitals.

Praema Raghavan-Gilbert, M.P.H., Boston University. Adjunct Assistant Professor of Public Health (Health Services). Director of Medical Services, Pathfinder Fund.

Peter Reich, M.P.H., Boston University. Adjunct Instructor in Public Health (Health Services). Director, Public Resource Strategies, Inc.

Joseph D. Restuccia, Dr.P.H., M.P.H., University of California, Berkeley. Associate Professor of Public Health (Health Services). Associate Professor of Health Care and Operation Management, Boston University School of Management; Assistant Research Professor of Medicine, Boston University School of Medicine.

Susan B. Rifkin, Ph.D., University of Hong Kong; M.A., Columbia University. Adjunct Associate Professor of Public Health (Health Services). Honorary Senior Lecturer, Department of International Community Health, Liverpool School of Tropical Medicine, United Kingdom.

Alberto Rizo, M.D., Universidad Nacional de Colombia, Bogota; M.P.H., Royal Dutch Tropical Institute, Amsterdam. Adjunct Associate Professor of Public Health (Health Services).

Regional Representative for Latin America, The Pathfinder Fund, Bogotá, Colombia.

Adrienne E. Rogers, M.D., Harvard Medical School. Professor of Public Health (Environmental Health). Professor of Pathology and Associate Chairman, Department of Pathology, Boston University School of Medicine.

William R. Rollins, J.D., LL.B., Boston College Law School. Adjunct Assistant Professor of Public Health (Health Law). Partner—Law Firm, Rollins and Moschella, Boston.

Alan S. Rosenfeld, Ph.D., University of Massachusetts; M.A., Boston College. Adjunct Associate Professor of Public Health (Health Services). Director, Regional Operations, University Hospital.

Hugues J. P. Ryser, M.D., Dr. Med., University of Berne, Switzerland. Professor of Public Health (Environmental Health), Professor of Pathology, Pharmacology, Biochemistry, and Socio-Medical Sciences and Community Medicine, Boston University School of Medicine.

Does Samporno, M.D., University of Indonesia; M.P.H., University of Hawaii. Adjunct Professor of Public Health (Health Services). Director, Project Management Unit, Ministry of Education and Culture, Jakarta, Indonesia.

Philip E. Sartwell, M.D., Boston University; M.P.H., Harvard University. Adjunct Professor of Public Health (Epidemiology and Biostatistics). Professor Emeritus, Department of Epidemiology, Johns Hopkins University.

Donald J. Scherl, M.D., Harvard Medical School. Adjunct Professor of Public Health (Health Services). President and Professor of Psychiatry, State University of New York, Health Science Center at Brooklyn.

George R. Seage III, M.P.H., Boston University. Lecturer in Public Health (Epidemiology and Biostatistics). AIDS Epidemiologist, Community Infectious Disease Epidemiology Program, Boston Department of Health and Hospitals.

Ascher J. Segall, M.D., University of Lausanne, Switzerland; Dr.P.H. and M.P.H., Harvard University. Adjunct Professor of Public Health (Epidemiology and Biostatistics). Co-director, Center for Educational Development in Health, Boston University Health Policy Institute. On leave 1988/89.

Rashid A. Shaikh, Ph.D., Massachusetts Institute of Technology; M.Sc., Indian Institute of Technology, Kampur, India. Adjunct Assistant Professor of Public Health (Environmental Health). Director, Scientific Review and Evaluation, Health Effects Institute.

Francis M. M. Shattock, M.B., B.S., London; M.R.C.G.P., England; D.T.P.H., London; M.P.H., University of California, Berkeley. Visiting Associate Professor of Public Health (Health Services). Professor and Head, Department of Community Health, University of Zambia School of Medicine.

David W. Sparrow, D.Sc., Boston University; M.S., University of Massachusetts. Assistant Professor of Public Health (Epidemiology and Biostatistics). Epidemiologist, Veterans Administration Normative Aging Study.

Avron Spiro, III, Ph.D., M.S., Pennsylvania State University. Assistant Professor of Public Health (Epidemiology and Biostatistics). Senior Research Associate, Education Development Center; Health Research Scientist, Veterans Administration Normative Aging Study.

Linda Jo Stern, M.P.H., Boston University. Adjunct Instructor in Public Health (Health Services). Assistant to the Director and Manager of Special Projects, Department of Social Work Services, New England Medical Center.

Joseph Stokes III, M.D., Harvard Medical School. Professor of Public Health (Epidemiology and Biostatistics). Professor of Medicine, Section of Preventive Medicine and Epidemiology, Evans Department of Clinical Research, Boston University School of Medicine.

Saraswati Swain, M.D., Bihar University; D.P.H., D.M.C.W., Calcutta University; M.B.B.S., Utkal University. Adjunct Professor of Public Health (Health Services). Professor and Head, Department of Social and Preventive Medicine, SCB Medical College, Cuttack Orissa, India.

Judith P. Swazey, Ph.D., Harvard University. Adjunct Professor of Public Health (Social and Behavioral Sciences). Adjunct Professor of Socio-Medical Sciences and Community Medicine, Boston University School of Medicine. President, The Acadia Institute, Bar Harbor, Maine.

Donald S. Taylor, M.S., University of Connecticut. Instructor in Public Health (Epidemiology and Biostatistics). Health Science Specialist, Veterans Administration Normative Aging Study.

Ann M. Thornburg, B.B.A., University of Wisconsin. Adjunct Assistant Professor of Public Health (Health Services). Audit Partner, Coopers & Lybrand.

Ann K. Tousignant, M.P.H., Yale University. Adjunct Assistant Professor of Public Health (Health Services). Vice President, Voluntary Hospitals of America, Waltham, Massachusetts.

Patricia H. Travers, M.S., R.N., Boston University; M.Sc., Harvard University. Instructor in Public Health (Environmental Health). Director, Occupational Health Nursing Program, Harvard Educational Resource Center, Harvard School of Public Health.

Elaine Shepard Ullian, M.P.H., University of Michigan. Adjunct Assistant Professor of Public Health (Health Services). President, Faulkner Hospital.

Jeanette M. Valentine, Ph.D., Cornell University. Assistant Professor of Public Health (Epidemiology and Biostatistics). Assistant Professor of Pediatrics, Boston University School of Medicine; Director of Health Statistics and Research, Division of Community Health, City of Boston Department of Health and Hospitals.

Hannelore F. Vanderschmidt, Ph.D., Boston College; Ed.M., Harvard University. Adjunct Associate Professor of Public Health (Health Services). Associate Professor of Education, Boston University School of Education; Co-Director, Center for Educational Development in Health, Boston University Health Policy Institute.

Peter W. Van Etten, M.B.A., Harvard University. Adjunct Assistant Professor of Public Health (Health Services). Chief Financial Officer, New England Medical Center.

Barbara H. Vinick, Ph.D., Boston University. Assistant Professor of Public Health (Social and Behavioral Sciences). Research Sociologist, Veterans Administration Normative Aging Study.

Pantel S. Vokonas, M.D., Ohio State University. Associate Professor of Public Health (Epidemiology and Biostatistics). Associate Professor of Medicine, Boston University School of Medicine; Director, Veterans Administration Normative Aging Study.

Bailus Walker, Jr., Ph.D., University of Minnesota; M.P.H., University of Michigan. Adjunct Professor of Public Health (Environmental Health). Professor of Environmental Medicine and Chair, Department of Environmental Health and Toxicology, State University of New York Graduate School of Public Health Sciences and School of Public Health.

Carl N. Wathne, M.S., Columbia University. Adjunct Assistant Professor of Public Health (Health Services). President, Board of Trustees and Chief Executive Officer, Leominster Health System, Inc.

Michael Weitzman, M.D., State University of New York, Upstate. Associate Professor of Public Health (Health Services). Associate Professor of Pediatrics, Boston University School of Medicine; Medical Director, Parent and Child Health Services, City of Boston Department of Health and Hospitals.

Dorothy C. Wertz, Ph.D., A.M., Harvard University. Research Professor of Public Health (Health Services).

Philip A. Wolf, M.D., State University of New York, Syracuse. Professor of Public Health (Epidemiology and Biostatistics). Professor of Neurology and Research Professor of Medicine (Preventive Medicine and Epidemiology), Boston University School of Medicine.

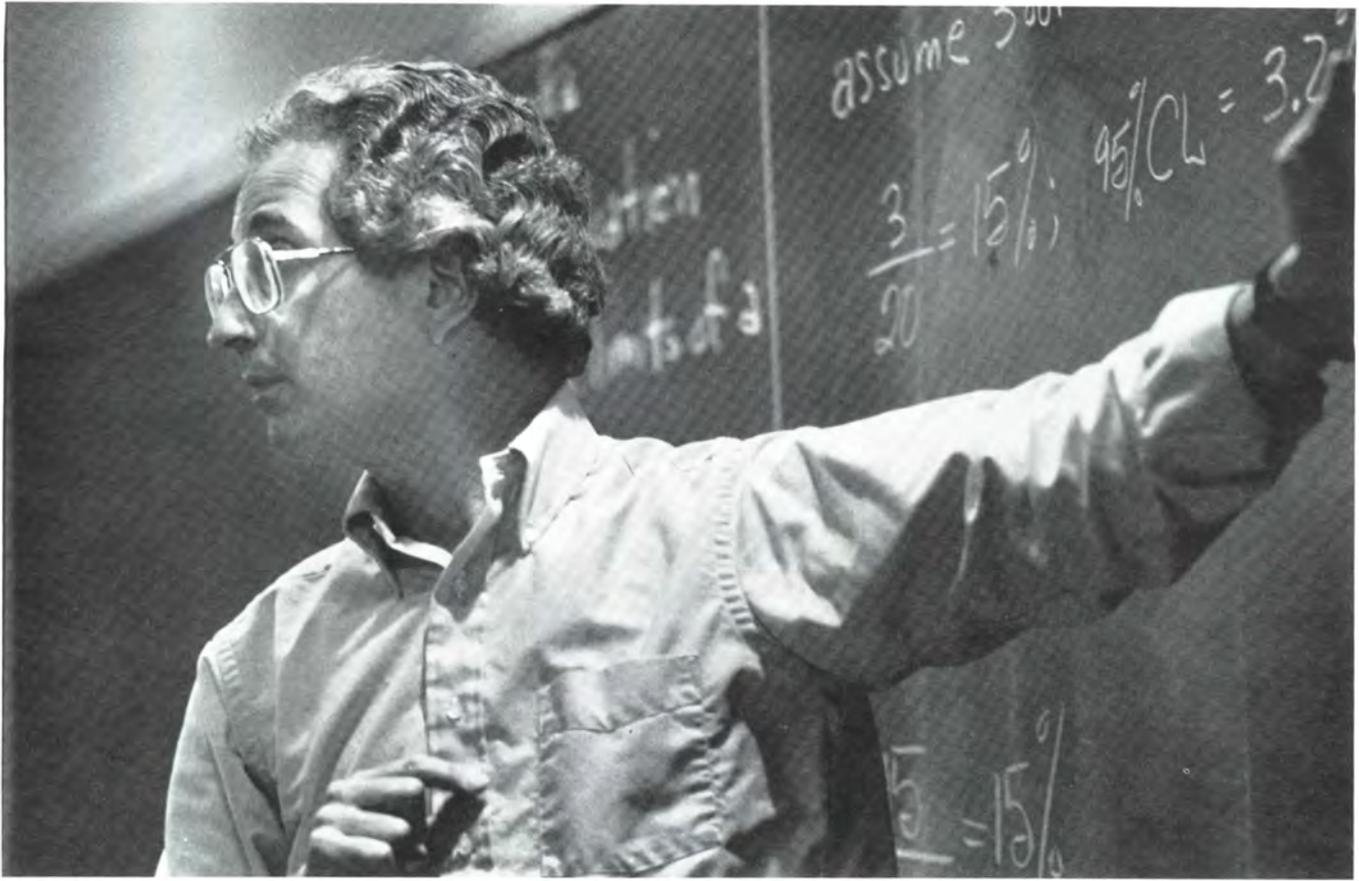
James A. Wolff, Jr., M.D., Columbia University; B.M.S., Dartmouth Medical School; M.A.T., M.P.H., Harvard University. Adjunct Associate Professor of Public Health (Health Services). Deputy Director for Training, Family Planning Management Training Project, Management Sciences for Health.

Steffie Woolhandler, M.D., Louisiana State University; M.P.H., University of California, Berkeley. Adjunct Associate Professor

of Public Health (Health Services). Physician, The Cambridge Hospital.

Barry S. Zuckerman, M.D., Georgetown University. Associate Professor of Public Health (Social and Behavioral Sciences). Professor of Pediatrics, Boston University School of Medicine. Pediatrician, Department of Pediatrics, Boston City Hospital.

Peter J. Zuromskis, M.D., Johns Hopkins University; M.P.H., Boston University. Adjunct Assistant Professor of Public Health (Environmental Health). Physician Consultant to the Environmental Health and Safety Service, Harvard University.



Dr. Herbert Kayne introduces students to the principles of biostatistics.

The School of Public Health Student Body



The Certificate Program in International Health brings together students from many continents for a summer-long intensive study of primary care in developing countries.

The student body of the School of Public Health reflects the policy of selecting a heterogeneous class. Students with diverse skills and backgrounds enrich the courses and contribute to the overall learning experience. The following is a sample of occupations from Public Health classes:

Director of Outpatient Services, Hospital
Research Operations Manager, Neighborhood Health Center
Coordinator of Maternal and Child Health Services, State Department of Public Health
Director of Health, Town
Marketing Coordinator, Health Maintenance Organization
Administrator, Nursing Home
Environmental Consultant
Director of Community Health Education, Hospital
Biohazards Safety Officer, University
Director, Inpatient Psychiatric Service, Mental Health Center
Quality Assurance Coordinator, Environmental Research Company
Supervisor, Physical Therapy Services, Visiting Nurse Association

Assistant General Counsel, State Department of Mental Health
Assistant Research Professor, School of Medicine
Data Analyst, Pharmaceutical Company
Director of Service and Rehabilitation, American Cancer Society
Clinical Director, Alcoholism Rehabilitation Program
Health Educator, Nonprofit Organization
Director of Development, Health Maintenance Organization
Executive Director, Emergency Medical Services Corporation
Food Service Director, Hospital
Health Agent, Town Board of Health
Director, Infection Control and Epidemiology, Hospital
Nutrition Consultant
Administrative Manager, Hospital Department
Industrial Hygienist, Private Industry
Certified Public Accountant
Director of Social Services, Hospital
Analyst, Insurance Company
Reimbursement Manager, Hospital
Scientist, Environmental Research Company

Research

Public Health students are project directors, analysts, research associates, and research assistants in a multitude of settings and content areas. Settings include hospitals, health maintenance organizations, environmental research companies, health systems agencies, the Department of Public Health, the Department of Environmental Quality Engineering, insurance companies, private consulting companies, medical schools, schools of public health, and local universities. The subject matter varies from highly scientific areas to health services research.

Medicine

Physicians who have been enrolled are from such areas as cardiology, pediatrics, general surgery, hematology, pathology, and endocrinology. Some have specialized in epidemiology and preventive medicine; others are making the transition from private practice to administrative medicine.

The educational backgrounds of the students are varied. They include the following:

Doctoral level—M.D., J.D., D.D.S., O.D., Ph.D. (microbiology, anthropology, biochemistry, physiology, education).

Master's level—M.S.W., M.Sc. (nursing, library science, audiology, biophysics, biology, environmental engineering, physical therapy), M.A. (urban affairs, English, communications science, philosophy, sociology, religion, political science), M.B.A. (accounting, general management), M.P.A., M.Ed.

Baccalaureate level—B.A. and B.S. degrees in liberal arts, science, and health professions.

Boston

Boston has long been recognized as one of the leading health care centers of the world. With more than seventy hospitals in the greater metropolitan area, the health care industry is the largest employer in the city. Twenty-six independent health centers serve the needs of the neighborhood communities. The city is proud of its reputation for operating one of the most efficient medical emergency systems in the country. In the forefront of progressive and innovative medical care delivery and research activity, Boston offers public health students a wide variety of opportunities in a dynamic environment.

Boston, the largest city in New England, is a seaport whose character results from a rich blend of historical heritage, active cultural life, and contemporary growth in high technology, medicine, and business. Greater Boston, with more than fifty colleges and universities, remains an unrivaled center of learning. Within the city's compact center are the Boston Common and the Public Garden, Faneuil Hall Marketplace, a host of galleries, Chinatown, and the Freedom Trail, along which are located some of the most important landmarks in U.S. history. The Museum of Fine Arts is open without charge to Boston University students. The Boston Symphony Orchestra, the Opera Company of Boston, and many fine chamber and jazz groups offer annual seasons, as do dance and theatre companies. Boston is also home to the Celtics, New England Patriots, Red Sox, and Bruins.

The Charles River, separating Boston from Cambridge, offers sailing and canoeing, and beaches are a short ride to the north and south by car or public transportation. Local skiing is minutes away in the Blue Hills; for the serious skier, the resorts of New Hampshire and Vermont are only a two-hour drive.

Academic Calendar

Boston University Office of the University Registrar Official Academic Calendar 1989–90

SUMMER I

Registration Begins	Tuesday, April 18, 1989
Registration Ends, Instruction Begins	Tuesday, May 23, 1989
Holiday, Classes Suspended	Monday, May 29, 1989
End of Session	Saturday, July 1, 1989

SUMMER II

Registration Begins	Tuesday, May 30, 1989
Holiday, Classes Suspended	Tuesday, July 4, 1989
Registration Ends, Instruction Begins	Wednesday, July 5, 1989
End of Session	Saturday, August 12, 1989

SEMESTER I

Registration Ends*, Instruction Begins	Wednesday, August 30, 1989
Holiday, No Classes Held	Monday, September 4, 1989
Holiday, No Classes Held	Monday, October 9, 1989
Substitute Monday Schedule of Classes	Wednesday, October 11, 1989
Registration Begins for Spring 1990	Monday, October 30, 1989
Holiday, Classes Suspended	Friday, November 10, 1989
Fall Recess — Instruction Suspended at 12 Noon	Wednesday, November 22, 1989
Instruction Resumes	Monday, November 27, 1989
Final Exams Begin	Thursday, December 14, 1989
Final Exams End	Friday, December 22, 1989

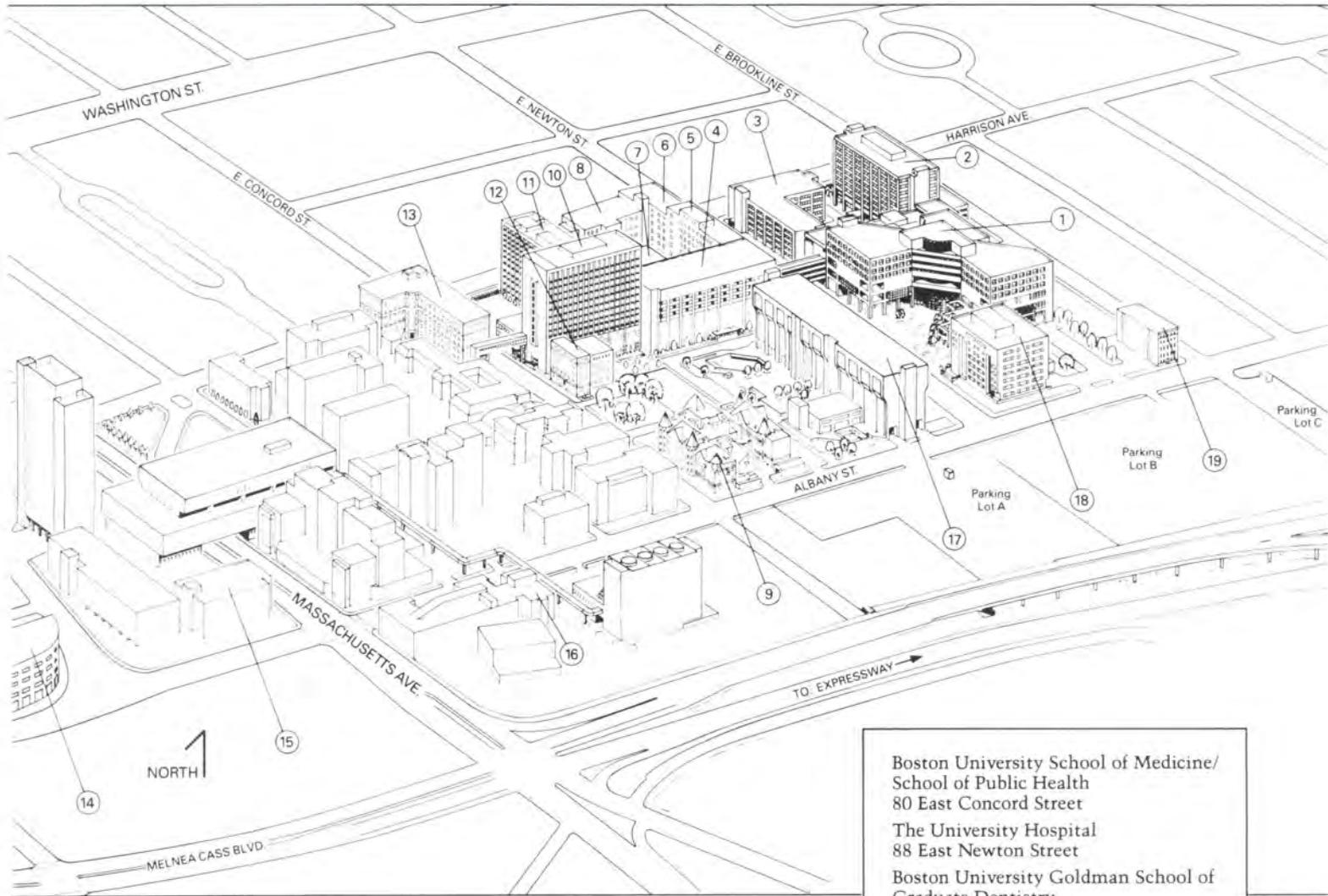
SEMESTER II

Registration Ends*, Instruction Begins	Tuesday, January 16, 1990
Holiday, Classes Suspended	Monday, February 19, 1990
Substitute Monday Schedule of Classes	Tuesday, February 20, 1990
Spring Recess	Saturday, March 3, 1990 through Sunday, March 11, 1990
Instruction Resumes	Monday, March 12, 1990
Holiday, Classes Suspended	Monday, April 16, 1990
Substitute Monday Schedule of Classes	Wednesday, April 18, 1990
Final Exams Begin	Monday, May 7, 1990
Final Exams End	Tuesday, May 15, 1990
COMMENCEMENT	Sunday, May 20, 1990

*Registration for the School of Public Health continues during the first week of classes, August 30–September 5 and January 16–22.

The University, in scheduling classes on religious holidays, intends that students observing those holidays be given ample opportunity to make up work. Faculty members who wish to observe religious holidays will arrange for another faculty member to meet their classes or for cancelled classes to be rescheduled.

Boston University Medical Center



Boston University School of Medicine/
School of Public Health
80 East Concord Street
The University Hospital
88 East Newton Street
Boston University Goldman School of
Graduate Dentistry
100 East Newton Street
Boston, MA 02118

Legend

- 1 = Atrium Pavilion (Main entrance of the University Hospital)
- 2 = Doctors Office Building (including public parking garage)
- 3 = Preston Family Building
- 4 = Evans Building
- 5 = Old Evans Building
- 6 = Collamore Building
- 7 = Vose Hall
- 8 = Robinson Building
- 9 = Talbot Building
- 10 = Instructional Building (School of Medicine main entrance)
- 11 = Housman Medical Research Center
- 12 = School of Public Health
- 13 = Silvio O. Conte Medical Research Center
- 14 = 801 Albany Street
- 15 = Nurses Education Building (Boston City Hospital)
- 16 = Maxwell Finland Laboratory (Boston City Hospital)
- 17 = Solomon Carter Fuller Mental Health Center (Commonwealth of Massachusetts)
- 18 = Goldman School of Graduate Dentistry (Goldman School main entrance)
- 19 = Naval Blood Research Center

Dining Facilities

- Bistro—Atrium Pavilion, Level 2 (UH)
 - Cafeteria—Preston Building, 1st Floor (UH)
 - Cafeteria—Instructional Building, Basement (BUSM)
 - Cafeteria—Goldman School 1st Floor (GSGD)
 - Cafe—Doctors Office Building, 1st Floor (UH)
- (Additional food services to be available in late 1988 in Atrium Pavilion.)*

Major Conference Rooms

- Hiebert Lounge, 14th floor, Instructional Building (BUSM)
- Bakst Auditorium, 1st floor, School of Public Health (BUSM)
- L-110, L-112, 1st floor, Instructional Building (BUSM)
- Shapiro Conference Room, 11th floor, Doctors Office Building (BUMC)
- Keefer Auditorium, 1st floor, Evans Building (UH)

Public Parking Facilities

- Doctors Building Garage
- Lot A
- Lot C

- Preston Conference Room, 1st floor, Preston Building (UH)
- Whitelaw Conference Room, 5th floor, Old Evans (UH)
- Wilkins Board Room, 1st floor, Evans Building (UH)
- Goldman Auditorium, 3rd floor, Goldman School (GSGD)
- Auditorium/Audiovisual Center, 7th floor, Goldman School (GSGD)



Getting to Boston University Medical Center

From North: Follow Routes 1 (via Mystic/Tobin Bridge) or I-93 to Rt. 3 (I-93) (Southeast Expressway or Central Artery) South. Take Exit 19 (Albany Street/East Berkeley Street). Follow Albany Street; turn right on East Newton Street.

From Logan Airport: Go through Sumner Tunnel (Rt. 1A South) to Expressway South. Take Exit 19 (Albany Street/East Berkeley Street). Follow Albany Street; turn right on East Newton Street.

From West: Take Rt. 90 (Massachusetts Turnpike) East to end. Take Expressway I-93/Rt. 3 South to Exit 19 (Albany Street/East Berkeley Street). Follow Albany Street; turn right on East Newton Street.

From South Shore: Take Expressway (Rt. 3) North to Exit 18 (Massachusetts Ave. off ramp). Turn right on Massachusetts Ave.; take first right onto Albany Street. Turn left at second intersection onto East Newton Street.

Public Transportation to the Medical Center

The MBTA provides the following bus service to Boston University Medical Center:

Bus 1: Harvard Square to Dudley Square via Boston City Hospital, connecting Massachusetts Avenue Station (Orange Line) with BUMC. Buses travel along Massachusetts Avenue as far as Albany Street, then continue to Dudley Square. Service is provided every 10 minutes during peak hours.

Bus 10: Copley Square (Green Line) to City Point, connecting Back Bay Station (Orange Line) and Andrew Station (Red Line) with BUMC. Buses provide service approximately every 30 minutes during peak hours, with added Saturday service.

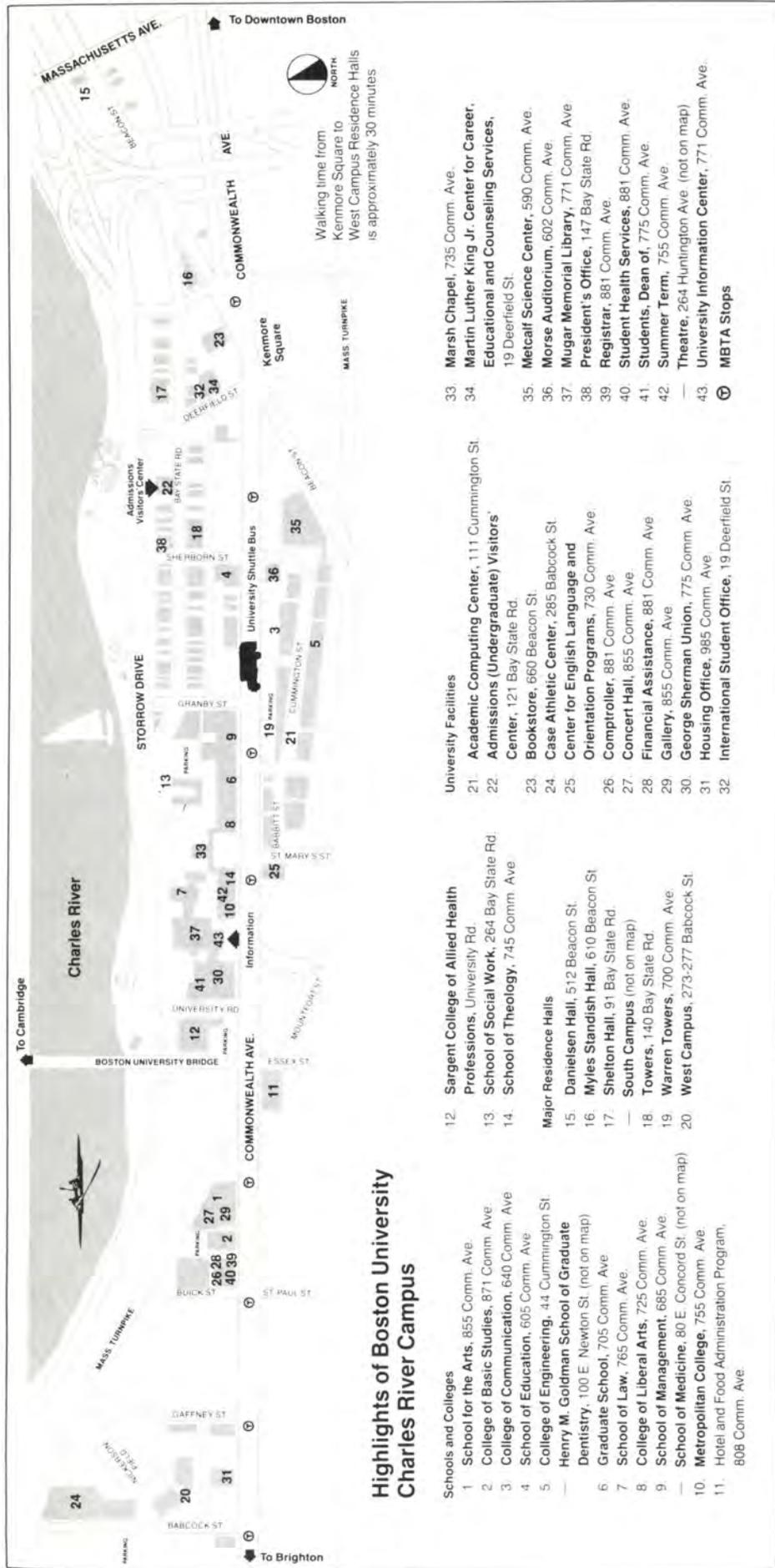
Bus 47: Service from Central Square, Cambridge (Red Line), to Andrew Station connects Ruggles Station (Orange Line) and Dudley Square with BUMC. Buses run every 20 minutes during peak hours. A shorter "loop" to the Longwood Medical Area and Dudley Square via Harrison Avenue also will run every 10 minutes during peak hours.

Bus 49: Service on Washington Street runs directly from Dudley Square to Downtown Crossing via Washington Street and provides service every seven minutes during peak hours.

Because transit schedules are subject to change, please contact the Massachusetts Bay Transportation Authority for the latest schedules and routes at (617) 722-3200.

Shuttle Bus Service

The Medical Center operates a shuttle bus to and from the Medical Center and Broadway Station on the Red Line approximately every 15 minutes weekdays during peak morning and late afternoon/evening traffic hours. For more information about the shuttle bus, please call (617) 638-4240.



Highlights of Boston University Charles River Campus

Schools and Colleges

- 1 School for the Arts, 855 Comm. Ave.
- 2 College of Basic Studies, 871 Comm. Ave.
- 3 College of Communication, 640 Comm. Ave.
- 4 School of Education, 605 Comm. Ave.
- 5 College of Engineering, 44 Cummington St.
- 6 Henry M. Goldman School of Graduate Dentistry, 100 E. Newton St. (not on map)
- 7 Graduate School, 705 Comm. Ave.
- 8 School of Law, 765 Comm. Ave.
- 9 College of Liberal Arts, 725 Comm. Ave.
- 10 School of Management, 685 Comm. Ave.
- 11 School of Medicine, 80 E. Concord St. (not on map)
- 12 Metropolitan College, 755 Comm. Ave.
- 13 Hotel and Food Administration Program, 808 Comm. Ave.

Major Residence Halls

- 15 Daniels Hall, 512 Beacon St.
- 16 Myles Standish Hall, 610 Beacon St.
- 17 Shelton Hall, 91 Bay State Rd.
- 18 South Campus (not on map)
- 19 Towers, 140 Bay State Rd.
- 20 Warren Towers, 700 Comm. Ave.
- 21 West Campus, 273-277 Babcock St.

University Facilities

- 21 Academic Computing Center, 111 Cummington St.
- 22 Admissions (Undergraduate) Visitors' Center, 121 Bay State Rd.
- 23 Bookstore, 660 Beacon St.
- 24 Case Athletic Center, 285 Babcock St.
- 25 Center for English Language and Orientation Programs, 730 Comm. Ave.
- 26 Comptroller, 881 Comm. Ave.
- 27 Concert Hall, 855 Comm. Ave.
- 28 Financial Assistance, 881 Comm. Ave.
- 29 Gallery, 855 Comm. Ave.
- 30 George Sherman Union, 775 Comm. Ave.
- 31 Housing Office, 985 Comm. Ave.
- 32 International Student Office, 19 Deerfield St.

MBTA Stops

- 33 Marsh Chapel, 735 Comm. Ave.
- 34 Martin Luther King Jr. Center for Career, Educational and Counseling Services, 19 Deerfield St.
- 35 Metcalf Science Center, 590 Comm. Ave.
- 36 Morse Auditorium, 602 Comm. Ave.
- 37 Mugar Memorial Library, 771 Comm. Ave.
- 38 President's Office, 147 Bay State Rd.
- 39 Registrar, 881 Comm. Ave.
- 40 Student Health Services, 881 Comm. Ave.
- 41 Students, Dean of, 775 Comm. Ave.
- 42 Summer Term, 755 Comm. Ave.
- 43 Theatre, 264 Huntington Ave. (not on map)
- 44 University Information Center, 771 Comm. Ave.

Walking time from
Kenmore Square to
West Campus Residence Halls
is approximately 30 minutes



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BOSTON UNIVERSITY
SESQUICENTENNIAL

Boston University
School of Public Health
80 East Concord Street
Boston, Massachusetts 02118
(617) 638-5052