



JOHNS HOPKINS
BLOOMBERG
SCHOOL *of* PUBLIC HEALTH



2011-2012

Academic Catalog



JOHNS HOPKINS
BLOOMBERG
SCHOOL *of* PUBLIC HEALTH

Mission Statement

The Johns Hopkins Bloomberg School of Public Health is dedicated to the education of a diverse group of research scientists and public health professionals, a process inseparably linked to the discovery and application of new knowledge; and through these activities, to the improvement of health and prevention of disease and disability around the world.

Contact Information

Johns Hopkins Bloomberg School of Public Health
Admissions Services
615 N. Wolfe Street, Suite E1002
Baltimore, MD 21205
admiss@jhsph.edu
www.jhsph.edu/admissions

The Johns Hopkins Bloomberg School of Public Health website is available by visiting *www.jhsph.edu*. A Faculty Directory and Course Search database are available on the Bloomberg School's main website.

Johns Hopkins University is accredited by Middle States Commission on Higher Education, 3624 Market Street, Philadelphia, PA 19104-2680, Phone: 215-662-5606.

The Johns Hopkins Bloomberg School of Public Health is accredited by the Council on Education for Public Health, 800 Eye Street, NW, Ste 202, Washington, DC 20001-3710, Phone: 202-789-1050.

The University reserves the freedom to change without notice any programs, policies, requirements, or regulations published in this catalog. The catalog is not regarded as a contract.

Table of Contents

3	Academic Calendar
4	The University
8	Academic Resources
10	Academic Information
10	Admissions
11	Degree Programs
22	Combined Degree Programs
26	Transfers Between Public Health Degree Programs
26	Certificate Programs
38	Other Programs
42	Continuing Professional Education
42	Internet-Based Courses
42	Continuing Lifelong Educational Opportunities for Alumni
42	Institutes
46	Special Lectureships
48	Administrative Regulations
48	Categories of Students (Degree)
48	Special Students
50	Academic Year, Registration, Course Credit
51	Grading System
53	Transcripts, Graduation
53	Academic Ethics Code
54	Student Conduct Code, Human Subjects
54	Institutional Animal Care and Use Committee
55	University Policy Statements
61	Student Services and Organizations
61	Student Affairs
61	Living Accommodations, Recreational and Cultural Opportunities
62	SOURCE
63	University Health Services, JHMI International Society, Office of International Services
64	Career Development
64	Student Government, Deans for Students Network
64	Delta Omega Public Health Honor Society-Alpha Chapter, Society of Alumni
65	Financial Assistance
74	Tuition and Fees
76	Departments of Instruction
76	Biochemistry and Molecular Biology
79	Biostatistics
81	Environmental Health Sciences
90	Epidemiology
95	Health, Behavior and Society
99	Health Policy and Management
103	International Health
109	Mental Health
115	Molecular Microbiology and Immunology
117	Population, Family and Reproductive Health
122	School-Affiliated Centers and Institutes
123	Trustees and Administration of the Johns Hopkins University
125	Administration and Standing Committees of the Bloomberg School

2011-2012 Academic Calendar

SUMMER TERM

Summer Institutes	Begin week of June 6
Internet-Based/Part-Time MPH New Student Orientation	Su June 5
Registration Begins for Regular Summer Term	Tu April 12
REGULAR SUMMER TERM (37 class days)	W June 29-F Aug 19
1 st Term Registration Begins for Continuing and Special Students	W June 1
Regular Summer Term Registration Ends	F June 17
NEW STUDENT ORIENTATION/REGISTRATION	M June 27-T June 28
Instruction Begins for Summer Term	W June 29
INDEPENDENCE DAY HOLIDAY	M July 4
Regular Summer Add/Drop Period	Varies per course schedule
2 nd Term Registration Begins	F July 29
1 st Term Registration Ends for Continuing and Special Students	F Aug 12
Last Class Day of Summer Term	F Aug 19

1ST TERM (39 class days, M-F)

NEW STUDENT ORIENTATION/REGISTRATION	M Aug 22-W Aug 24
Instruction Begins for 1 st Term	Th Aug 25
Add/Drop Period	Th Aug 25-W Sept 7
LABOR DAY RECESS	M Sep 5
2 nd Term Registration Ends	F Oct 7
Winter Intersession Registration Begins	Th Oct 13
Last Class Day of 1 st Term	W Oct 19

2ND TERM (40 class days, M-F)

Instruction Begins for 2 nd Term	Th Oct 20
Add/Drop Period	Th Oct 20-W Nov 2
THANKSGIVING RECESS	Th Nov 24-Su Nov 27
Registration Begins for 3 rd Term	T Nov 22
Winter Intersession Registration Ends	F Dec 9
Last Class Day of 2 nd Term	F Dec 16

Internet-Based/Part-Time MPH New Student Orientation	Su Jan 8
WINTER INTERSESSION	M Jan 9-F Jan 20 (no class M Jan 16)

3 rd Term Registration Ends	T Jan 10
MARTIN LUTHER KING, JR. HOLIDAY RECESS	M Jan 16

3RD TERM (40 class days, M-F)

Instruction Begins for 3 rd Term	M Jan 23
Add/Drop Period	M Jan 23-F Feb 3
Registration Begins for 4 th Term	M Feb 6
Last Class Day of 3 rd Term	F Mar 16
4 th Term Registration Ends	F Mar 16
SPRING RECESS	M Mar 19-F Mar 23

4TH TERM (40 class days, M-F)

Instruction Begins for 4 th Term	M Mar 26
Add/Drop Period	M Mar 26-F Apr 6
Last Class Day of 4 th Term	F May 18
PUBLIC HEALTH CONVOCATION	W May 23
UNIVERSITY COMMENCEMENT	Th May 24
RESIDENCY PROGRAM ENDS	Th June 29

The University

HISTORICAL BACKGROUND

The Johns Hopkins University

The Johns Hopkins University was incorporated in 1867 under the terms of a \$7 million bequest from Johns Hopkins, a Quaker merchant of Baltimore, who directed that the funds be used for the establishment of a university and hospital. Instruction in the University began in 1876, three years after his death.

The Johns Hopkins University was to be different from the traditional American college. The historic role of the University was clearly defined by the first president, Daniel Coit Gilman, in his inaugural address: “while forms and methods vary, the freedom to investigate, the obligation to teach, and the careful bestowal of academic honors are always understood to be among the university functions. The pupils are supposed to be wise enough to select and mature enough to follow the courses they pursue.”

Gilman branded the dispute between the old or literary education and the new scientific education “useless.” He spoke of the value of remote utility in contrast to immediate advantage: “Those ventures are not always most sagacious that expect a return on the morrow. It sometimes pays to send our argosies across the seas; to make investments with an eye to slow but sure returns. So is it always in the promotion of science.”

In discussing curriculum, Gilman recognized the fact that University trustees and administrators must select the branches of learning that are to be encouraged, since one university cannot possibly encourage all. The criterion should be the “requirements and deficiencies of a given people, in a given period,” not “an absolute standard of preference.” Students should be

free of routine; investigators should be “free, competent, and willing;” research and teaching should supplement one another.

“The object of the University,” said Gilman, “is to develop character. It misses its aim if it produces learned pedants, or simple artisans, or cunning sophists, or pretentious practitioners. Its purport is not so much to impart knowledge to the pupils, as to whet the appetite, exhibit methods, develop powers, strengthen judgment, and invigorate the intellectual and moral forces. It should prepare for the service of society a class of students who will be wise, thoughtful, progressive guides in whatever department of work or thought they may be engaged.”

The Bloomberg School of Public Health

The Johns Hopkins Bloomberg School of Public Health is the oldest school of public health in the world. When established in 1916, the School’s founders designated their new institution “the School of Hygiene and Public Health,” to pay homage to two honored European traditions of the day. Hygiene was included in the name to emphasize the founders’ devotion to basic research and the uncovering of new knowledge about disease and its prevention. In that era, hygiene was used by the finest German universities to mean rigorous laboratory investigations into the biological nature of health and disease. Similarly, by including public health in the School’s name, the founders were paying tribute to another European tradition, this time from England, a nation admired for its skillful design of practical programs to improve the overall health of populations.

By 2001, when the School’s name was officially changed to the Johns Hopkins Bloomberg School of Public Health, hygiene was dropped from the name because this word had lost its hard-sci-

ence connotations over the intervening 85 years, becoming a mere synonym of sanitation. In spite of these changes in the institution’s name, however, the Bloomberg School continues to honor its dual commitment to both research and practice, and to providing the highest quality education in public health and the sciences basic to it.

PRESENT PERSPECTIVES

University Divisions

Within the University and Hospital there is increasing emphasis on inter-divisional and inter-institutional cooperation in education and research programs. The Bloomberg School of Public Health, in East Baltimore, offers an unusually rich environment in the health sciences, in part because of its close proximity to and cooperative relationships with the other divisions of the University.

The other divisions include the School of Medicine, the School of Nursing, and the Welch Center, all of which are also located in East Baltimore; the Zanvyl Krieger School of Arts and Sciences, the School of Education, and the Whiting School of Engineering, all on the nearby Homewood campus; the Paul H. Nitze School of Advanced International Studies in Washington, D.C.; the Applied Physics Laboratory in Laurel, Md.; the Carey Business School with campus locations in Baltimore, Columbia, Rockville and Washington, D.C.; and the Peabody Institute in Baltimore.

The Bloomberg School of Public Health

The Bloomberg School of Public Health provides opportunities for graduate education, research, professional practice, and service in diverse fields, including the primary intellectual disciplines of public health; quantitative sciences such as biostatistics, epidemiology, and demography; basic and applied research; social policy;

planning, management, and evaluation of the delivery of health services; and the biological and environmental health sciences. These programs are designed for individuals from a wide variety of professional and academic backgrounds and experience in health.

The Bloomberg School is organized into the following departments: Biochemistry and Molecular Biology; Biostatistics; Environmental Health Sciences; Epidemiology; Health, Behavior and Society; Health Policy and Management; International Health; Mental Health; Molecular Microbiology and Immunology; and Population, Family and Reproductive Health.

Within the broad concepts of health protection and disease prevention, specialized academic interests include quantitative and analytic methodologies, health policy, health finance and management, outcomes assessment, chronic diseases, injury and violence prevention, substance abuse, epidemiologic patterns of risk factors, health promotion and practice, health behavior and communications, human genetics, infectious diseases, vector biology, infant and women's health, health problems in the developing world, nutrition, interactions between behavior and health, reproductive health and family planning, environmental health engineering and chemistry, physiology, toxicology, occupational safety and health, and molecular biology.

The Bloomberg School has cooperative relationships with its East Baltimore community, and with both private and public organizations at the local, state, national, and international levels, including academic, governmental, and service organizations, all of which enhance the breadth and depth of the Bloomberg School's curriculum.

Johns Hopkins Medicine

Johns Hopkins Medicine is the name of the governance structure for the Hospital/Health System and the Johns

Hopkins University School of Medicine. The Chief Executive Officer for Johns Hopkins Medicine and Dean of the Medical Faculty oversees the organization.

The Johns Hopkins Hospital is a separate corporation and has an endowment independent of the University, but the relations between the Hospital and the School of Medicine are close, in accordance with the wish of their founder. The head of each clinical department of the hospital is also the professor and director of the corresponding academic department of the School of Medicine.

The School of Medicine is organized into preclinical and clinical departments. The preclinical departments are Biological Chemistry; Biomedical Engineering; Biophysics and Biophysical Chemistry; Cell Biology; the History of Medicine; Molecular and Comparative Pathobiology; Molecular Biology and Genetics; Neuroscience; Pharmacology and Molecular Sciences; and Physiology. The clinical departments are Anesthesiology and Critical Care Medicine; Dermatology; Emergency Medicine; Gynecology and Obstetrics; Medicine; Neurology and Neurosurgery; Oncology; Ophthalmology; Orthopaedic Surgery; Otolaryngology—Head and Neck Surgery; Pathology; Pediatrics; Physical Medicine and Rehabilitation; Plastic and Reconstructive Surgery; Psychiatry and Behavioral Sciences; Radiation Oncology; Radiology and Radiological Science; Surgery; and Urology.

Objectives of the School's curriculum include integrating basic science and clinical experiences, expanded use of case-based small group learning sessions, and early experience with community-based practice.

The School of Nursing

In 1983, Johns Hopkins University, in affiliation with three Baltimore-based hospitals—Sinai, Church and Johns Hopkins—formed the Consortium

for Nursing Education, which in turn established Johns Hopkins University School of Nursing. The first class of undergraduates was admitted in 1984. Johns Hopkins University School of Nursing offers baccalaureate, master's, and doctoral programs as well as a number of post-degree options. The School of Nursing prepares students for professional nursing practice through an educational process that combines a strong academic curriculum with intensive clinical experience. The school's mission is to educate professional nurses to participate in all aspects of health care and to prepare them academically and technologically for challenges of the future. Students work side by side with some of the brightest scholars and graduate and undergraduate students in the world. The outstanding resources of the university provide them with a unique opportunity to develop and grow in the nursing profession. This rare combination of resources and opportunities makes the School of Nursing a leader in nursing education and research.

For additional information, please contact the School of Nursing Office of Admissions and Student Services at 410-955-7548 or jhuson@son.jhmi.edu or www.nursing.jhu.edu.

The Welch Center

The Welch Center is a multidisciplinary research center affiliated with the Johns Hopkins School of Medicine and Bloomberg School of Public Health. The Center's work promotes the health of the public by generating the knowledge required to prevent disease and its consequences. Through patient-oriented research, the Welch Center evaluates the application of laboratory discoveries as well as the adoption of best practices in clinical settings and populations. To meet this challenge, the Center harnesses the talents of a group of faculty dedicated to disease prevention, health promotion, and evidence-based health practices, integrating clinical expertise

with a comprehensive knowledge of epidemiologic methods.

For more information, visit www.hopkinsmedicine.org/welchcenter.

The Homewood Campus

Homewood is the main campus for the Zanvyl Krieger School of Arts and Sciences, the Whiting School of Engineering, and the School of Education. Located in Charles Village, it's a peaceful place of green grass, wide-spreading trees, brick residence halls and classroom buildings and interconnecting walkways that combine to create a comfortable country atmosphere in the heart of a major city. Cooperation between the various divisions of the University makes many of the courses, lectures, and other opportunities available to all students of the University.

The Zanvyl Krieger School of Arts and Sciences

The Zanvyl Krieger School of Arts and Sciences is the core institution of the Johns Hopkins complex of schools, centers, and institutes. Its mission is discovery--the creation of knowledge through scholarship and research, and the education of students, undergraduate and graduate alike. The school's unique character derives from its commitment to choose carefully what is worth pursuing and to do so without compromise.

The vision of founding president Daniel Coit Gilman continues to guide us and is reflected in a school that encourages independent research and creative thinking at all levels. The school's academic programs in the humanities, natural sciences, and social sciences are renowned for their excellence and intensity, and notable for the wide range of interdisciplinary opportunities provided.

For more information, visit <http://krieger.jhu.edu>.

The Whiting School of Engineering

Since the first engineering students enrolled at Johns Hopkins in 1912, engineering students, faculty, and graduates have been leaders in innovation, conducting pioneering research, and creating new technologies that address the ever-changing demands of modern society.

At the Whiting School of Engineering, students and faculty are immersed in a remarkable, collaborative environment—an environment that combines a rigorous academic program with cutting-edge research. The Whiting School both draws upon and contributes to the university's many strengths and renown in fields ranging from medicine and public health to the physical sciences and humanities.

For more information, please visit <http://engineering.jhu.edu>.

School of Education

For over a century, the Johns Hopkins University School of Education (SOE) has been preparing educators to make a difference in the lives of children, youths and adults. Founded in 1909 as the College Courses for teachers, the school prepares educational leaders and develops research-based models of instruction that are making lasting improvements in student achievement. The SOE offers doctorate and graduate programs, and is engaged in a variety of research and development activities, external partnerships, and collaborative connections to the broader Johns Hopkins research community. Three research and development centers support the work of the SOE: the Center for Research and Reform in Education, the Center for Social Organization of Schools, and the Center for Technology in Education. The SOE's nationally recognized Division of Public Safety Leadership provides graduate and undergraduate programs in manage-

ment, and conducts applied research in various areas of public safety leadership.

For more information, please visit <http://education.jhu.edu>.

The Paul H. Nitze School of Advanced International Studies

The Paul H. Nitze School of Advanced International Studies (SAIS) was established during World War II by Christian A. Herter and Paul H. Nitze, statesmen who sought new methods of preparing men and women to cope with the international responsibilities that would be thrust upon the U.S. in the postwar world. The founders assembled a faculty of scholars and professionals to teach international relations, international economics and foreign languages to students. The natural choice for the location of the school was Washington, D.C., a city where American foreign policy was and continues to be shaped and set in motion.

SAIS became a division of The Johns Hopkins University in 1950. In 1963, SAIS moved to one of its three present buildings on Massachusetts Avenue, N.W. in Washington, D.C. SAIS also has campuses in Bologna, Italy (established in 1955), and Nanjing, China (established in 1986).

For more information, visit www.sais-jhu.edu.

The Applied Physics Laboratory

The Applied Physics Laboratory, a division of the Johns Hopkins University, is a not-for-profit engineering, research and development center dedicated to solving complex problems that present critical challenges to the nation. Through advanced technology, highly qualified, diverse teams, hands-on operational knowledge, and a basic systems engineering approach, the Laboratory achieves affordable, effective solutions. The Laboratory's outstanding, creative staff and world-class facilities

have made it a major asset to the nation for more than six decades.

For more information, visit www.jhuapl.edu.

The Johns Hopkins Carey Business School

The Johns Hopkins Carey Business School educates students to be leaders in an ever-changing, demanding global environment. The MBA, as well as other master's degrees, certificates, and undergraduate programs, builds on the Johns Hopkins University's tradition of excellence in practice and research.

The full-time Global MBA program focuses on entrepreneurial leadership, innovation, and ethical practices. Unique features of the Global MBA include the Innovation for Humanity project, which takes students to developing nations for a hands-on exploration of business challenges, and Discovery to Market, which teams students with scientists to assess the commercial potential of new research.

Also available are the Executive MBA, designed for high-potential leaders; and the Weekend MBA for Emerging Professionals, with Saturday classes that keep career and life goals on track. The Carey Business School offers additional MBA programs in conjunction with the School of Medicine, School of Nursing, Bloomberg School of Public Health, and Krieger School of Arts and Sciences.

Master of Science degrees are offered in Finance, Information Systems, Marketing, and Real Estate. Graduate certificates include the Business of Medicine, the Business of Nursing, Competitive Intelligence, Financial Management, Investments, and the Leadership Development Program for Minority Managers. The school also offers a Bachelor of Science degree completion program with options in accounting, finance, information systems, management, and marketing.

For more information, visit <http://carey.jhu.edu> or email carey.admissions@jhu.edu.

The Peabody Institute

The Peabody Institute is recognized as one of the leading professional schools of music in the country. Through comprehensive excellent education, the Peabody Institute nurtures talent and creativity; provides aspiring musicians with the skills to sustain professional careers; fosters lifelong involvement in music and dance; and prepares students in artistic performance at the highest level, providing inspiration and enlightenment to regional, national and international communities.

For more information, visit www.peabody.jhu.edu.

Academic Resources

LIBRARY RESOURCES

The William H. Welch Medical Library

The William H. Welch Medical Library (www.welch.jhu.edu) provides the Johns Hopkins Medical Institutions (School of Medicine, Bloomberg School of Public Health, School of Nursing, Johns Hopkins Hospital, Kennedy Krieger Institute) and its affiliates with information services that advance research, teaching, and patient care. Since 2001, Welch has been organizing library services around the all-digital collection of the future, creating state-of-the-art interfaces to these collections and redefining the role of librarians supporting the digital collection.

By registering as library users, faculty, staff, and students can search a range of databases, and take advantage of the library's information services and classes. The Welch Library offers a wide range of services to the Medical Institutions including liaison consultation, classes and online tutorials, document delivery, and an editing referral service. Welch services are available online and at a number of campus locations. The Welch Web (www.welch.jhu.edu) provides users with Internet access to databases in many disciplines, a collection of online full-text journals, and online reference services called "Ask Welch Now" and "Ask Us." Interlibrary loan and document delivery services are available online through WelDoc at www.welch.jhu.edu/services/ill.html. The library owns over 400,000 books and journal volumes, and subscribes to over 5,000 online journals. Desktop computers and selected software are available for use in the library.

With an emphasis on providing services at the point of use, a number of "information suites" have been created for Hopkins communities such as in the Population Center (<http://infosuite.welch.jhmi.edu/PopCenter/>), the basic sciences (<http://bsdlibrary.jhmi.edu>), and oncology to provide a range of library services and digital resources. Authors at the Medical Institutions can find open access publishing resources from WelchWeb or directly from a website sponsored by the University's Scholarly Communications Group (<http://scg.library.jhu.edu/>).

The library's education program is designed around tools and technologies for biomedical communication. Online tutorials on information resources and tools are made available on WelchWeb as they are developed. Classes are offered to advance skills in searching online databases, managing information and scientific writing; details at www.welch.jhu.edu/classes. In addition, discipline focused lecture series are offered for Welch Information Suite (WIS) communities. Welch co-sponsors associated lecture series in Nursing, Oncology, and Basic Sciences www.welch.jhu.edu/classes/wls.cfm.

Other campus service sites in the Welch system are the Adolf Meyer Collection, with a focus on neurology, neurosurgery, anesthesiology, critical care and psychiatry, and the Nursing Information Resource Center. A special library of historical materials, administered by the Department of the History of Medicine, Science and Technology, is located on the third floor of the Welch building.

The Sheridan Libraries

The Sheridan Libraries encompass the Milton S. Eisenhower Library and its collections at the John Work Garrett Library, the

Albert D. Hutzler Reading Room, the George Peabody Library, and the Montgomery County and Washington, D.C. regional sites.

Located on the Homewood campus, the Eisenhower Library is Hopkins' main research library and a university-wide resource supplementing the specialized libraries on other campuses.

The Libraries' materials and services reflect the development and increasing diversification of resources used for research and scholarship. Of particular interest for Bloomberg School students are the collections in the social, physical, and life sciences. Librarians with subject expertise serve as liaisons to the academic departments, build electronic and print collections, and provide research consultation and instructional services to meet the teaching and research needs of the university.

The collection includes over 3.7 million printed volumes, more than 70,000 print and electronic journals, 12,000 videos and DVDs, and over 217,000 maps.

Complementing the general research collections are numerous specialized collections. The U.S. government documents collection is particularly strong in congressional and statistical material. United Nations e-resources and materials from international organizations are also accessible. Geographic Information System software is available for compiling and analyzing demographic data.

Other special collection materials include rare books, manuscripts, archives, sheet music, maps, and photographs. In addition to the Eisenhower Library's Rare Books and Manuscripts Department, other special collections locations include the Garrett Library at Evergreen Museum (4545 N. Charles St.) and the George Peabody Library (17 East

Mt. Vernon Place). Notable digital collections provide enhanced access to American sheet music and medieval manuscripts. For more information, visit www.library.jhu.edu.

Bloomberg School faculty, students, and staff are eligible for access to the Eisenhower Library upon presentation of a valid Bloomberg School ID card. Borrowing privileges require a Welch Library card.

The Eisenhower Library will be open on a 24/7 schedule during the academic year. For summer and holiday hours, consult the libraries' website at www.library.jhu.edu. For hours of the three special collections locations, please call 410-516-8348.

INFORMATION SYSTEMS (IS)

The Office of Information Systems (IS) serves as the central computing resource for the Bloomberg School. **All students are required to have a laptop or personal computer**, as the technology is essential for basic academic functions such as research, writing and note taking and will greatly assist students in their studies.

The IS office provides hardware, software and support for the instructional, research and administrative computing needs of faculty, staff and students.

Information about services provided by IS will be offered during new student orientation and can be found at www.jhsph.edu/IS. IS supports the MyJHSPH portal (<http://my.jhsph.edu>) where enrolled students can find non-public School information, store and manage their private and shared files, and subscribe to and view RSS feeds.

The School offers a wireless network (www.jhsph.edu/IS/wireless) for use with laptop computers. IS will configure wireless-enabled laptops to connect students to the wireless net-

work, thus allowing students to connect to the Internet from anywhere within the School's Wolfe Street and Hampton House buildings. Laser printers allow students to print through the wireless network and are located throughout the buildings.

JOHNS HOPKINS ENTERPRISE DIRECTORY (JHED)

JHED (<http://jhed.jhu.edu>) is the University's web directory. All faculty, staff, and students are included in the directory; however, individuals have the ability to determine which data elements may be accessible on both the intranet and Internet levels. Students are encouraged to make their address, phone number, email, and photo available on the intranet view. Members of the Hopkins community are granted secure access to the directory via their login IDs (LID) and passwords. Students' LIDs and passwords also provide access to Self Service available at <https://isis.jhu.edu/sswf>. All University students may use this service to provide current and complete address information, including email addresses. Students are also encouraged to check their registration and grades via Self Service.

Questions regarding access to JHED should be directed to JHED Support at 410-735-4357.

Academic Information

REQUIREMENTS FOR ADMISSIONS AND DEGREE CANDIDACY

The Johns Hopkins Bloomberg School of Public Health offers opportunities for graduate and post-graduate study to degree candidates and special students (those who are not in a degree program; refer to the Administrative Regulations chapter for more information) with varied interests and backgrounds.

The Bloomberg School welcomes applications from qualified individuals regardless of race, color, gender, religion, national or ethnic origin, age, disability, marital status, sexual orientation, or veteran status. For further information regarding the University Nondiscriminatory Policy, see the Administrative Regulations chapter. The School reserves the right to limit the number of students admitted to any program and to dismiss any student whose work is deemed unsatisfactory for any reason.

ADMISSIONS PROCEDURE

Application for admission is completed online at www.jhsph.edu/admissions. Admissions Services will only distribute paper applications under rare circumstances if an applicant can demonstrate they have no Internet access. Paper applications must be requested in writing from: Johns Hopkins Bloomberg School of Public Health, Attention: Admissions Services, 615 N. Wolfe Street, Suite E1002, Baltimore, MD 21205, or by phone at 410-955-3543.

Application Deadlines

Applications are processed in Admissions Services on a rolling basis in accordance with applicable degree and program deadlines ([www.jhsph.edu/admissions/](http://www.jhsph.edu/admissions/application_instructions/includes/Application_Deadlines.pdf)

[application_instructions/includes/Application_Deadlines.pdf](http://www.jhsph.edu/admissions/application_instructions/includes/Application_Deadlines.pdf)). Most departments and programs do not begin reviewing applications until after October 1. International students are advised to apply early due to the time required to process visa applications.

Application Requirements

In addition to the completed online application, the following documentation must be submitted in order for an application to be complete (requirements for special student and postdoctoral fellow applicants may differ slightly from those listed below):

- A statement of objectives summarizing past education, training, and experience, as well as present interests and future aims.
- A resumé or curriculum vitae, and a list of publications, if any.
- A complete set of official transcripts from each academic institution attended beyond the secondary level. Applicants who will be submitting documentation from post-secondary institutions outside of the U.S. will be required to have their documents evaluated by an external credential evaluation agency. Applicants are instructed to only use a credentialing agency that will include a copy of the transcript or marks sheet in their credentialing report. If a copy of the transcript or marks sheet is not included in the credentialing report, the document will be considered insufficient for admissions review. If the credentialing report does include a copy of the transcript or marks sheet, and Admissions Services considers this evaluation sufficient, we will use this documentation for the review of your application and to satisfy official School transcript contingencies.
- Letters of recommendation. Please follow the recommendation process associated with the online application at the Admissions Services website at www.jhsph.edu/admissions. Applicants should select three individuals who are acquainted with their professional and/or academic performance.
- A non-refundable application fee is required of all applicants (except current JHU students and/or those applying for a postdoctoral fellowship). The application fee to apply online is \$45.00. Applicants who meet one of nine criteria may send a written request to the Bloomberg School to waive the application fee. For a list of the criteria and additional information, please visit www.jhsph.edu/admissions/application_instructions.
- Standardized test scores. All MPH applicants are required to submit scores of the Graduate Record Examination (GRE) or scores of other graduate admissions tests such as the MCAT, GMAT (MPH/MBA) or the LSAT (JD/MPH only). Departmental (non-MPH) test score requirements vary per Department. Applicants should indicate the Johns Hopkins Bloomberg School of Public Health (code number 5352) as a score recipient. International applicants should refer to the following section regarding the submission of TOEFL and IELTS scores.

STUDENT RIGHTS AND RESPONSIBILITIES FOR THE ADMISSIONS PROCESS

An offer of admission will be contingent upon Admissions Services receiving all official application documents. Students with missing documents may be unable to register after two terms of enrollment. Federal legislation gives each student

who is admitted and enrolled at the Bloomberg School a right of access to his/her educational records. This includes the letters of recommendation submitted in the admissions process. An applicant may waive this right, if so desired, by signing the waiver statement on each recommendation form before sending it to the person from whom a letter of recommendation is being requested. Signing this waiver is not required as a condition for admission to, receipt of financial aid from, or receipt of any other services or benefits from the Bloomberg School.

Deposits—All accepted degree and regular special student applicants will be required to furnish a nonrefundable deposit of \$600. The deposit will be applied toward expenses in the first term of enrollment. In cases where there are deferments, the deposit can be applied to the student account for a maximum two year deferment period. After that time, the deposit will not be refunded nor will it be applied to any subsequent tuition charges.

International Students—Applicants from other countries are subject to the same requirements concerning admission and candidacy as are applicants from the U.S.. Proficiency in the English language is a requirement for admission to the Bloomberg School.

Applicants from countries where English is not the language of university-level instruction will be required to submit the results of the Test of English as a Foreign Language (TOEFL) or the International English Language Testing System (IELTS). Applicants should arrange to take the exam well in advance of applying and should indicate the Johns Hopkins Bloomberg School of Public Health (code number 5352 for TOEFL) as a score recipient. The minimum requirements for TOEFL

are 250 for computer-based or 100 for the Internet-based test. The minimum requirement for IELTS is a score of 7.

COURSE EVALUATIONS

Each academic term, students are encouraged to participate in the course evaluation process. There are two ways students can provide feedback on their courses. Mid-course feedback via the CoursePlus website may be provided to the instructor. At the end of the term, students can evaluate their courses using the online course evaluation system. The questions on the online course evaluation system have been carefully crafted to gather information about the quality of the instructor and the course content. The responses are used to recognize excellent instructors and courses, and to identify where improvements can be made. The evaluation results for each course can be accessed by term, in the portal.

DEGREE PROGRAMS

MASTER OF PUBLIC HEALTH

Marie Diener-West, PhD
Chair of the MPH Program

Associate Chairs

Jacqueline Agnew, MPH, PhD
Randy Bryant, PhD
Andrea Gielen, ScD
Sukon Kanchanaraks, PhD
Gary Ketner, PhD
Laura Morlock, PhD
George Rebok, PhD
Andrea Ruff, MD
Edyth Schoenrich, MD, MPH
Donna Strobino, PhD
Susan Tonascia, ScM
James Yager, PhD
Jon Vernick, JD, MPH

The Master of Public Health (MPH) is a Schoolwide program designed to provide students with a population perspective on health. The program prepares students to become leading

public health professionals capable of addressing current global public health problems through multidisciplinary approaches that apply the latest scientific knowledge.

Please contact the MPH office by phone at 410-955-1291 or 1-888-548-6741, or email at mphprog@jhsphe.edu, with any questions about the programs. Or visit the MPH website at www.jhsphe.edu/academics/mph.

MPH Academic Program

The MPH is a flexible program that can be customized to meet a variety of professional and career goals. Students may study on a full-time or part-time basis. Full-time and part-time students have the same academic requirements and receive the same degree.

Full-time Study

The full-time option is a concentrated eleven-month course of study at the East Baltimore campus. The program begins with an orientation in late June.

Part-time/Internet-based Study

The part-time MPH Program offers opportunities for working professionals to complete the degree within three years. Part-time students may blend a mix of traditional courses and short-term intensive summer and winter institutes offered on the Baltimore campus with courses at locations such as Barcelona, Spain and Internet-based courses. Students can earn up to 80% of their academic credits online. Matriculation is in January and June in Baltimore and November in Barcelona. Part-time MPH students should also refer to the list of online courses to fulfill the MPH curriculum available at http://distance.jhsphe.edu/offerings/full_web.cfm.

For more information on the MPH Academic program, visit: www.jhsph.edu/academics/degreeprograms/mph.

MPH Curriculum

The MPH program provides a balance between a broad-based core curriculum and opportunities to pursue individual interests. The curriculum, which is grounded in the critical disciplines and competencies of public health, includes the following courses:

- Environmental Health
- Principles of Epidemiology or Fundamentals of Epidemiology (online only)
- Problem Solving in Public Health or Making Change through Policy

In addition, students are also required to complete coursework in each of the following areas:

- Biostatistics
- Public Health Biology
- Management Sciences
- Social and Behavioral Sciences

Students must also complete the following projects:

- MPH Individualized Goals Analysis
- Practicum Experience in Population-based Health
- MPH Capstone

The MPH Individualized Goals Analysis is an opportunity for students to develop a plan for their MPH program of study that meets their educational and professional goals. The Practicum is an opportunity for students who don't have public health work experience to have a hands-on experience working and interacting with public health professionals. The MPH Capstone Project is an opportunity for students to apply the competencies and skills they acquire in the program to a pub-

lic health problem relevant to their professional goals and interests.

For a complete listing of the MPH curriculum, visit the MPH website at www.jhsph.edu/academics/degreeprograms/mph/curriculum.

Admission Requirements

The minimum requirements for admission to the MPH program are:

- A baccalaureate-level degree
- Additional health-related experience beyond the baccalaureate level. This requirement can be satisfied in several ways:
 - A minimum of two years full-time post-baccalaureate work experience in a health field or other fields related to public health
 - A doctoral degree in a field underlying public health
 - Completion of two years of medical school curriculum
 - This requirement may be waived for applicants to the MPH/JD, MSN/MPH and MPH/MSW degree programs
- College-level courses in:
 - Mathematics (e.g., calculus, algebra, statistics)
 - General biology
 - A health-related science course (e.g., nutrition, microbiology, anatomy or physiology) or another biology course
- Scores from a standardized test of aptitude (GRE, MCAT, GMAT, LSAT)
 - MPH applicants who have an advanced degree beyond the baccalaureate, or have completed a Bloomberg School certificate, may request their application be reviewed without submission of standardized tests. However,

this may place the applicant at a disadvantage in the admissions or scholarship selection process

- English proficiency, measured by the TOEFL exam, for students from non-English speaking countries (minimum 600 on the paper-based, 250 on the computerized or 100 on the Internet-based exam). Students may also submit an International English Language Testing System (IELTS) with a minimum score of 7
- Official transcripts from each college and university attended
- Curriculum vitae or resumé
- Personal statement of experience and career goals and objectives in pursuing the MPH degree, including how the program will help in attaining those goals
- Three letters of recommendation, both academic and professional, if possible, which address the applicant's potential for success in a public health career

For more detailed Admissions information, visit www.jhsph.edu/academics/degreeprograms/mph/prospective_students.

Graduation Requirements

Students should consult the MPH Program Manual for a detailed list of graduation requirements. The manual can be accessed at: www.jhsph.edu/academics/degreeprograms/mph/current_students.

- Total of 80 units required for graduation
- At least 60 units in formal Bloomberg School coursework that is not special studies
- Students must maintain a grade "C" or better in all required MPH core courses and courses that meet

concentration area requirements that are offered for a letter grade

- Complete the MPH Goals Analysis
- Complete the Practicum Requirement
- Complete the MPH Capstone project
- Internet-based/part-time students must complete at least 16 units of coursework in a face-to-face format; not special studies
- Maintain minimum academic standards as described in the MPH Student Program Manual. Failure to maintain minimum standards is grounds for dismissal from the program.
- Complete the School's Academic Ethics module

MPH Customized Programs and Concentration Areas

Full-time MPH students may either elect an optional concentration area or customize their program of study. Regardless of whether a student elects a concentration or customizes the program of study, all students must complete the MPH core course requirements, the MPH Individualized Goals Analysis, the Public Health Practicum, and MPH Capstone Project. Students electing a concentration must complete a number of required course units as specified by the concentration area over and above the MPH core course requirements. Students who customize their program of study complete the core MPH requirements and then choose elective courses for the remaining units in consultation with their faculty advisers.

Part-time/Internet-based MPH students participating through a predominantly off-campus format will not be able to elect a concentration, but can use the concentrations as a guideline to customize the curricu-

lum for specialization in a particular area of public health.

For a complete listing and description of the MPH concentrations, please visit www.jhsph.edu/academics/degreeprograms/mph/curriculum/F_Concentrations_Customizing.html.

MPH Customized Program of Study

Faculty Directors:

Susan Tonascia, ScM

Senior Scientist

Epidemiology

Edyth Schoenrich, MD, MPH

Professor

Health Policy & Management

The MPH customized program is designed for students who are interested in a broad perspective on the science and practice of the population-based approach to health and disease. It allows students the flexibility to tailor programs which meet their individual professional goals and interests. Such students often already have a specific area(s) of expertise, but also prefer the option of access to a wide range of course content throughout the academic year. Additional reasons for choosing a customized program might include having academic objectives that do not precisely fit into the more structured concentration areas or lack of a firmly predetermined area of focus in public health.

The only required courses are those included in the core MPH curriculum, with the remainder as tailored electives. Customized students will meet monthly as a group. These meetings will provide an academic and professional "home" for the customized students and an opportunity to interact with other students and faculty with a broad range of interests.

Child and Adolescent Health

Faculty Concentration Directors:

Andrea Ruff, MD

Associate Professor

International Health

Anne Riley, PhD, BSN

Professor

Population, Family and Reproductive Health

The MPH concentration in Child and Adolescent Health (CAH) focuses on understanding the health problems and health status of children and adolescents across the globe, the nature and scope of the multiple determinants of their health status, and the range of public health programs to address the health and well-being of children and their families, in developed and developing countries. Students participating in the CAH concentration will be assigned a faculty adviser with similar interests and will be assisted in developing an understanding in the following critical areas based on their coursework, their Capstone, and the seminars conducted monthly by the CAH concentration.

- The concept of child/adolescent health, and the determinants of child and adolescent health status in industrialized and resource-limited settings, including socio-economic, demographic, developmental, behavioral, cultural, political, and environmental determinants
- Current basic understanding of specific health problems of children and adolescents, including obesity and other nutritional issues, injury, infectious diseases and HIV, chronic and disabling conditions, adolescent health concerns, and others
- The design, development, implementation, and evaluation of public health programs to improve the health and well-

being of children, including immunization programs, child survival strategies, primary health care, health promotion and disease prevention efforts, including those that target HIV/AIDS and injury prevention

Epidemiological and Biostatistical Methods for Public Health and Clinical Research

Faculty Concentration Directors:

Rosa Crum, MD

Professor

Epidemiology

Marie Diener-West, PhD

Professor

Biostatistics

This concentration is designed for students with quantitative backgrounds who wish to pursue a rigorous curriculum in epidemiologic study design and statistical data analysis. The goal of this concentration is to help students participate in the design, conduct and analysis of research studies in public health and put concepts into practice. This concentration is best suited for students who have already worked in a particular substantive area and have identified specific research questions. The competencies gained from this concentration include the following:

- Articulating an appropriate question/hypothesis
- Identifying an appropriate study design and data set for answering the question
- Obtaining Institutional Review Board (IRB) approval
- Gaining familiarity with aspects of data management
- Identifying and applying appropriate statistical methods and correctly interpreting results
- Gaining familiarity with tracking and recording steps in the analysis of a data set

- Writing up the results of a data analysis for a professional publication
- Oral presentation of the results

Food, Nutrition, and Health

Faculty Concentration Directors:

Laura E. Caulfield, PhD

Professor

Center for Human Nutrition, International Health

Cheryl Anderson, PhD, MS, MPH

Assistant Professor

Epidemiology

This concentration provides students with an opportunity to focus their study on food and nutrition as it affects health and integrate this information with other coursework in order to develop the skills to understand and address nutrition problems in the U.S. and around the world.

Students choosing this concentration will gain an understanding of:

- The role of foods and nutrition in disease risk and prevention
- The methods for studying food consumption, nutritional status and the use and interpretation of nutritional data
- The design and implementation of nutrition programs and policy to improve the nutrition and health of diverse populations

Infectious Diseases

Faculty Concentration Directors:

Clive Shiff, PhD

Associate Professor, Molecular Microbiology and Immunology

Ken Nelson, MD

Professor, Epidemiology

Neal Halsey, MD

Professor, International Health

This concentration provides students with competencies in multiple disciplines including epidemiology, immunology, microbiology, parasitology, and vector-borne diseases

to address critical problems in the control and prevention of infectious diseases. Students who complete the concentration gain special expertise in the pathogenesis, epidemiology, and control of infectious diseases appropriate for careers within state health departments, federal agencies or the pharmaceutical industry conducting research in these matters. Students are exposed to the fundamental concepts underlying the epidemiology and control of a number of infectious diseases affecting global health.

Global Environmental Sustainability and Health

Faculty Concentration Directors:

Cindy Parker, MD, MPH

Assistant Professor

Environmental Health Sciences

Brian Schwartz, MD, MS

Professor

Environmental Health Sciences

Peter Winch, MD, MPH

Professor

International Health

This concentration provides students with an understanding of how human consumption and standards of living have exceeded the carrying capacity of the earth; how, as a result, the environmental resources upon which we depend have been severely compromised; and how this affects the health of individuals, communities, and the global population. Specifically, students will learn how land use (including patterns of suburban sprawl), transportation patterns and systems, energy use, food production and distribution, water use, and population growth contribute to climate change, ecosystem degradation, and species extinctions and biodiversity losses, and how these, in turn, threaten human health on local, regional, and global scales.

The goal of this concentration is to provide students with the neces-

sary knowledge about the drivers of global environmental change and the consequences for health. In addition, students will gain necessary skills to develop appropriate responses to these challenges for global environmental sustainability through qualitative research methods and behavioral change interventions.

The objectives of the MPH concentration include:

- Acquire key knowledge of the drivers of global environmental change and possible responses on local, regional, and global scales:
 - Identify the five main drivers of global environmental change: land use, energy use, food use (i.e., food production and distribution), water use, and population growth
 - Explain how these drivers interact with each other to result in global environmental consequences such as climate change, ecosystem degradation, biodiversity loss, and species extinctions
 - Describe the complexities and interrelationships of these drivers and their environmental and public health consequences
 - Explain the implications of the consequences to individual, community, and global health
 - Compare and contrast potential solutions or responses to ensure global sustainability and improved health in the context of the complicating challenges of the coming era of energy scarcity, U.S. federal indebtedness, and myriad political obstacles
 - Describe the types of organizations and businesses working on addressing the problem of global environmental change, and the

approaches each type is taking to producing change

- Develop a set of intervention skills to change behavior.
 - Present information on global environmental change and possible responses for a range of audiences (e.g., professional groups, community organizations, schools)
 - Select models and theories relevant to the design of behavior change interventions for different groups and behaviors, and apply them in design of the intervention
 - Develop a plan for behavior change communication for behaviors related to sustainable use of the environment

Health in Crisis and Humanitarian Assistance

Faculty Concentration Directors:

Courtland Robinson, PhD

Assistant Professor

International Health

Shannon Doocy, PhD

Assistant Professor

International Health

This concentration focuses on health of populations in crisis, internationally and domestically. These include refugees, internally displaced persons (IDPs), populations affected by natural and human-made disasters, victims of human rights abuse, and survivors of human trafficking. The coursework will focus on why populations become vulnerable and the health issues they face. Preparedness, advocacy and response to promote effective and equitable interventions will be stressed. Emphasis will also be placed on gaining expertise in methods to assess needs and provide assistance to displaced populations and other vulnerable groups.

A variety of methods will be used to teach students basic skills including to:

- Identify, protect and advocate for vulnerable groups
- Develop appropriate public health responses for refugees and displaced persons
- Measure health and demographic indicators in humanitarian emergencies
- Plan food, water and sanitation programs for displaced populations
- Implement and monitor humanitarian assistance programs

Health Leadership and Management

Faculty Concentration Directors:

Ann-Michele Gundlach, EdD

Assistant Professor

Health Policy and Management

Anbrasi Edward, PhD, MPH, MBA

Assistant Professor

International Health

This concentration provides students with an understanding of the challenges of organizational leadership and management in the health sector. The concentration is aimed at individuals whose responsibilities require them to have the knowledge and skills essential to balance the demands of leading and managing during times of change, but do not require a full management degree. Students will gain a fundamental understanding of leading and managing health organizations in a range of settings in both domestic and international settings. Topics covered include the following:

- Understanding the health care environment
- Leadership and management development
- Organizational structure and design

- Strategic management and planning
- Organizational stakeholders
- Governance
- Human resources management
- Managing change
- Quantitative tools for management
- Budgeting and financial management
- Working with teams and groups
- Approaches to process improvement
- Measuring and monitoring organizational performance

Through a variety of teaching methods (lectures, laboratories, group work, seminars, case methods, individual assignments) and application of the leadership and management frameworks, students will be able to demonstrate the skills and attributes to function effectively in health sector organizations. These include: performing stakeholder analysis and developing a detailed understanding of stakeholder expectations within an organization; analyzing problems using quantitative tools to support management and decision-making; planning strategically and setting management priorities; developing a budget based on information regarding business or service volume, staffing levels, salary rates, and supply usage and costs; team building, facilitating work team performance; acting ethically in an organization; and applying performance improvement concepts and tools in order to design or redesign a specific process and using indicators to measure and monitor organizational performance.

The Health Leadership and Management Concentration also offers a monthly film series focused on leadership and management topics which is open to the whole school.

Health Systems and Policy

Faculty Concentration Directors:

Sara Bennett, PhD

*Associate Professor
International Health*

Sara Bleich, PhD

*Assistant Professor
Health Policy and Management*

This concentration aims to develop a broad understanding of health systems and approaches to the development and implementation of health policy. Students will learn about key health policy issues, health care systems and public policies and programs in the U.S. and in select low-, middle-, and high-income countries. It is possible for students in the concentration to follow either a U.S.-focused course of study, or one that addresses health systems and policy in low and middle income countries, or a mixed approach.

Through their coursework, students acquire a solid foundation in methods pertaining to policy analysis, the analysis of health systems (particularly, systems for health financing) and the application of economics and evaluation techniques in the health sector. The required curriculum provides students with a sound knowledge of the processes through which public policy decisions are made; training in basic quantitative and analytic methods; and the skills needed to use and critique data, research findings, and program evaluations in the development of health policies. The curriculum provides an overview of changes occurring in the U.S. and internationally in health sector policy and financing.

Social and Behavioral Sciences in Public Health

Faculty Concentration Directors:

Janice Bowie, PhD, MPH

*Associate Professor
Health, Behavior and Society*

Caitlin Kennedy, PhD, MPH

*Assistant Professor
International Health*

The MPH concentration in Social and Behavioral Sciences in Public Health provides students with competencies in the areas of: 1) theoretical basis of behavioral intervention and psychosocial influences on health and illness; 2) social and behavioral intervention design and implementation; and 3) social and behavioral research methods and program evaluation.

The specific competencies included under these topic areas are:

- Theoretical basis of social and behavioral intervention and psychosocial influences on health and illness. These have implications for both behavioral interventions and understanding psychosocial influences on health and social policies that affect health:
 - Identify social and psychological factors and processes in the etiology of disease and health related behaviors
 - Articulate the influence of major social structural divisions such as gender, SES, and ethnicity on health and health related behaviors
 - Appropriately select and apply behavioral science theories to studying health problems in diverse populations
- Social and behavioral intervention design and implementation:
 - Apply principles from educational, behavioral, communication, social and psychological theory to influence health related behaviors and health status in diverse populations
 - Utilize effective needs assessment and program

planning skills to design health promotion programs and policies

- Implement a wide array of intervention strategies, including media-based (mass media, small media, electronic media), interpersonal communication, social support and social network based interventions, advocacy and community organizing
- Articulate and address issues that facilitate implementation and sustainability of effective behavior change programs
- Social and behavioral research methods and program evaluation:
 - Conduct process, impact, and outcome evaluations of health behavior change programs
 - Conduct qualitative and formative research in the social and behavioral sciences
 - Appropriately select and apply behavioral science research methods to studying health problems and evaluating interventions

Students completing this concentration can gain skills in designing, implementing, and evaluating programs promoting healthy behaviors in international and/or domestic settings. Students can also focus on analysis of psychological and social influences on health and behavior. They can obtain skills necessary for working with diverse populations, on a variety of health topics, and in non-profit organizations and government agencies at all levels. The concentration includes required and elective courses, a special seminar, and a capstone experience. Students completing this concentration may be eligible to take the national certifying exam to become a Certified Health Education Specialist.

Women's and Reproductive Health

Faculty Concentration Directors:

Donna Strobino, PhD

Professor

Population, Family and Reproductive Health

Michelle Hindin, PhD

Associate Professor

Population, Family and Reproductive Health

This concentration focuses on understanding the health status of women with regard to their general and reproductive health, the determinants of their health status, and preventive strategies and programs to address women's health and well being, as well as the health of their newborns. Students may opt to focus on women's, reproductive or perinatal health issues either domestically or in a developing country setting. The goals of the concentration provide students with competencies and understanding in several critical areas including:

- The scope and magnitude of health problems for women with regard to their health in general or reproductive health, with a focus across the life span, and including infectious, chronic and disabling conditions
- The determinants of women's and reproductive health, including socio-economic, cultural, behavioral, environmental, political and other determinants
- Analytic skills in the core MPH courses, as they are applied to women's and reproductive health as well as other skills including demographic, evaluation, and epidemiologic methods
- Development and implementation of public health programs and clinical interventions to improve the reproductive health and well being of women, including programs related to family planning services, safe

motherhood, or health during the reproductive years

DOCTOR OF PUBLIC HEALTH

The Doctor of Public Health (DrPH) degree is a Schoolwide advanced professional degree program designed for the student who has a Master of Public Health (MPH) or equivalent degree and who intends to pursue a leadership career as a public health professional. The mission of the DrPH program is to prepare graduates to advance the public's health through the integration and application of a broad range of knowledge and analytical skills in leadership, practice, policy analysis, program management and professional communication, coupled with preparation in a specific disciplinary public health field. The DrPH program prepares graduates to apply these skills and methods in both academic and non-academic settings as well as in either public agency or private sector settings that emphasize improving the health of the public.

Full-time and Part-time—The DrPH degree may be completed on either a full- or part-time basis depending on the department and course of study. Candidates in the full-time DrPH program fulfill the residency requirement and register for a full course load each term (16 credits or more per term). The part-time DrPH is designed to allow working public health professionals to complete a doctoral education as part of a career development plan. Specific deadlines for completion of the full- and part-time program requirements are found in the department handbooks.

Admission

Admissions decisions to the DrPH program are determined by each department offering the degree. Admission is based on evaluation of the applicant's educational and work

experience, past academic performance, and potential to provide leadership in public health. Admission requirements include, in addition to the MPH degree, the following:

- At least two years of relevant work experience or relevant professional skills as determined by the department to which the student is applying
- Evidence of quantitative or evaluative skills and ability. This criterion is usually met in the form of scores on recent GRE or other standardized exams (usually taken in the last 5 years). In addition, applicants must meet specific departmental requirements
- Applicants whose native language is not English will be required to submit the results of the Test of English as Foreign Language (TOEFL) or the International English Language Testing System (IELTS)

Questions about specific admissions requirements for the DrPH should be addressed to both the DrPH program office (gwhite@jhsph.edu or 410-502-6150) and the department of interest.

Curriculum

The DrPH Program has both a Schoolwide component and a departmental component. Generally stated, the Schoolwide component emphasizes the advanced, cross-cutting knowledge and skills associated with leadership, integration and application of public health concepts. The departmental component emphasizes the disciplinary knowledge and competence in a specific public health field.

Core competencies to be mastered by DrPH students include the core knowledge and abilities of the MPH program plus advanced expertise

in health and disease in human populations, public health leadership, and methodologies essential to the solution of public health problems, as well as the administration and evaluation of public health programs.

The core curriculum includes formal coursework plus a DrPH Schoolwide Seminar, where informal interactions among students and faculty enhance student professional development. The objectives of the DrPH seminar are to help students understand the intellectual origins of public health as a field and to help build a DrPH intellectual community by linking DrPH students across departments and across cohorts as well as with public health practitioners and faculty working on a wide range of public health challenges.

The doctoral dissertation for the DrPH demonstrates the student's capacity for public health analytic work. The DrPH dissertation will meet the following criteria: addresses a practical problem confronting a leader in public health practice; represents original thought and work; uses a rigorous and scientifically defensible analytic component; and is based on a conceptual model that relates the work to existing knowledge and to practice. The specific content of the dissertation is developed by the student in consultation with the faculty of his/her department. For specific graduation requirements, DrPH candidates should consult their departmental handbooks/student manuals.

MASTER OF HEALTH ADMINISTRATION

The Master of Health Administration (MHA) program, offered by the Department of Health Policy and Management, is a professional master's degree that emphasizes the conceptual, analytical, and applied skills required to advance into

management careers in hospitals and health systems, consulting firms and other health care related businesses. The MHA is designed to develop health care leaders for a rapidly changing world. The program is a full graduate member of the Association of University Programs in Health Administration (AUPHA) and is accredited by the Committee on Accreditation of Healthcare Management Education (CAHME).

Admission

To be accepted as a candidate, the student must hold a baccalaureate-level degree in a field of study considered appropriate to the MHA program. All applicants must demonstrate the compatibility of their career goals with the educational objectives of the MHA program. Applicants are required to complete and submit the results of the Graduate Record Exam or the Graduate Management Aptitude Test.

Curriculum

The MHA is a cohort program requiring one full-year of coursework in which students complete approximately 75 credits over four terms. The curriculum includes a wide variety of courses that provide opportunities to study current economic, social, technological and marketplace issues that directly influence health care organizations and the health care sector in general. Additionally, the curriculum includes courses to develop competence in the core areas of public health. The second year of the program is comprised of an 11-month administrative residency field placement during which time students also complete three courses via the Internet.

Graduation

In addition to successful completion of all required courses and a field placement, students must submit a

capstone paper during the second year. Completion of the Academic Ethics Module is also a graduation requirement.

MASTER OF HEALTH SCIENCE

The Master of Health Science (MHS) degree is a specialized master's degree offered by each of the academic departments of the School. Depending on the department and specific area of study, the MHS degree provides opportunities for advanced study and research. They offer an alternative to the Master of Public Health (MPH) degree for students desiring more focused skills and for less experienced students.

MHS programs provide students opportunities for advanced study in preparation for graduate or professional school or for participation in research. At a minimum, programs require four terms of full-time coursework, a written culmination such as a thesis, essay or other written exercise, and an oral presentation. MHS programs are offered by the departments of Biochemistry and Molecular Biology (reproductive and cancer biology), Biostatistics (biostatistics); Environmental Health Sciences (environmental health); Epidemiology (cancer, cardiovascular disease, clinical, aging, general, genetic, infectious disease, and environmental epidemiology); Graduate Training Program in Clinical Investigation (clinical investigation); Health, Behavior and Society (social factors in health); Health Policy and Management and International Health (health economics); Mental Health (mental health); Molecular Microbiology and Immunology (molecular microbiology and immunology) and Population, Family and Reproductive Health (demography). Further information about all degree programs can be found in the appropriate departmental sections.

Admission

To be accepted as a candidate, the applicant must hold a baccalaureate with strong academic backgrounds in the natural or social sciences. All applicants must demonstrate the compatibility of their career goals with the educational objectives of the degree program to which they are applying. Applicants are usually required to complete and submit the results of the Aptitude Test of the Graduate Record Examination.

Curriculum

All MHS programs require a minimum of 64 credit units for graduation to be completed over a minimum of four terms. MHS degree candidates must successfully complete courses on the responsible conduct of research (e.g., Research Ethics 550.860 or Research Ethics and Integrity 306.665 or equivalent) and Public Health Perspectives on Research 550.865-.866. Time to complete the degree depends upon the specific requirements of the program. Not more than four calendar years may elapse between matriculation and completion.

Graduation

A minimum of 64 credit units is required for the MHS degree, as is completion of the Academic Ethics Module. Each program has also developed its own specific requirements for this degree, including admission, courses, and residence requirements. Requirements for a culminating essay or thesis are also specific to the degree program. For details, please review the appropriate departmental sections.

MASTER OF SCIENCE

The Master of Science (ScM) program is designed for students who wish to acquire research skills in a "hands-on" manner. At a minimum,

programs require four terms of full-time coursework and preparation and approval of a written thesis based on original research and worthy of publication.

Admission

To be accepted as a candidate, the student must have a degree in arts, science, or medicine and have completed a major in mathematics or in one of the physical, biological, or social sciences. The application must have the approval of the head of the department in which the student wishes to work. Applicants nearly always are obliged to take and submit the results of the Aptitude Test of the Graduate Record Examination as one of the requirements for admission.

Curriculum

The curriculum varies with the department of the student's major interest and with the individual's needs. In addition to the work in his or her own department, the student is required to take courses in at least two other departments of the School. Departments currently offering programs leading to a ScM degree include Biochemistry and Molecular Biology (biochemistry and molecular biology); Biostatistics (biostatistics), Epidemiology (cancer, cardiovascular disease, clinical, aging, general, genetic, infectious disease, and environmental epidemiology); Health Behavior and Society (genetic counseling) and Molecular Microbiology and Immunology (molecular microbiology and immunology).

Graduation

The following requirements must be met before the student is presented for the degree:

- A minimum of 64 credits is required to complete the degree. The department offering the degree shall determine what proportion of the required

academic credits may be taken in full-time residence and what proportion may be taken on a part-time basis. Not more than four calendar years may elapse between the date of matriculation and fulfillment of all requirements for the ScM degree

- At least 12 credit units of formal coursework are required in courses outside of the student's primary department. At least six of these credits must be taken in the Bloomberg School. The remaining outside credit units may be earned in any department or division of the University
- A written examination in the principle subject administered by the student's department
- Satisfactory completion of a course in the responsible conduct of research, e.g., 550.860 Research Ethics, or 306.665 Research Ethics and Integrity: U.S. and International Issues and Public Health Perspectives on Research 550.856-.866.
- Students are expected to conduct laboratory or field research culminating in the preparation of a thesis. The extent of this research is in accordance with the need to satisfy the thesis requirement and must be approved by a committee of the faculty. (In any study involving human subjects, clearance by the Committee on Human Research must be obtained prior to the initiation of the investigation. In any study involving animals, clearance by the Institutional Animal Care and Use Committee must be obtained prior to the initiation of the investigation)
- Completion of the Academic Ethics module

MASTER OF SCIENCE IN PUBLIC HEALTH

The Master of Science in Public Health (MSPH) offers students the opportunity to directly apply what they learn in classes and gain practical experience as part of their program so that upon graduation they can begin or advance their careers as public health professionals. MSPH degree programs provide students who do not have prior health-related professional experience with specialized in-depth academic training followed by internships that provide opportunities to apply classroom instruction to public health practice. For individuals with prior health-related professional experience, MSPH programs provide specialized in-depth training to advance these skills followed by internships for more advanced practice experience. At a minimum, they require four terms of full-time coursework, a written culmination such as an essay or other written exercise, and an internship that is appropriate to their program.

Departments that offer MSPH degree programs are: Environmental Health Sciences (occupational and environmental hygiene); Health, Behavior and Society (health education and health communication); Health Policy and Management (health policy); International Health (global disease epidemiology and control, health systems, human nutrition, social and behavioral interventions) and Population, Family and Reproductive Health (child and adolescent health and development; population and health; and reproductive, perinatal and women's health).

Admission

To be accepted as a candidate, the applicant must hold a baccalaureate with strong academic backgrounds in the natural or social sciences. All

applicants must demonstrate the compatibility of their career goals with the educational objectives of the degree program to which they are applying. Applicants are usually required to complete and submit the results of the Aptitude Test of the Graduate Record Examination.

Curriculum

All MSPH programs require a minimum of 64 credit units for graduation to be completed over a minimum of four terms. MSPH degree candidates in professional programs receive training in the five areas of knowledge considered by the Council on Education for Public Health to be basic to public health and must successfully complete a field placement practicum or equivalent. Time to complete the degree depends upon the specific requirements of the program. Not more than four calendar years may elapse between matriculation and completion.

Graduation

A minimum of 64 credit units is required for the MSPH degree, as is completion of the Academic Ethics Module. Each program has also developed its own specific requirements for this degree, including admission, courses, and residence requirements. Requirements for a culminating essay and/or field placement practicum are also specific to the degree program. For details, please review the appropriate departmental sections.

DOCTOR OF PHILOSOPHY

Curriculum

The Doctor of Philosophy (PhD) degree is the degree where scholarship is represented by the creation of new and innovative knowledge. Each department of the Bloomberg School offers the PhD degree. The

PhD degree represents outstanding achievement in the scholarship of discovery, signifies a capacity for independent research, and is primarily a degree for those individuals with research and/or teaching as their goal. The curriculum is planned by the department under the concept stated above, namely, that it contain breadth of coverage in addition to intensive work in the field of special study. The progress of each PhD student's research is followed regularly, at least once per year, by a Thesis Advisory Committee consisting of the thesis adviser and two to four other faculty. The objective of the Thesis Advisory Committee is to provide continuity in the evaluation of progress and development of the student.

Admission

Well-qualified students with evidence of exceptional ability in acquiring the bachelor's or master's degree may be accepted following recommendation of the department in which they wish to study. Applicants nearly always are obliged to take and submit the results of the Aptitude Test of the Graduate Record Examination as one of the requirements for admission.

Graduation

Requirements for completion of the PhD degree are determined by the Bloomberg School of Public Health and include fulfillment of the following requirements before being presented for the degree:

- Satisfactory completion of a departmental comprehensive written examination in the principle subject given by the major department
- A minimum of four consecutive terms of registration as a full-time student is required. If a student completes a master's program at the Bloomberg School and continues into a PhD program within one year of completing the master's program, the subsequent four-term residency may be waived by the department if it was satisfied as part of the master's program. The full-time residency requirement must be fulfilled prior to the preliminary oral examination
- Satisfactory completion of a preliminary oral examination administered by a committee of the faculty. The examination should be taken not later than the student's third year in residence and before significant engagement in thesis research. Not more than seven years may elapse between the date of matriculation and fulfillment of all requirements for the degree
- Coursework as required by the department. In addition, at least 18 credit units must be satisfactorily completed in formal courses outside the student's primary department. Among these 18 credit units, not less than nine credit units must be satisfactorily completed in the Bloomberg School. The remaining outside credit units may be earned in any department or division of the University. Candidates who have completed a master's program at the Bloomberg School may apply 12 credits from this program toward the above requirement
- Satisfactory completion of a two-term course, 550.865-.866 Public Health Perspectives in Research (during second or third year), and a course in the responsible conduct of research, e.g., 550.860 Research Ethics, or 306.665 Research Ethics and Integrity. PhD students who have earned an MPH degree within the last 10 years may request a waiver for Public Health Perspectives
- Completion of the Academic Ethics module
- Completion of a satisfactory investigation in the principle subject and its presentation in the form of a thesis, approved by a committee of the faculty. The material contained in the thesis should be worthy of publication in a scientific journal in the field involved. (In any study involving human subjects, clearance by the Committee on Human Research must be obtained prior to the initiation of the investigation. In any study involving animal use, clearance by the Institutional Animal Care and Use Committee is required prior to initiation of the investigation.) Where appropriate to their career interests, students will be expected to gain relevant teaching experience, either before arrival at the Bloomberg School or as part of the educational program at the School
- Oral defense of the thesis by the candidate before a committee of the faculty
- Written acceptance of the thesis from Committee chair and student adviser
- Submission of the thesis

DOCTOR OF SCIENCE

The Doctor of Science (ScD) degree is available in some departments as an alternative to the Doctor of Philosophy (PhD) degree. The ScD degree is for individuals of exceptional ability who seek to establish the methods and skills needed for a career in research, often in an academic setting. Departments that offer the ScD degree are: Epidemiology (cancer, cardiovascular disease, clinical, clinical trials, aging, general, genetic epidemiology, infectious disease, and environmental epidemiology), and Health, Behavior and Society (social and behavioral sciences).

Admission

Admission requirements are similar to those for the PhD degree in that well-qualified students with evidence of exceptional ability in acquiring the bachelor's or master's degree may be accepted following recommendation of the department in which they wish to study. Applicants nearly always are obliged to take and submit the results of the Aptitude Test of the Graduate Record Examination as one of the requirements for admission.

Curriculum

Similar to the PhD, the ScD degree represents outstanding achievement in the scholarship of discovery, signifies a capacity for independent research, and is primarily a degree for those individuals with research and/or teaching as their goal. The curriculum is planned by the department under the concept stated above, namely, that it contain breadth of coverage in addition to intensive work in the field of special study. The progress of each ScD student's research is followed regularly, at least once per year, by a Thesis Advisory Committee consisting of the thesis adviser and two to four other faculty. The objective of the Thesis Advisory Committee is to provide continuity in the evaluation of progress and development of the student.

Graduation

The requirements for completion of the ScD degree are determined by the Bloomberg School. Students must meet similar requirements to the PhD degree (see graduation requirements for the PhD degree below), with the only difference being that the minimum of four consecutive terms of registration as a doctoral student in full-time residence required of PhD students may be waived by the department.

COMBINED DEGREE PROGRAMS

Graduate students working towards degrees in medicine, business, nursing, social work, international relations or law may integrate their degree programs with a public health degree from the Bloomberg School. These degree programs will provide students with additional credentials and unique skill sets that will prepare them for careers within their fields that require a high degree of health care expertise. Current PhD students in the Bloomberg School may pursue an additional master's or doctoral program, and undergraduates majoring in Public Health Studies at the Johns Hopkins University may enroll in a BA/MSPH or BA/MHS degree program. The Bloomberg School's Committee on Academic Standards approves these combined degree programs.

Degree Programs Offered with Other Schools

BA/MHS and BA/MSPH

The Johns Hopkins Krieger School of Arts and Sciences, in conjunction with the Bloomberg School, offers a major in public health studies for undergraduates interested in careers in public health. The major has been tailored to prepare students for careers that have a basic science foundation, including medicine, and to orient students to health policy and management (domestic and international), to other social and behavioral sciences, and to the quantitative sciences fundamental to public health.

The Bloomberg School departments of Environmental Health Sciences, and Health Policy and Management, will consider JHU undergraduates majoring in Public Health Studies for admission to the BA/MSPH program. The departments of Environmental Health Sciences, Epidemiology and Mental Health

will consider JHU undergraduates majoring in public health studies for admission to the BA/MHS program.

Students should formally apply for early admission during their junior year. Applications can be obtained online at www.jhsph.edu/admissions. Admitted students must complete the BA degree before formally enrolling in the Bloomberg School, but up to one-half of the public health credits (maximum of 16 credits) earned interdivisionally toward the BA may also apply toward the MHS or MSPH degree.

Johns Hopkins undergraduate Public Health Studies majors are welcome to apply to any master's program offered by the Bloomberg School during their senior year; however, the credit and application requirements will be the same as for other students entering the master's program from outside the BA/MHS and MSPH programs.

For further information, contact Dr. James D. Goodyear, Public Health Studies adviser, at 3505 N. Charles Street, Homewood campus; 410-516-7812; goodyear@jhu.edu.

GRADUATE TRAINING PROGRAM IN CLINICAL INVESTIGATION

The Doctor of Philosophy (PhD), Master of Science (ScM), and Master of Health Science (MHS) degrees in Clinical Investigation are a joint enterprise of the Johns Hopkins University's School of Medicine and the Bloomberg School. The Graduate Training Programs in Clinical Investigation (GTPCI) are targeted toward internal physician postdoctoral fellows and faculty in clinical departments of the School of Medicine. Students with other backgrounds may also be considered for the MHS track of the GTPCI Program. Please contact Bobbi Nicotera in the GTPCI office by

phone, 410-502-6965, or email, bnicote1@jhmi.edu, with any questions about the program.

N. Franklin Adkinson, MD
Director

Charles W. Flexner, MD
Associate Director

Advisory Council and Standing Committee Members

Richard Ambinder, MD
Fredrick L. Brancati, MD
Kay Dickerson, PhD
Marie Diener-West, PhD
Allan Gelber, MD, MPH, PhD
Diane E. Griffin, MD, PhD
Craig Hendrix, MD
Michael J. Klag, MD
Robert S. Lawrence, MD
Marlene Miller, MD, MSC
William Moss, MD
Dale Needham, MD, PhD
David Newman-Toker, MD, PhD
Peter J. Pronovost, MD, PhD
Naresh Punjabi, MD, PhD
Jodi Segal, MD, MPH
Scott L. Zeger, PhD
Pamela Zeitlin, MD, PhD
James Yager, PhD

GTPCI Academic Programs

Usually following one year of a clinical fellowship, a year of full-time coursework is undertaken. Subsequently, two or more years of mentored clinical research is undertaken in conjunction with a faculty mentor from the sponsoring School of Medicine clinical department or division. Upon successful completion of didactic instruction and demonstration of substantial achievement in Clinical Investigation in the form of an acceptable PhD or ScM thesis, the PhD or ScM degree is awarded by the Bloomberg School. Candidates are not admitted directly to the ScM program; all candidates for a thesis-requiring degree must qualify under the PhD program.

There is also a track leading to an MHS degree in Clinical Investigation. Health professionals with an advanced degree may apply. The MHS is a one-year, full-time program.

GTPCI Curriculum

There is a core curriculum common to both the PhD and MHS degree programs in Clinical Investigation. Both curricula were designed to provide competence in a wide variety of skills necessary for successful clinical research. However, the two degree programs differ in total credit hours, electives, and some courses. Detailed curriculum information for each can be found at www.jhsph.edu/gtpci/degrees/curriculum.html.

Admissions Requirements

The GTPCI program seeks students from a variety of academic and professional backgrounds. Application instructions specific to each GTPCI degree program, related forms, deadlines, transcript and standardized test requirements can be found at www.jhsph.edu/gtpci/degrees/application_instructions.html.

The following requirements apply to both PhD and MHS tracks:

- MD or appropriate advanced degree in a biomedical science
- Personal statement of professional and clinical research goals
- Two letters of support that meet the criteria outlined on the GTPCI website (www.jhsph.edu/gtpci)
- TOEFL scores (for applicants who speak English as a second language)
- GRE or MCAT scores
- USMLE or applicable test scores

Note: Minimum requirements may differ slightly for each degree program. Please contact the program office with

any questions regarding the admission criteria.

PhD-specific—*In addition, PhD admissions requirements include:*

- Physicians or other medical professionals who will have completed at least one year of their terminal subspecialty clinical training
- Physicians must have at least a guaranteed academic appointment at the fellowship and/or faculty level within the School of Medicine for at least a three-year term
- Other health professionals with an appropriate advanced degree and substantial human subjects research experience are also eligible to apply

MHS-specific—*In contrast, the MHS track will accept:*

- Physicians and other health professionals with advanced degrees but only one year available for full-time training
- Postdoctoral clinical investigators without current academic appointments within the School of Medicine
- Postdoctoral clinical investigators interested in coursework without a thesis research requirement
- Medical students desiring intensive clinical research training at the predoctoral level

Note: Only students who are accepted and matriculate into the MHS degree program will be eligible to receive the MHS degree. PhD or ScM students who are not able to complete their thesis research do not have the option to receive a MHS degree.

MA/MSPH

This program combines the Master of Arts in International Relations degree at the Paul H. Nitze School of Advanced International Studies

(SAIS) in Washington, D.C., and the Master of Science in Public Health in International Health at the Bloomberg School. Each two-year program may be completed in a total of three years. The program is designed to prepare students for careers that require a high level of health care expertise and a sophisticated understanding of international, political, socioeconomic, and cultural issues. Emphasis is given to the synthesis of knowledge and experience essential for planning and managing health services in a variety of settings around the world. Students in the program normally spend one year at the Bloomberg School and after completing the practicum, can enroll in the SAIS program for another year and a half, depending on the SAIS program the student chooses. The Bloomberg School component stresses the basic disciplines of epidemiology, biostatistics, and health policy and planning, along with specialized training in public health. The SAIS portion emphasizes public policy, development economics, regional studies, and foreign language instruction.

Separate applications must be submitted to each school and admission offered in both. Students already enrolled in one school will be considered by the other in competition with all other applicants for admission to the incoming class. For more information on the program, including how to apply: www.jhsph.edu/dept/ih/globalhealthdegrees/msph/Ma-msph.html.

MPH/MBA

The Bloomberg School, in conjunction with the Carey Business School of Johns Hopkins University, offers the Master of Public Health (MPH) and Master of Business Administration (MBA) degree program. This unique, 18-month, full-time program of study enables

students to integrate the philosophies, functions and competencies of the seemingly disparate fields of public health and business. Students acquire knowledge and skills in the principles of population-based health as well as of finance and management, which enables them to be more effective managers and leaders in health-related agencies and organizations. Graduates will be able to assess the public health needs of a defined population; develop, analyze and implement targeted health policies and programs; lead the process of change within their own organizations and communities; manage health care organizations so that identified goals can be achieved; and communicate health-related messages to targeted audiences.

An application form for the MPH/MBA degree program is available at www.jhsph.edu/admissions. The admissions committees of both schools will review all applications. Please note the academic policies for the MPH program will be applied to courses taken at the Bloomberg School, and the academic policies for the MBA program will be applied to courses taken at the Carey Business School. For more information and an application, visit the Admissions Services website at www.jhsph.edu/admissions, or call the MPH Program Office at 410-955-1291.

MPH/MSW

In collaboration with the University of Maryland School of Social Work (UMSSW), the Bloomberg School offers the Master of Public Health (MPH) and Master of Social Work (MSW) degree program. This program provides students with the knowledge and skills needed to become effective practitioners and leaders in health-related agencies and settings. Students obtain a population-based perspective as well as expertise in the quantitative sciences

that, when combined with training in social work, prepares them to be effective members of the social work community who can plan, implement and evaluate such programs.

MPH/MSW students complete the core MPH requirements, along with a customized public health curriculum and all required MSW coursework within a specific area of concentration. In a combined public health and social work practicum, the UMSSW grants six to nine academic credits for public health coursework, and the Bloomberg School allows up to 20 credits of special studies.

The MPH/MSW program is designed for full-time students. Students normally complete one year of the MSW program at UMSSW and then spend 11 months (starting in late June) completing the requirements for the MPH program, returning to UMSSW to complete the MSW program. The MPH degree is awarded upon completion of the MSW degree.

Interested applicants must apply to each school separately and simultaneously, taking care to indicate on the Bloomberg School's application form the appropriate beginning year for the MPH program. For students who successfully complete the degree program, the standard MPH admission prerequisite of previous health-professional training or two years of health-related experience is waived. All other prerequisites must be met.

Applicants must send their official transcripts and GRE scores separately to each school, and must also provide separate recommendations using the appropriate forms. Further information about the University of Maryland's MSW program may be obtained by contacting the Office of the Associate Dean for Admissions at 410-706-3025 or visiting www.ssw.umaryland.edu.

MSN/MPH

The Johns Hopkins University's School of Nursing and the Bloomberg School offer a Master of Public Health (MPH) and Master of Science in Nursing (MSN) degree program. This 18-month curriculum of full-time study is designed specifically for nurses seeking to link their clinical and managerial interests with public health so as to streamline the delivery of nursing services in a variety of settings. Two-thirds of the program consists of core courses in nursing and public health; the remaining elective courses allow students to pursue individualized concentrations. Please note that both degrees will be awarded jointly on a single diploma.

Applications for the MSN/MPH degree program must be obtained from and submitted to the School of Nursing, and will be reviewed by the admissions committees of both the School of Nursing and the Bloomberg School. The steering committee for the degree program will make the final admission decision. For more information and an application, contact the Office of Admissions and Student Services, The Johns Hopkins School of Nursing, 525 N. Wolfe Street, Baltimore, MD 21205; call 410-955-7548 or visit <http://son.jhmi.edu/academics/programs/masters/msn-mph/index.html>.

MPH/JD

The MPH/JD program prepares students in the overlapping fields of law, public health, policy, and ethics. Eligible candidates must apply and be accepted into the full-time MPH program at the Bloomberg School of Public Health and also separately apply and be accepted into the full time program at Georgetown University Law Center or into another accredited U.S. or Canadian law school for the Juris Doctor

degree. Students in the JD/MPH program will earn a Juris Doctor degree from their accredited law school and a Master of Public Health degree from Johns Hopkins. This degree program is offered in a full-time format only and takes a total of four years to complete. Students will complete one or two years of the JD degree program at an accredited U.S. or Canadian law school, which is a minimum of two full-time semesters. Then, starting in late June, spend 11 months completing the MPH program requirements. They will then return to their law school to complete the remaining year(s) of their JD program. To be eligible for the JD/MPH program, the applicant must provide written approval from the student's law school to take a leave of absence for one year to attend Johns Hopkins. JD/MPH applicants need not have fulfilled the usual MPH requirement of either an advanced degree or two years of health-related work experience at the time of admission to Johns Hopkins. All other MPH admission prerequisites such as, college-level math and biological science coursework must be completed. The MPH degree is awarded upon the student's successful completion of the JD degree. For further information on the program, contact Professor Jon Vernick, jvernick@jhsph.edu.

MPH/MD

Medical students desiring a Master of Public Health typically enroll in the MPH program between their third and fourth years of medical school. Medical students must apply to the program and request a leave of absence from medical school. The years of medical training will fulfill the two years of health experience required for admission to the School's MPH program.

MD/PhD

The Bloomberg School, in conjunction with the Johns Hopkins School of Medicine, offers the MD/PhD degree program. Admitted students complete two years of medical school before pursuing a PhD program full-time at the Bloomberg School. After completion of the PhD degree requirements, students return to the School of Medicine to complete the MD degree. Candidates for the MD/PhD degree must fulfill all of the normal requirements for the PhD degree. Prospective students must submit application materials to the Admissions Office of the School of Medicine. For more information, visit the program's website at www.hopkinsmedicine.org/mdphd, or contact the MD/PhD program administrator, Ms. Sharon Welling (swelling1@bs.jhmi.edu or 410-955-8008).

Combined Degree Programs Offered within the Bloomberg School

Note: The PhD program is the primary program of study for any student accepted into a concurrent master's degree program.

Doctoral/MHS in Biostatistics

The Department of Biostatistics provides students who are candidates for doctoral-level degrees in one department of the Bloomberg School with the opportunity to earn a Master of Health Science (MHS) degree in Biostatistics during the course of their doctoral studies.

Candidates must apply directly to, and be admitted by, the Department of Biostatistics. Accepted students must have the permission of their doctoral department to enroll and to complete all requirements for the MHS degree. The MHS must be relevant to the candidate's field of doctoral study and must not impede progress in the doc-

toral program. For information about the MHS programs in the Department of Biostatistics, contact Mary Joy Argo at 410-614-4454 or margo@jhspsh.edu.

Doctoral/MSPH in International Health

The Department of International Health provides students who are candidates for doctoral-level degrees in one department of the Bloomberg School with the opportunity to earn a Master of Science in Public Health (MSPH) degree in International Health during the course of their doctoral studies. A similar opportunity exists for PhD students in the Department of History of Science, Medicine and Technology in the Johns Hopkins School of Medicine.

Candidates must apply directly to, and be admitted by, the Department of International Health. Accepted students must have the permission of their doctoral department to enroll and to complete all requirements for the MSPH degree. The MSPH must be relevant to the candidate's field of doctoral study and must not impede progress in the doctoral program. For information about the MSPH programs in the Department of International Health, call 410-955-3734 or email Cristina Salazar at csalazar@jhspsh.edu.

Doctoral/ScM

As a result of the complete sequencing of the human genome and rapid advances in high through-put molecular techniques, epidemiology is poised to move beyond measuring associations of exposures with disease occurrence to assessing the underlying biological mechanisms of pathogenesis. The Interdepartmental Program in Molecular Epidemiology (IPME) offers specialized cross-training in molecular epidemiology, whereby PhD students in one of the School's laboratory-based science

departments (Biochemistry and Molecular Biology; Environmental Health Sciences; Epidemiology, Molecular Microbiology and Immunology; and the laboratory groups in International Health) earn a concurrent Master of Science (ScM) degree from the Department of Epidemiology. PhD students in the Department of Epidemiology have a similar opportunity to concurrently earn an ScM degree from one of the laboratory-based science departments.

The objective of the Interdepartmental Program in Molecular Epidemiology is to provide candidates with solid training in the complementary disciplines of epidemiology and laboratory molecular biology/genetics to encourage interdisciplinary approaches to solving public health problems. Candidates will select an academic training program based on the requirements for the individual departmental PhD and ScM requirements structured around a Core Curriculum in Molecular Epidemiology. The Core Curriculum will ensure a broad theoretical basis in the following subject areas: epidemiology, biostatistics, molecular biology, cellular biology, genetics, physiology/immunology, molecular epidemiology, and laboratory rotations.

The integrative aspects of the interdisciplinary model include a system of co-advising (advisers from doctoral and master's departments) and integration of PhD and ScM research into a single dissertation. The IPME dissertation will include results of both master's and doctoral research (which must be thematically related) and a chapter integrating the laboratory and epidemiologic approaches to the research topic. Successful candidates of the Interdepartmental Program in Molecular Epidemiology will be concurrently awarded a PhD

in the core department and an ScM degree in the joint department.

Admission to the IPME will follow standard admission procedures for the PhD and ScM departments,

with final approval by the Molecular Epidemiology Advisory Council. Prior laboratory experience/training is required for admission to the IPME.

For more information, contact Dr. Patti Gravitt, Associate Professor of Epidemiology and Chair of Molecular Epidemiology Committee, pgravitt@jhspsh.edu.

TRANSFERS BETWEEN PUBLIC HEALTH DEGREE PROGRAMS

When a matriculated student wants to change degree programs or move from one academic department to another prior to completion of a degree, it is considered a "Transfer." "Transfers" do not involve the Bloomberg School's Admissions Services.

Transfers are distinct from the situation where a student completes one degree and wants to pursue another; such a student must formally apply to the Bloomberg School, as this is not considered a transfer.

For more information about the policy regarding transfers, please visit www.jhspsh.edu/student_affairs/registrar/TransferPolicy.pdf.

CERTIFICATE PROGRAMS

Certificate programs represent courses of study in specific areas of public health. The Bloomberg School offers various certificates to degree students only, degree and nondegree students, and nondegree students only. Admissions standards and completion requirements vary with each certificate program. As there are fewer course requirements for

certificate programs than for formal degree programs, degree candidates may also pursue certificates as part of their degree program. Courses within certificate programs must be taken for academic credit, with the exception of the Public Health Training Certificate for American Indian Health Professionals, the Global Health Certificate, the Training Certificate in Public Health, and the Training Certificate in Science of Clinical Investigation (SOCl). A certificate of program completion is issued by the sponsor upon satisfactory completion of coursework.

For more information, including a complete list of certificate programs, prerequisites and required courses, visit www.jhsph.edu and click on “Academics” and then on “Certificate Programs.”

Certificate Programs Open to Johns Hopkins University or Bloomberg School Students ONLY:

CERTIFICATE IN ADOLESCENT HEALTH

Sponsoring department

Population, Family and Reproductive Health

Educational Objectives

The certificate program focuses on the health and welfare of adolescents and youth with particular attention on adolescent pregnancy, substance abuse, violence prevention, and mental health promotion. Those earning the certificate will be able to apply knowledge of adolescent growth and development, positive youth development, and cultural and ethical considerations of youth to design, implement, and evaluate adolescent health-related research, programs, and policies. Specifically the certificate will:

- Impart the current knowledge regarding how developmental (biological, cognitive, psychological), environmental

(physical and social), and cultural factors do and can be used to influence the health and health-related behaviors of adolescents.

- Allow the student to develop skills for designing research, programs, and/or policies using family-, school-, and/or community-based methodologies that are effective for addressing adolescent health issues and that adhere to ethical standards for adolescents who are legal minors.
- Provide the opportunity to combine knowledge about 1) the factors influencing adolescent health and 2) effective research, program, and/or policy methodologies to design, conduct, and/or evaluate research and/or to develop, implement, monitor, and/or evaluate programs/policies that are appropriate to address adolescent health issues, prevent unhealthy behaviors, and/or promote healthy ones.

Admissions Criteria

The certificate is open to currently enrolled masters, doctoral, and post-doctoral students at Bloomberg School of Public Health and the JHU School of Nursing. It is also open to JHU School of Medicine fellows, Urban Health residents, and Preventive Medicine residents. More information on this certificate can be found at www.jhsph.edu/academics/programs/certificates/program/54

BIOETHICS AND HEALTH POLICY CERTIFICATE

Sponsoring Department

Health Policy and Management

Educational Objectives

Upon completion of the Certificate in Bioethics and Health Policy, the student will be able to recognize and analyze a moral problem in public health practice, research, and health policy; and will be able to further

public policy debate concerning moral problems in public health practice, research, and health policy.

Intended Audience

Open to students enrolled in any graduate degree (master's or doctoral) program at Johns Hopkins University (all divisions).

Admissions Criteria

To be eligible to receive a certificate in bioethics and health policy, students must be admitted to a graduate degree program at the Johns Hopkins University. In addition, a letter addressed to the Bioethics faculty sponsor requesting admission, outlining courses to be taken and providing an estimated timetable for completion must be submitted along with written permission from the student's faculty adviser. Admission into the certificate program must be obtained prior to enrollment in the last course required for completion. Admission at the beginning of the student's matriculation, or shortly thereafter, is encouraged. Certificates will not be granted retrospectively upon course completion.

For more information about this certificate program with the Bloomberg School, please visit www.jhsph.edu/academics/programs/certificates/program/38.

COMMUNITY-BASED PUBLIC HEALTH (CBPH) CERTIFICATE

Sponsoring Department

Department of Health, Behavior and Society

Educational Objectives

To develop students' skills and competencies for careers in both community-based public health practice and research, particularly for applications in underserved urban settings. By marrying training in these two areas, this certificate will prepare future

community public health practitioners and researchers to collaborate.

The certificate will train recipients in the skills and knowledge necessary for community-based public health program development, management and evaluation, community-based participatory research (CPBR) and other research in community settings.

Intended Audience

Students enrolled in any graduate degree program (master's or doctoral) at the Johns Hopkins University.

Admissions Criteria

Admission to the certificate program may be granted to any student pursuing a graduate degree at the Johns Hopkins University. Applicants must submit a letter addressed to the faculty sponsor outlining their career objectives and how the certificate program will enhance those objectives.

For more information and an application for this certificate program at the Bloomberg School, visit www.jhsph.edu/academics/programs/certificates/program/44.

GERONTOLOGY CERTIFICATE

Sponsoring Departments

Epidemiology and Health Policy and Management

Educational Objectives

- Increase understanding of the health issues confronting aging populations
- Provide health professionals with skills for analyzing and improving the health of an aging population from an interdisciplinary perspective
- Foster constructive attitudes and solutions for the challenges of providing excellent health care for aging populations

- Demonstrate the relevance and application of public health gerontological research findings to health care

Intended Audience

Candidate's for master's or doctoral degrees at Johns Hopkins University.

Course of Study

To earn the certificate, a graduate student must complete satisfactorily four specified gerontology courses and one elective gerontology course.

The specified courses are: Health Issues for Aging Populations (309.605), Innovations in Health Care for Aging Populations (309.607), Epidemiology of Aging (340.616), and New Frontiers in Gerontology (309.608).

The elective course (3 credits each) must be chosen from: Biological Basis of Aging (260.665), Managing Long-Term Care Services for Aging Populations (309.606), Mental Health in Later Life (330.618), and Dynamics of Population Aging (380.753).

Admissions Criteria

Eligible recipients must be enrolled in a masters or doctoral degree-granting program at JHU. Applicants must submit an application to Brian Buta, administrative contact for the certificate. For more information on this certificate program at the Bloomberg School please visit: www.jhsph.edu/academics/programs/certificates/program/1.

HEALTH AND HUMAN RIGHTS CERTIFICATE

Sponsoring Department

Environmental Health Sciences

Educational Objectives:

The Certificate Program in Health and Human Rights is designed to:

- Increase understanding and foster positive attitudes among health professionals regarding the key linkages among human rights ideals, legal guarantees of human rights, and the promotion and protection of public health.
- Elaborate and explain details regarding the vital roles of health professionals in promoting human rights, especially the right to health, and building a culture of human rights.
- Build familiarity with international human rights standards, instruments, and the numerous state-based and international laws related to human rights, especially those that impact upon the health of populations and individuals.
- Introduce the skills needed to investigate, analyze, and document abuses of human rights as they relate to health and public health practice.

Intended Audience

The Certificate Program in Health and Human Rights is open to all enrolled degree candidates from any academic unit within the Johns Hopkins University.

Admissions Criteria

- Prior admission to a Johns Hopkins University degree program
- A letter to one (or both) faculty sponsor(s) requesting admission, outlining courses, and providing an estimated timetable for completion (choices can be modified with permission, as needs change)
- Prior written approval of student's faculty adviser. For more information on this certificate program at the Bloomberg School, please visit: www.jhsph.edu/academics/programs/certificates/program/2

HEALTH COMMUNICATION CERTIFICATE

Sponsoring Department

Health, Behavior and Society

Educational Objectives

Students completing the certificate will be exposed to and have a basic understanding of the theoretical and applied aspects of Health Communication. Competencies achieved will include, but are not limited to: awareness of behavior change and communication theories; knowledge of media effects and audiences use of media/communication modes; and recognition of quantitative and qualitative methods used in the study of Health Communication. Additionally, the Health Communication certificate program will familiarize students with the design and evaluation (formative, process, and summative) of communication messages, campaigns, and programs.

Intended Audience

Current degree students at the Johns Hopkins University with an interest in communication, social marketing, and health behavior change.

Admissions Criteria

To be eligible to receive a Health Communication Certificate, students must be admitted to a graduate degree program at the Johns Hopkins University. For more information and an application for this certificate program at the Bloomberg School, visit www.jhsph.edu/academics/programs/certificates/program/20.

HEALTH DISPARITIES AND HEALTH INEQUALITY CERTIFICATE

Sponsoring Department

Health Policy and Management

Educational Objectives

To train future leaders in research on health disparities and health inequal-

ity; to train individuals for leadership in health policy and public health practice on the underlying causes of health inequality; and to prepare public health professionals in known solutions for health disparities and health inequality.

Intended Audience

Students enrolled in any graduate degree program (master's or doctoral) in any division of the Johns Hopkins University.

Admissions Criteria

Admission into the program may be granted to any student pursuing a graduate degree at Johns Hopkins. Applicants must submit a letter addressed to the faculty sponsor outlining their career objectives and how the certificate program will enhance those objectives. For more information on this certificate program at the Bloomberg School please visit: www.jhsph.edu/academics/programs/certificates/program/21.

HEALTH EDUCATION CERTIFICATE

Sponsoring Department

Health, Behavior and Society

Educational Objectives

Students completing the certificate will gain a broad understanding of health education principles, theories, and strategies, and will achieve the competencies considered central to effective health education. After completing core and elective courses, students will be able to assess individual and community needs for health education, plan effective health education programs, implement health education programs, evaluate the effectiveness of health education programs, coordinate provisions of health education services, act as a resource person, and communicate health and health education needs, concerns and resources.

Intended Audience

This certificate is open to any student in a graduate degree program at the Johns Hopkins University.

Admissions Criteria

For more information and an application for this certificate program at the Bloomberg School, visit www.jhsph.edu/academics/programs/certificates/program/12.

HUMANITARIAN ASSISTANCE CERTIFICATE

Sponsoring Department

International Health

Educational Objectives

Humanitarian emergencies are becoming an increasingly important aspect of international health. The number of refugees and displaced persons is now estimated to be above 40 million with some 5–8,000 additional persons being displaced somewhere every day. Industrialization, rapid population growth, and political instability have greatly increased the population at risk from natural and man-made disasters in developing countries. The objective of this program is to equip graduates with the basic skills and capacities needed to plan and manage humanitarian assistance to displaced populations and for disaster preparedness and mitigation in the international context. These include planning, epidemiological assessment, control of communicable diseases, information and surveillance systems, environmental sanitation, estimating risks and hazards, and meeting nutritional needs. Additional areas covered include the protection of women and vulnerable populations, the basics of international humanitarian law, documentation and prevention of human rights abuses, psychosocial and mental health issues, and establishing logistical support for refugees and displaced persons.

Intended Audience

Health professionals pursuing master's or doctoral degrees in the Bloomberg School of Public Health who may be responsible for health care programs and policies for displaced and disaster-affected populations.

Note: This certificate parallels the MPH Concentration Area in Health in Crisis and Humanitarian Assistance. MPH students who have a career interest in humanitarian emergencies, disaster preparedness, and human rights are encouraged to pursue the concentration area.

Admissions Criteria

This certificate is open for health professionals pursuing master's or doctoral degrees in the Bloomberg School of Public Health, and is offered in conjunction with coursework in these programs. The certificate will be awarded when required courses have been satisfactorily completed; advance registration is not required (though students are encouraged to notify Dr. Burnham and their faculty adviser of their interest). For more information on this certificate program at the Bloomberg School of Public Health, please visit: www.jhsph.edu/academics/programs/certificates/program/9.

MATERNAL AND CHILD HEALTH CERTIFICATE***Sponsoring Department***

Population, Family and Reproductive Health

Educational Objectives

Upon completion of the core courses of the Maternal and Child Health (MCH) Certificate, individuals will gain a broad understanding of the field which focuses on the health and welfare of women and children. Competencies achieved will include: understanding the biological, social, and behavioral basis for a MCH

program; knowledge of the historical development of the field of MCH; knowledge of significant past and current national legislative mandates relative to MCH, including the structure and roles of legislative and administrative bodies at the national, state, and local levels; ability to define and describe the MCH population in a community; ability to prepare and interpret data; an understanding of the normal patterns of human growth and development; knowledge of the organization and financing of health systems in the U.S.; an understanding of the design, implementation, and evaluation of MCH needs assessment domestically and internationally; and an ability to identify essential gaps in existing programs serving mothers and children.

Intended Audience

Degree students in the Bloomberg School of Public Health with an interest in the health of women and children. MPH students affiliated with either the Child Health Concentration or the Women's and Reproductive Health Concentration may earn a MCH Certificate; however, course requirements are adjusted accordingly.

Admissions Criteria

Students must be admitted to a degree program in the Bloomberg School of Public Health. Additional information about this certificate may be found at www.jhsph.edu/academics/programs/certificates/program/7.

PUBLIC HEALTH PREPAREDNESS CERTIFICATE***Sponsoring Department***

Health Policy and Management

Educational Objectives

Through academic coursework, this certificate will provide essential tools for public health practitioners to

prepare for natural disasters, terrorism or other emerging threats.

Specific objectives are to: identify the major threats to public health and to identify public health issues in disasters, and to describe the integration of risk sciences, public health practice and public health surveillance as it relates to public health preparedness and terrorism response.

Intended Audience

Bloomberg School degree candidates.

Admissions Criteria

Completion of the certificate application must be submitted to the HPM Academic Office by the last day of add/drop in the term the last course required for the certificate is being completed.

For more information on the certificate programs at the Bloomberg School, visit www.jhsph.edu/academics/programs/certificates/program/23.

VACCINE SCIENCE AND POLICY CERTIFICATE***Sponsoring Department***

International Health

Educational Objectives

The objectives of this certificate program are to educate students in research, development and testing of vaccines and in public health vaccination policies.

Intended Audience

This certificate is open to all degree seeking candidates within the Bloomberg School of Public Health.

Admissions Criteria

Prior admission to a Bloomberg School of Public Health degree program.

For more information on this certificate program at the School,

please visit: www.jhsph.edu/academics/programs/certificates/program/4.

Certificate Programs Open to Johns Hopkins University or Bloomberg School and Nondegree Students:

DEMOGRAPHIC METHODS

Sponsoring department

Population, Family and Reproductive Health

Educational Objectives

Demographic analytic methods are used to calculate denominators of health measures. They, along with epidemiology methods, are used to develop profiles of those at risk for health/disease conditions, evaluate health care interventions, forecast health resource needs, and inform health care policies and planning based on accurate projections of at-risk groups.

Upon completion students will be able to:

- Assess comparative strengths and weaknesses of different methods of demographic analysis
- Analyze a range of population and health issues using appropriate demographic methods
- Critically evaluate the public health implications of results from applications of different demographic and population analysis methods

Intended Audience

The certificate is designed to serve two audiences—masters or doctoral degree students at The Johns Hopkins University and junior and mid-level professionals—desiring to gain skills in applying demographic analytic methods to identify or forecast public health problems and evaluate the effectiveness of policies or interventions aimed at mitigating them.

Admissions Criteria

Persons eligible for admission to the certificate program must be enrolled in a masters or doctoral degree program at The Johns Hopkins University (any division) or be a non-degree student with at least a baccalaureate degree from an accredited college or university. More information on this certificate can be found at www.jhsph.edu/academics/programs/certificates/program/57

ENVIRONMENTAL AND OCCUPATIONAL HEALTH CERTIFICATE

Sponsoring Department

Environmental Health Sciences

Educational Objectives

The Certificate Program in Environmental and Occupational Health educates and trains students to address major environmental health issues facing public health professionals today. The Certificate addresses:

- Sources of environmental agents and their distribution in community and work environments
- Transfer routes to humans and possible health effects
- The basic biological mechanisms underlying the association between prior exposure and subsequent development of adverse health effects
- Control strategies and interventions

A selection of online courses is available for students who wish to complete the certificate via the Internet.

For students interested in using the certificate as a lead-in to the Part-time/Internet-based MSPH in OEH, program: Please contact Carla Reinhard, creinhar@jhsph.edu.

Intended Audience

The Certificate is open to:

- Non-degree candidates who want to begin their formal training in environmental health (such as public health professionals currently practicing environmental/ occupational health who are seeking formal training)*
- Current degree candidates at the School.

Admissions Criteria

The program is open to any student qualified to register as a Special Student Limited, Special Student Regular or JHU degree candidate outside of the Department of Environmental Health Sciences. Students registered as a Special Student Limited, however, may pursue courses in only one certificate in the School due to enrollment restrictions. Admission to the Department as a Special Student Regular or degree candidate is required for individuals who wish to enroll in coursework beyond that required by the certificate program. It is recommended that students who plan to obtain the certificate should contact the Academic Program Manager to inform the department of their intent to pursue the certificate so that arrangements can be made to meet with a program director and discuss course options. The Department must also be informed in writing as soon as possible, but no later than the first week of the term in which the final course is to be taken. The Department's Academic Programs Manager may be contacted at 410-955-2212, nkulacki@jhsph.edu, Office E7039. Additional information about this certificate may be found at www.jhsph.edu/academics/programs/certificates/program/39.

GLOBAL HEALTH***Sponsoring Department***

International Health

Educational Objectives

Global health is the study of the health of populations in a global context, considering its political, social and economic impact. Those completing the certificate will be able to:

- Understand individual, community, and organizational behaviors and change processes in cross-cultural and developing countries settings as a foundation for planning appropriate primary health care programs
- Apply relevant social and behavioral theories to diagnose and understand individual, social network, organizational, community, and policy-maker behaviors associated with the planning, implementation, evaluation, and maintenance of community-based primary health care programs.
- Critically evaluate the strengths, weaknesses, and sustainability of disease control programs and policies for major causes of death and disability in developing countries and discuss program and policy implementation obstacles and approaches to overcoming them

Intended Audience

The certificate is primarily intended for junior and mid-level professionals practicing or planning to practice in developing countries and interested in expanding their global health skills and knowledge. The certificate can be completed entirely with online courses or with a combination of online and on-campus courses. Non-degree students may take the certificate courses not-for-credit at a reduced tuition rate or for credit. Bloomberg students currently

enrolled in any master's or doctoral degree program, other than degree programs in the Department of International Health, may also take the certificate for credit.

Admission Criteria

Non-degree Students must have at least a baccalaureate degree from an accredited college or university with a strong record of successful academic performance and have a minimum of one year of post-baccalaureate public health experience. For-credit and not-for-credit non-degree students apply to the certificate through the Admissions Services (www.jhsph.edu/admissions). With the exclusion of Department of International Health students, Bloomberg students currently enrolled in any master's and doctoral degree program may also earn the certificate for credit. For additional information, visit www.jhsph.edu/academics/programs/certificates.

GLOBAL TOBACCO CONTROL CERTIFICATE***Sponsoring Department***

Health, Behavior and Society

Educational Objectives

Tobacco use is the number one preventable cause of death in the world, and it is projected to kill one billion people in the 21st century unless effective tobacco control measures are implemented. In order to slow and ultimately end the global burden of tobacco-related death and disease, public health professionals, tobacco control professionals, and research scientists need to be equipped with the technical skills necessary to advance global tobacco control efforts. Currently there is no other certificate in the field of global tobacco control offered in the U.S. The aim of this certificate program is to provide formal education to research scientist and tobacco control professionals to equip them

with the technical skills necessary to play a core role in the global tobacco control movement.

Upon completion of the courses in the Global Tobacco Control Certificate Program, students will gain:

- General knowledge of global tobacco control along with an understanding of the scope of the health and economic burden of tobacco use worldwide
- An understanding of the multiple dimensions of tobacco use and prevention
- Practical approaches to tobacco prevention, control, surveillance, and evaluation
- Skills to develop, implement, and evaluate comprehensive tobacco control programs
- Problem-solving methodology to identify and develop appropriate intervention strategies
- Methods to develop and implement policy to stem the global epidemic of tobacco-related deaths

Intended Audience

Intended students for this certificate are research scientists and tobacco control professionals seeking formal education and training in tobacco control. Public health students and public health professionals who want specialized skills and knowledge to work in the area of global tobacco control.

Admissions Criteria

For admissions criteria and more information on this certificate, please visit www.jhsph.edu/academics/programs/certificates/program/41.

HEALTH FINANCE AND MANAGEMENT

Sponsoring Department
Health Policy and Management

Educational Objectives

This Certificate Program is designed to provide students with an overview of current issues in the operation and financial management of health services organizations. After completing the certificate, students will be able to:

- explain the environment in which health care organizations function
- articulate the importance of leadership skills
- examine work processes and articulate potential improvements to them
- develop and manage a budget
- articulate the importance of strategic planning
- develop and measure performance indicators

Intended Audience

The intended audience includes current degree students in the Bloomberg School of Public Health who are interested in health management and finance issues. Non-degree students who want to focus exclusively on current topics in health services management and finance are also welcome to apply for the certificate program.

Admissions Criteria

Current students are required to submit an application to the department in the term in which they are completing the last course required for the certificate.

Non-degree students (special students) who want to take the certificate program are required to submit an application through Admissions Services. An undergraduate degree from an accredited college or university is required for admission. Applicants apply for special student regular status, in the Department of Health Policy and Management, and select Health Finance and

Management as the “track/division.” Applicants must provide copies of their undergraduate transcripts and a statement of purpose. The application will be reviewed by a committee of faculty who will determine the admissions decision.

For more information on this certificate program at the Bloomberg School, please visit: www.jhsph.edu/academics/programs/certificates/program/5

HUMANE SCIENCES AND TOXICOLOGY POLICY CERTIFICATE

Sponsoring Department

Environmental Health Sciences

Educational Objectives

The educational objectives of this certificate program are:

- to provide students with an understanding of the principles that govern the relationship between biomedical researchers and laboratory animals
- to demonstrate the application of transgenic, in vitro, computational, non-mammalian and non-animal research in toxicology
- to illustrate the ways in which humane science and alternatives are used in setting regulatory standards and making environmental health policy decisions

The certificate program will introduce and explain the application of the “3Rs,” (reduction, replacement and refinement), which are the guiding principles of humane science, as well as demonstrate how the use of humane science principles in biomedical research can lead to more robust scientific methodology and knowledge. The Program course of study covers the scientific principles needed to appreciate humane science and identify and evaluate its

implications in biomedical research and public health policy. Persons completing the certificate will be well equipped to translate new toxicological knowledge into scientifically credible product safety evaluations and hazard assessments and apply these concepts to environmental health decision making.

Intended Audience

The certificate program is open to persons who hold undergraduate or graduate degrees in public health or the biomedical sciences. It is also open to any student in a degree-granting program at the University, although it is anticipated that most enrollees will be students at the Bloomberg School. Persons who are members of Institutional Animal Care and Use Committees (IACUC) and/or involved in animal welfare issues are encouraged to participate in this certificate program.

Admissions Criteria

All students pursuing the certificate should contact the Academic Program Manager to inform the department of their intent to pursue the certificate so that arrangements can be made to meet with a program director and discuss course options. The Department must be informed in writing, as soon as possible, but no later than the first week of the term in which the final course be taken. The Department’s Academic Program Manager may be contacted at 410-955-2212, nkulacki@jhsph.edu, Office E7039.

Nondegree Students: A student not enrolled in a degree program at the Johns Hopkins Bloomberg School must have an undergraduate degree from an accredited college or university. Any student may register and complete the certificate program as a Special Student Limited; however, such students may pursue courses in

only one certificate in the School. Admission to the Department as a Special Student Regular or degree candidate is required for individuals wishing to enroll in coursework beyond that required by the certificate program.

Degree Students: Degree-seeking students at the Bloomberg School: Students in a master's or doctoral program at the School can enroll in the certificate program as part of their training.

For more information, please visit: www.jhsph.edu/academics/programs/certificates/program/32.

INJURY CONTROL CERTIFICATE

Sponsoring Department

Health Policy and Management

Educational Objectives

On completion of the Certificate in Injury Control, students will be able to describe the importance of injury as a public health problem; understand the epidemiology of major injury problems; identify important sources of data for injury research; apply appropriate epidemiologic methods to study injury problems; identify and develop appropriate intervention strategies; be familiar with evaluation methods appropriate for injury interventions; have acquired in-depth knowledge of at least one injury problem and one type of intervention strategy; and have demonstrated ability to develop, synthesize, and apply this knowledge by compiling an integrated program plan to address an injury problem of interest to them.

Intended Audience

Students in graduate degree programs in the Bloomberg School who are interested in receiving concentrated training in the practice of injury control and/or in research applied to injury control or nondegree students

who have a graduate degree from an accredited school of public health.

Admissions Criteria

To be eligible to receive a certificate in injury control, students must be admitted to a graduate degree program in the Bloomberg School. Nondegree students who have a graduate degree from an accredited school of public health may also be eligible on a case-by-case basis.

For more information on this certificate program at the Bloomberg School, please visit: www.jhsph.edu/academics/programs/certificates/program/3.

POPULATION HEALTH

Sponsoring Department

Population, Family and Reproductive Health

Educational Objectives

A population's health is shaped by fertility, mortality and migration patterns; and population numbers themselves provide the denominators of basic measures of public health, such as life expectancy, cause-specific mortality rates, and infection rates. Connecting a population and health perspective with public health epidemiology allows us to measure and assess the aggregate-level structure of and variation in health risks by age, sex, or other major factors and across the human life span. Students completing the certificate will gain competency in: knowledge of the components and measures of population dynamics, knowledge of population dynamics' linkages with public health issues, and the ability to relate vital events and duration exposures with risk factors at the individual and population level.

Intended Audience

The certificate is designed to serve two audiences—masters or doctoral degree students at The Johns

Hopkins University and junior and mid-level professionals—desiring to expand their knowledge of population dynamics and its linkages with public health issues and their ability to relate population-level concepts and measures of fertility, morbidity and mortality, and migration to epidemiologic risks.

Admissions Criteria

Persons eligible for admission to the certificate program must be enrolled in a masters or doctoral degree program at The Johns Hopkins University (any division) or be a non-degree student with at least a baccalaureate degree from an accredited college or university. More information on this certificate can be found at www.jhsph.edu/academics/programs/certificates/program/56

PUBLIC HEALTH ECONOMICS

Sponsoring Departments

Population, Family and Reproductive Health; International Health; and Health Policy and Management

Educational Objectives

Upon completion of the core courses in the Public Health Economics certificate program, students will have gained general knowledge in public health economics. They will have learned how to identify problems that can be answered in economic terms as well as having acquired skills in economic evaluation.

Intended Audience

The intended students for this certificate are students with an interest in public health economics in any graduate-level program. Besides the Bloomberg School, this certificate will be attractive to students from the medical school, nursing school, and the economics department in the School of Arts and Sciences. The certificate will interest public health professionals who are just beginning

their career as well as mid-career professionals. Doctoral and master's level graduate students in the Bloomberg School will be eligible as well as medical students, nursing students and PhD students at the school of medicine as long as they are enrolled as special students for the certificate.

Admissions Criteria

This certificate program requires a student to be either admitted to a Johns Hopkins University degree program or hold a baccalaureate degree from an accredited college or university. Students not matriculated in the Bloomberg School must apply and be admitted as special student regular. The student will apply formally for the certificate and would be encouraged to do so in September of each year. They would not be allowed to apply any later than the first week of the term in which the final course leading to the certificate is offered. This application will include a recent copy of the student's transcript and a general information form provided by the Public Health Economics certificate program. Public Health Economics faculty meetings with a minimum quorum of three will evaluate and vote on applications of students to the certificate.

For more information about this certificate with the Bloomberg School, please visit www.jhsph.edu/academics/programs/certificates/program/31.

PUBLIC HEALTH INFORMATICS

Sponsoring Department

Health Policy and Management

Educational Objectives

Individuals who complete the Certificate in Public Health Informatics will gain a significant degree of competency in the area of health informatics within the public health context. It will allow them to perform management, policy and

research functions with a higher degree of effectiveness within the increasingly digital organizational / system environment. This Certificate will help equip students to move into leadership positions in the public health / population health informatics domain within the U.S. and other nations.

Intended Audience

This certificate is intended for students currently enrolled in the School of Public Health, and also for non-degree seeking students working in related fields who require in-service education to align their skills with the current health information technology (HIT) demands of their occupations.

Admissions Criteria:

Degree Seeking Students

Current BSPH degree candidates must apply for the certificate by obtaining a certificate application from the Department's Office of Academic Affairs, Hampton House 492. The completed application along with all required documentation must be submitted by the deadline indicated on the certificate website.

Nondegree Seeking Students

Nondegree seeking students must apply to the Department of Health Policy and Management as a "special students regular" by submitting an application through the School of Public Health's Admissions Services. An undergraduate degree from an accredited college or university and 3 years of experience in a field relevant to public health informatics is required for admission. In addition, applicants need to include in their application a resume, current job description, letter of support to participate in the certificate program from their employer/supervisor and a draft course of study. A previous master's degree is strongly

encouraged. Applicants apply for special student regular status in the department and select Public Health Informatics as the "track/division." The application will be reviewed by a committee of faculty who will determine the admissions decision.

For more information on this certificate with the Bloomberg School, please visit www.jhsph.edu/academics/programs/certificates/program/53

PUBLIC HEALTH TRAINING CERTIFICATE FOR AMERICAN INDIAN HEALTH PROFESSIONALS

Sponsoring Department

International Health

Educational Objectives

The overarching purpose of this public health certificate program is to promote participants' capacity to address American Indian population health disparities through multidisciplinary public health approaches and culturally competent strategies. The certificate program examines four quadrants of influence: physical, behavioral, political, and spiritual/emotional, which, in balance, comprise the sphere of public health for American Indian communities.

Intended Audience

American Indian health paraprofessionals and professionals and/or people working within American Indian communities and current degree candidates at the School who are interested in expanding their public health expertise and skill sets related to American Indian health. The certificate may be taken for credit or for noncredit.

Admissions Criteria

Admission Criteria for Credit

Certificate Program: Any student enrolled in a graduate program at the School or a nondegree student with a minimum of a baccalaureate degree from an approved institution

is eligible to enroll in the certificate program for credit.

Admission Criteria for the Noncredit Certificate Program: Students applying for the noncredit certificate program must have completed a minimum of 60 credit hours of baccalaureate level courses (or equivalent) or have at least two years of work experience (or equivalent) in public health or a health-related field. For more information on the certificate, visit www.jhsph.edu/academics/programs/certificates/program/30.

PUBLIC MENTAL HEALTH RESEARCH CERTIFICATE

Sponsoring Department
Mental Health

Educational Objectives

This program is offered through the Department of Mental Health. It provides graduate training in understanding the causes and consequences of mental disorders in populations including: clinical and behavioral features, the incidence and prevalence of disorders, and identification of factors that promote or influence the occurrence, persistence, or severity of mental and behavioral disorders. The goals are to increase the public health expertise of psychiatrists and other mental health professionals, and to increase the number of epidemiologists, biostatisticians, and health policy makers, with an interest in psychiatric disorders.

Intended Audience

The certificate is intended for students in a Bloomberg School degree program interested in mental health; psychiatrists in residency training; postdoctoral fellows; and nondegree seeking students who have at least an undergraduate degree from an accredited college or university.

Admissions Criteria

Current Bloomberg School students; nondegree seeking students must have at least an undergraduate degree from an accredited college or university. Prior or concurrent course in 340.601 Principles of Epidemiology or 340.751.01 Epidemiologic Methods and two terms of biostatistics required, e.g., 140.611-612; 140.621-624; or 140.651-654. Applicants must declare their intent to obtain a certificate, in an email to the Administrative Contact, before enrolling in their final term of courses for the certificate. For more information on the certificate programs at the Bloomberg School, visit www.jhsph.edu/academics/programs/certificates/program/17.

Nondegree seeking students must apply online to be a Special Student Regular.

RISK SCIENCES AND PUBLIC POLICY CERTIFICATE

Sponsoring Departments
Epidemiology; Health Policy and Management; Environmental Health Sciences

Educational Objectives

This certificate provides training in risk assessment methods, risk management and policy, and risk communication. Courses are designed to provide the student with an understanding of the scientific basis for assessing environmental and other public health risks, as well as providing the skills needed to evaluate the implications of these scientific relationships for risk management and policy.

Intended Audience

- Research scientists interested in bridging science and policy
- Public and private sector professionals who evaluate

scientific data in the context of risk assessment and management

- Decision makers and risk managers, such as regulators, corporate executives, elected officials, economists, engineers, and lawyers
- Those responsible for communicating risk, such as lobbyists, journalists, and non-governmental organizations

Admissions Criteria

For further information on the certificate, visit www.jhsph.edu/academics/programs/certificates/program/15.

TROPICAL MEDICINE

Sponsoring Departments
Department of International Health; Environmental Health Sciences

Educational Objectives

This eight-week summer program provides participants with multidisciplinary training in tropical medicine and related public health issues. Participants learn to address health problems in developing countries and those of travelers. At the program's conclusion, participants will have acquired a strong scientific basis for preventing, diagnosing, treating, and controlling tropical health diseases.

Intended Audience

Johns Hopkins Medical Institution students and staff; health professionals; individuals with an interest in tropical medicine.

Admissions Criteria

Graduate degree in a health related science; or bachelor's degree with significant experience in a health profession. For more information on this certificate program at the Bloomberg School, please visit www.jhsph.edu/tropic.

Certificates Open to Nondegree Students ONLY:

TRAINING CERTIFICATE IN PUBLIC HEALTH

Sponsored by:

The Office of Continuing Education

Educational Objectives

The certificate recipient will be able to:

- Use appropriate statistical methods for critical reading of reports of statistical analysis of public health problems;
- Apply the basic concepts of epidemiology to the study of the patterns of disease and injury applied to public health;
- Determine the role of environmental factors affecting the health of a population;
- Identify the managerial and policy issues associated with the delivery, quality and costs of health care;
- Identify the social, behavioral, and cultural factors related to population health.

Intended Audience

- Members of the public health workforce seeking formal education and training in the five core areas of public health. This program is intended to be taken on a part-time basis. The certificate can be completed by taking all courses online or a combination of online and on site.
- Individuals interested in the Master of Public Health or another degree program in the School following completion of the certificate for-credit may be able to apply the course credits upon application and admission to the degree program.
- Individuals who are matriculated in a degree program in the School

are not eligible for this training certificate.

Admission Criteria

Bachelor's degree with at least one college-level biology course and one college-level math or statistics course completed with a grade of B or above; a strong overall record of successful academic performance. For more information on the certificate program at the Bloomberg School, please visit: www.jhsph.edu/academics/programs/certificates/program/47.

TRAINING CERTIFICATE IN PUBLIC HEALTH PRACTICE

Sponsored by:

The Office of Continuing Education

Educational Objectives

The certificate recipient will be able to: identify, analyze and use available disease and behavioral surveillance data; apply leadership in the management of health systems organizations; communicate effectively to constituencies both within and outside of the health system; determine public health information needs; use appropriate basic statistical, demographic, and epidemiologic techniques to evaluate data with attention to quality control issues; support state and local public health agency efforts in assessing health needs, quality of services, and strategies for health services research; and identify and help fill needs for information and responses to new threats to public health.

Intended Audience

- Members of the public health workforce who seek formal education and training in public health principles, problem solving skills, quantitative methods, social and behavioral determinants of disease, organization and management of health programs, and preparation for new and

emerging threats to the health of the public.

- Public health practitioners interested in obtaining the MPH degree in the part-time and Internet-based programs of the School may apply the course credits of the certificate upon subsequent application and admission to the MPH program.
- Matriculated degree candidates are not eligible for this certificate.

Admissions Criteria

Bachelor's degree with at least one college-level biology course and one college-level math or statistics course; a strong record of successful academic performance. For more information on the certificate programs at the Bloomberg School, please visit: www.jhsph.edu/academics/programs/certificates/program/11.

TRAINING CERTIFICATE IN QUANTITATIVE METHODS IN PUBLIC HEALTH

Sponsored by:

The Office of Continuing Education

Educational Objectives

The certificate recipient will be able to:

- Evaluate the methods used to measure health effects in populations
- Interpret basic, quantitative public health measures
- Judge policy implications of public health data and research
- Be familiar with the difficulties of collecting, interpreting and analyzing data and their implications.
- Perform a critical review of public health literature.

Intended Audience

Members of the public health workforce and other professionals who

seek training and education in basic quantitative methods for analyzing and using public health data and who seek to develop the additional data analysis skills taught in the Data Analysis Workshops. The certificate is appropriate for those needing basic skills in analyzing data. Matriculated degree candidates are not eligible for this certificate. This program is intended to be taken on a part-time basis. The courses are available at the East Baltimore Campus during the Institutes and/or via the Internet.

Admissions Criteria

Bachelor's degree with at least one college-level biology course and one college-level math or statistics course; a strong record of successful academic performance. For more information on the certificate programs at the Bloomberg School, please visit: www.jhsph.edu/academics/programs/certificates/program/29.

SCIENCE OF CLINICAL INVESTIGATION (SOCI) TRAINING CERTIFICATE

Sponsored by

Graduate Training Programs in Clinical Investigation

Educational Objectives

The certificate program is designed to enhance clinical scientists' theoretical and practical skills in design, implementation, and interpretation of data from clinical investigations. The certificate will train clinical scientists in five core areas of Clinical Investigation.

Upon completion of the training certificate, students will be able to:

- Critically evaluate strengths and weaknesses in study design
- Read, understand, and critically discuss quantitative methods used in the scientific literature on clinical investigation

- Explore and examine ethical issues and regulatory requirements central to clinical research
- Acquire basic concepts of relational database design for clinical and basic research including development of data collection forms, design of a relational database, data quality control, and importing and exporting collected data across different platform
- Explore experimental and observational designs, alternative approaches to addressing confounding in controlled observational studies, methods for evaluating the effectiveness of patient-level interventions, and methods for evaluating the effectiveness of providers and provider-level interventions

Intended Audience

- Scientists, clinicians, or support personnel fully engaged in clinical investigation
- Regulatory personnel involved in IRBs, DSMBs, and oversight of human subjects research
- Post-doctoral trainees in the clinical disciplines who would like an overview of the requirements of clinical investigation
- Students matriculated in a University degree program are not eligible for the training certificate

Admissions Criteria

Admission to the certificate program may be granted to faculty, trainees, and staff of the medical institutions who are or expect to be fully engaged in clinical investigation. In addition, non-Hopkins affiliated investigators and their staff may enroll with appropriate credentials and prerequisites. For more information on the certificate program at the Bloomberg School, please visit: www.jhsph.edu.

www.jhsph.edu/academics/programs/certificates/program/50.

OTHER PROGRAMS

Community-based Public Health (CBPR)

To reinforce the importance and strengthen competencies in CBPR at the Bloomberg School and University-wide, the School offers multiple education/training opportunities in community-based participatory research. These include a year-long seminar series, a second quarter course in CBPR, an annual CBPR workshop, a Community-based Public Health Certificate and a two-year postdoctoral training program funded by the W. K. Kellogg Foundation. Faculty, students, staff, and community leaders are invited to participate in any of these training opportunities. The emphasis is on multidisciplinary partnerships with community-based organizations and institutions to improve health services and health status of vulnerable populations in Baltimore. A network of faculty conducting CBPR are available as resources and CBPR faculty are closely linked to the Johns Hopkins Urban Health Institute. For more information, contact Ms. Lee Bone, 410-955-6887 or email lbone@jhsph.edu.

Bloomberg School and University of Pennsylvania Annenberg School for Communication Collaborative Education in Public Health Communication

There have been significant advances in communication theory and research, in media technology, and in the use of marketing strategies for health and social development. In addition, there is increasing recognition of the role and the expanding potential of communication in public health programs. As a result, the demand for systematic persuasive

communication nationally and internationally has outpaced the supply of well-trained professionals with the expertise to develop, manage, implement, and evaluate health-related communication activities. These professionals need a theoretical base for public health communication, and they also need an understanding of public health methods and the role of modern technology in the diffusion of health innovations and in health behavior change.

Traditionally, public health communication professionals receive training at either schools of communication or schools of public health. Schools of communication offer a curriculum in communication and behavior change theory, but do not provide students with epidemiologic skills, biostatistical methodology, health services research background, or direct access to populations or patients. Conversely, schools of public health provide training in these fields and in social, psychological, educational, and behavioral sciences and communication practice, but not in communication theory.

To bridge the gap, the Bloomberg School of Public Health and the Annenberg School for Communication at the University of Pennsylvania offer an interdisciplinary collaborative exchange program to enhance training available to their students in public health communication. Students have the opportunity to attend courses given at both universities as a supplement to the normal course of study.

Eligibility

Students currently enrolled at the Bloomberg School of Public Health or the Annenberg School for Communication may be eligible to be exchange scholars after completing one academic year of study in a graduate degree program in their home institution. Acceptance into the pro-

gram by the home institution will be based on procedures determined by each institution. All applications will then be submitted to the exchange institution for review. Bloomberg students should contact Dr. Dina Borzekowski, Department of Health, Behavior and Society for the application and additional information.

Duration

A minimum of one term of study (eight weeks at Bloomberg and fifteen weeks at Annenberg) and a maximum of one academic year will be permitted in the program.

Advisers

Students will be assigned an adviser from the exchange institution who will help the student select appropriate courses. At Bloomberg the adviser will be in a department that is closest to the student's area of interest (e.g., Health, Behavior and Society, International Health, or Health Policy and Management). At Annenberg, the adviser will be a faculty person with expertise in the student's field of interest, such as visual communication, development communication, or mass media policy, content, and effects.

Courses and Credits

Students will take courses at the exchange institution that are not offered at the home institution. In addition to regular coursework, both schools offer opportunities for special studies with faculty members which can be designed to meet the needs of an individual student. Credits earned at the exchange institution will count towards the home institution's requirements for graduation. Each institution determines course credits to be transferred from the exchange institution on a case by case basis.

Bloomberg School of Public Health

The School provides education in the diverse fields of public health which include epidemiology, biostatistics, social and behavioral sciences, maternal and child health, risk sciences, management and delivery of health services, and environmental health sciences. In order to obtain a broad understanding of public health, students may wish to enroll in courses that are required for the MPH degree and some courses offered by departments, depending on the student's particular field of interest. All courses are listed at www.jhsph.edu.

Annenberg School for Communication

Courses are offered in three core areas. Communication and Culture encompasses the analysis of meaning, content, symbols and message systems, the social and cultural contexts of communication and the social construction of realities. Communication Influence includes the study of communication behavior, belief and attitude formation and change, consequences of exposure to messages, mass communication and socialization. Communication Institutions incorporates history and theories of social and mass communication, public policy related to communication; structure, organization, technologies, regulation, management, and the economic functions of institutions and media. All courses are listed in the Annenberg School for Communication Graduate Studies Catalog.

Residency Training

General Preventive Medicine Residency

Director:

Miriam H. Alexander, MD, MPH

The General Preventive Medicine Residency (GPMR) is a two-year program that prepares physi-

cians in the theoretical, practical, and clinical knowledge and skills essential to leadership roles in the design, management, and evaluation of population-based approaches to health. As preventive medicine specialists, graduates of the program assume leadership positions in government, international health, academia, and clinical medicine. The program consists of an academic year and a practicum year and is fully accredited by the Accreditation Council for Graduate Medical Education (ACGME). Completion of the program leads to eligibility for certification by the American Board of Preventive Medicine.

The GPMR training consists of PGY2 and PGY3. Physicians entering the program must have completed at least one year of clinical training in an approved program in the U.S. prior to entering the program. This year may either be a transitional internship or part of a residency. Graduating medical students in the U.S. or Canada have the option of selecting the GPMR through the National Resident Matching Program; such residents do a rotating internship at the Mary Imogene Bassett Hospital in Cooperstown, N.Y., prior to beginning their academic year at Johns Hopkins. Applicants for this position must apply simultaneously to GPMR for admission to begin the year following the internship. This combined internship/residency program is limited to one resident each year.

The first (academic) year of residency training begins in July and is a combined residency and Master of Public Health (MPH) degree year. The MPH program is enriched by a two-month summer orientation to the specialty of preventive medicine. Throughout the year, twice-weekly preventive medicine seminars, quarterly Grand Rounds, and a preventive medicine core course enhance the

educational program. In the second half of the year, residents participate in teaching an undergraduate introduction to public health course on the Hopkins Homewood campus. Residents are expected to participate in preventive medicine research during the academic and/or practicum years of the residency; publication and presentation of research results are encouraged.

The second (practicum) year of the program is designed to train the resident in a variety of preventive medicine skills through practical preventive medicine rotations that last two to three months each. The program offers approximately 20 different established rotations in a wide variety of local, state, federal, and international public health settings. Residents complete a minimum of one rotation in each of the following competency areas: biostatistics/epidemiology, management and administration/ medical management, and either clinical preventive medicine or occupational medicine/environmental health.

Note: Admission to the Bloomberg School's Master of Public Health (MPH) degree program is a prerequisite for admission to the residency program. Applicants apply simultaneously for the MPH and residency programs, using one application. Applicants will be notified separately of each decision. Applicants who possess an MPH from Johns Hopkins may apply for the practicum year of the residency.

A one-month elective in preventive medicine is available for third- or fourth-year medical students who have completed some clinical rotations, as well as for residents in other specialties. The purpose of the elective is to provide both a broad overview of the field and a brief, in-depth experience in a specific area of preventive medicine/public health.

To apply for the residency training, applicants should submit complete applications and supporting materials to Admissions Services by December 1. Interviews are required; applicants selected for interviews are invited to come to campus in January and February. For application information please visit the Bloomberg School's website, www.jhsph.edu/admissions.

For further information about the General Preventive Medicine Residency or the elective, visit: www.jhsph.edu/gpmr, or contact the administrator, Christine Brown, General Preventive Medicine Residency Program, Johns Hopkins Bloomberg School of Public Health, Room WB602, 615 N. Wolfe Street, Baltimore, MD 21205; phone: 410-955-3362; fax: 410-614-1582; email: cjbrown@jhsph.edu.

Occupational and Environmental Medicine Residency

Director:

Virginia Weaver, MD, MPH

The overall objective of the Occupational and Environmental Medicine Residency (OMR) is to train specialists for careers in any of the major sectors of the field—academia, industry, government, clinical practice, or labor—and provide expertise in both clinical and preventive aspects of occupational and environmental medicine. The program is fully accredited by the Accreditation Council for Graduate Medical Education (ACGME). Completion of the program leads to eligibility for certification by the American Board of Preventive Medicine. In general, all residents receive stipend support, tuition support, and health, life, and disability insurance. The OMR training consists of PGY2 and PGY3. Physicians entering the program must have completed at least one year of clinical training in an approved program in the U.S. prior to entering the program. This year may either be a transitional internship or part of a residency. The most competitive applicant will already have completed residency training in another clinical specialty (e.g., internal medicine, family practice).

The first (academic) year involves coursework leading to the Master of Public Health (MPH) degree, plus certain experiences specific to the residency such as seminars, research projects, and plant visits. The second (practicum) year consists of rotations in a variety of settings, including clinical, government, industry, and union organizations. An optional third year may be spent in a postdoctoral research fellowship for trainees interested in academic careers.

Note: Admission to the Bloomberg School's Master of Public Health (MPH) degree program is a prerequisite

for admission to the residency program. Applicants apply simultaneously for the MPH and residency programs, using one application. Applicants will be notified separately of each decision. Applicants who possess an MPH may apply for the practicum year of the residency.

To apply for the residency training, applicants should submit complete applications and supporting materials to Admissions Services by October 31. Interviews are required; applicants selected for interviews are invited to come to campus in November and early December. Candidates are notified by December 15 of the Residency Admissions Committee's decision. For application information please visit the Bloomberg School's website, www.jhsph.edu/admissions.

For further information about the Occupational Medicine Residency, visit www.jhsph.edu/omr, or contact the administrator, Christine Brown, Occupational and Environmental Medicine Residency Program, the Johns Hopkins Bloomberg School of Public Health, Room WB602, 615 N. Wolfe Street, Baltimore, MD 21205; phone: 410-955-3362; fax: 410-614-1582; email cjbrown@jhsph.edu.

Continuing Professional Education

The Johns Hopkins Bloomberg School of Public Health is committed to providing opportunities for students to pursue graduate academic degrees and continuing professional education on a part-time, flexible basis. Both full- and part-time University faculty teach in these programs to ensure an education as high in quality as experienced by the full-time students. Courses are offered in different formats and venues including courses via the Internet, and condensed courses taken during summer and winter institutes.

By blending a mix of these formats, working professionals can participate in the rich academic environment of the School while continuing their careers. Courses taken through these programs may be used toward degree and certificate programs, as well as for continuing education.

INTERNET-BASED COURSES

Most core and popular on-campus courses at the Bloomberg School are offered online by the same course faculty and are available anywhere and anytime (within the academic term offered) to enrolled students who have reliable Internet service. Because of the program's flexibility, students may earn degrees via the part-time Internet-based MPH or part-time DrPH program by enrolling in the Internet-based courses (in combination with courses of other modalities). See www.jhsph.edu/academics/mph and www.jhsph.edu/dept/hpml/degrees/drph.

Because the Bloomberg School's Internet-based courses are unique online learning tools, successful completion of Introduction to Online Learning (offered via Internet only)

is required prior to participating in any of the School's Internet-based courses. For registration details and additional course information, please visit <http://distance.jhsph.edu/iol>.

CERTIFICATES

Certificate programs represent courses of study in specific areas of public health. The Bloomberg School offers various certificates designed for degree students only, for degree and nondegree students together, and for nondegree students only. Admissions standards and completion requirements vary with each certificate program. As there are fewer course requirements for certificate programs than for formal degree programs, degree candidates may also pursue most certificates as part of their degree program. Courses within certificate programs must be taken for academic credit, with the exception of the Public Health Training Certificate for American Indian Health Professionals, the Global Health Certificate, the Training Certificate in Public Health, and the Training Certificate in Science of Clinical Investigation (SOCl). A certificate of program completion is issued by the sponsor upon satisfactory completion of coursework.

For details, please see the "Certificates" section in the Academic Information chapter, or visit www.jhsph.edu/academics/programs/certificates.

CONTINUING LIFELONG EDUCATIONAL OPPORTUNITIES FOR ALUMNI

Alumni may now participate in "on-cycle" online courses on a noncredit basis. On-cycle, noncredit enrollments give alumni the opportunity to listen to online lectures, participate in group discussions, and interact with faculty and students for a 50 percent tuition discount. To enhance the

online experience, participants will be expected to interact fully, and to complete all related coursework. For information, please visit <http://ocw.jhsph.edu>.

Alumni may also choose to participate in online courses "off-cycle." Off-cycle enrollment allows students to listen to online lectures, navigate the course website and access course-related materials without faculty or student interaction. For \$100.00, alumni can access select courses during a defined period for a maximum of eight weeks. Additional information can be found at <http://ocw.jhsph.edu>.

SPECIAL STUDENTS

Students participating in continuing professional education programs for academic credit, who are not registered as degree candidates, are considered Special Students. For a full description of this category, please see the "Special Students" section in the Administrative Regulations chapter.

INSTITUTES

The Bloomberg School offers a number of summer institutes sponsored by different departments between the months of May and August, a two-week winter institute in January and a fall institute sponsored by the Department of Health Policy and Management in Barcelona, Spain. The institutes provide short-term, intensive educational opportunities for public health practitioners and other professionals whose schedules necessitate a more flexible, non-traditional approach to their studies. Many of the courses offered through these institutes are equivalent to regular academic courses.

Graduate Summer Institute of Epidemiology and Biostatistics

The departments of Epidemiology and Biostatistics at the Bloomberg

School jointly sponsor the Graduate Summer Institute of Epidemiology and Biostatistics each June-July. The program has been in existence since 1983, and has trained hundreds of students from the U.S. and numerous other countries.

The courses are intended to develop an understanding of principles of epidemiologic research, and will present epidemiologic methods and their application to the study of the natural history and etiology of disease. After completion, participants will be able to evaluate the methods used to measure health effects in populations, judge policy questions raised by the epidemiologic literature and become familiar with the principles and difficulties of collecting, interpreting and analyzing data.

The program offers courses with varying durations, with some of the courses offered over a three-week period, some two-week and many one-week courses. In addition to offering basic and advanced courses on epidemiologic and biostatistical concepts and methods that can stand alone, the curriculum allows students combinations of courses that either expand their breadth of knowledge or enable them to delve more deeply into a specialized topic area of their choice. Many of the courses are equivalent in content and number of academic credits to those taught during the regular academic year. Examples of courses offered include Principles of Epidemiology; Observational Epidemiology; Methods and Applications of Cohort Studies; Applications of the Case-Control Method; Conducting Epidemiologic Research; Statistical Reasoning in Public Health I and II; Epidemiologic Methods for Planning and Evaluating Health Services; Introduction to the SAS Statistical Package; Gene Expression Data Analysis; Family Based

Genetic Epidemiology and Genetic Epidemiology in Populations.

For more information, contact Ayesha Khan at 410-955-7158 or akhan@jhspsh.edu, or visit www.jhspsh.edu/summerepi.

Health Emergencies in Large Populations (HELP) Summer Institute

Each July, the Department of International Health, Center for Refugee and Disaster Response, holds a summer institute course at the East Baltimore campus. This course has been developed in collaboration with the International Committee of the Red Cross, and focuses on the public health aspects of humanitarian assistance. The course is designed to develop and improve the skills of persons and organizations providing emergency health services in humanitarian emergencies. During the three-week session, the following topics are covered: Disaster Definitions and Responses, Disaster Management, Conducting Assessments, Responding to Needs, Environmental Health, Food and Nutrition, Information Surveillance, Communicable Diseases, Reproductive Health, Humanitarian Ethics, International Humanitarian Law, and Human Rights and Human Security.

By the end of the course, participants will be able to:

- Select methods of assessment for specific emergency situations in the field
- Carry out general and specific health assistance programs for displaced populations
- Foresee the possible extension/expansion of immediate assistance projects into development programs
- Develop a common approach among humanitarian

organizations to the provision of services

- Monitor adequacy of services provided to affected populations
- Assess the ethical implications of the choices faced by relief workers in humanitarian crises
- Apply the principles of International Humanitarian Law when providing services in conflict situations

For more information, please contact the HELP Course Coordinator at helpcour@jhspsh.edu or visit www.jhspsh.edu/refugee/education_training/help/application.html.

Johns Hopkins Center for Injury Research and Policy Summer Institute

The mission of the Center for Injury Research and Policy in the Department of Health Policy and Management is to close the gap between research and practice by conducting high quality research and assuring that results are translated into practice as well as integrated into the education of injury and violence prevention professionals. To advance this mission, the summer institute offers an introductory course in injury prevention. This intensive course, Principles and Practice of Injury Prevention, is for those who are new to the field or seeking to broaden or advance their basic skills and knowledge of injury prevention. In selected years, an advanced institute course is also offered for those already knowledgeable and skilled in the field.

Many of the nation's leading experts in the injury field, from both Johns Hopkins and other institutions will lead the lectures and discussions. Small group exercises are held to enable participants to use what they are learning in lecture through hands-on practical application. The

institute culminates with an opportunity for students to share their work and receive feedback from injury faculty.

For more information, visit www.jhsph.edu/injurycenter or contact Maryanne Bailey, mmbailey@jhsph.edu or Edith Jones, eljones@jhsph.edu.

Johns Hopkins Center for American Indian Health Summer and Winter Institutes

The Johns Hopkins Center for American Indian Health conducts one-week long institute courses every June/July and January in conjunction with the Bloomberg School's Summer and Winter Institute programs. In summer 2011, the Center is offering two courses: Collecting, Analyzing and Using Public Health Data in Native American Communities and Introduction to American Indian Health Research Ethics.

In January 2012, the Center offered two courses: Interdisciplinary Approaches to Understanding American Indian Health and Using Mass Media for Health Promotion in American Indian Communities. The institute courses are designed to introduce tribal health leaders and related health professionals and paraprofessionals who have had little to no formal training in the health sciences, but may be determining the tribe's priority for health care, determining the tribe's approaches to addressing priorities, or working/interested in clinical research or public health within tribal communities.

For more information, visit www.jhsph.edu/caih/programs/training.html or contact Danielle Tsingine or Nicole Pare, Johns Hopkins Center for American Indian Health, Bloomberg School of Public Health, 621 N. Washington Street, Baltimore, MD 21205, 410-955-

6931, or email: dstingine@jhsph.edu or npare@jhsph.edu.

Summer Institute in Health, Behavior and Society

The Health, Behavior and Society Summer Institute offers short, intensive courses during June that provide students with an understanding of behavioral and societal impacts on public health and specific strategies to address the challenges they present. Courses are offered that include general overviews of social and behavioral science issues in public health, including discussion of the social, contextual, and individual influences on risk behaviors and interventions that modify these influences. Courses are also offered on topics such as the strategic use of the news media to support public health goals, qualitative research methods applied to the investigation of public health issues, methods in global tobacco control, and tobacco control leadership. The courses may be taken for academic credit or on a noncredit basis.

For more information about courses and enrollment, contact Barbara Diehl, HBS Summer Institute Director, 410-502-4415, bdiehl@jhsph.edu, or visit www.jhsph.edu/dept/hbs/continuing_ed/summer_institute/.

Summer Institute in Health Policy and Management

The Health Policy and Management Summer Institute provides short-term, intensive educational opportunities for public health practitioners and other professionals. The Institute serves as a convenient venue for health professionals to begin or enhance their education in a variety of public health disciplines, with coursework focusing on key health policy and health management issues. Participants learn about policies as well as management and leadership

approaches that work, along with strategies for effective implementation. Courses offered by the Institute are equivalent to regular academic year courses and may be taken for academic credit or noncredit/continuing education. The Annual Health Policy and Management Summer Institute is held each June in Baltimore, Maryland. For information on the institute offerings, visit the institute website at www.jhsph.edu/dept/hpml/continuing_ed.

Summer Institute in Mental Health Research

The Summer Institute in Mental Health Research focuses on methodological and substantive topics of particular importance in mental health and substance-use research from a public health framework. It is intended for working professionals or students who are interested in conducting or evaluating research in the epidemiology of specific types of disorders, the implementation and evaluation of population mental health services, and/or the measurement and statistical issues that commonly arise when studying mental health.

After completing the program, participants will recognize strengths and weaknesses of different research questions, know the major issues involved in the collection and analysis of mental health data on the population level, and understand the steps involved in the scientific, empirical evaluation of services and interventions targeted for mental health outcomes.

For more information contact Patty Scott at 410-955-1906 or by email mbinstitute@jhsph.edu, or visit www.jhsph.edu/dept/mh/summer_institute.

Summer Institute in Reproductive Health and Development

The Bill and Melinda Gates Institute for Population and Reproductive Health in the department of Population, Family and Reproductive Health offers a summer institute in June. Participants are introduced to contemporary population, reproductive health and development issues, measures and indicators. Participants complete data-driven exercises that strengthen their analytic and interpretive skills to understand linkages between demographic change, sexual and reproductive health outcomes, and economic and social development. Participants familiar with software applications, such as SPSS or STATA, can receive specialized training in survey data analysis, while other participants will be guided through policy and program analyses using programs such as STATcompiler and Spectrum to inform future development needs. Seminar topics include population dynamics, poverty alleviation and health inequities; gender equity and development; nutrition over the life span; reproductive health dynamics of birth spacing and birth outcomes, family and economic impacts, sexually transmitted infection patterns and service integration models. Upon completion of the course, participants will be:

- Knowledgeable about global population dynamics, measures and associated development changes
- Better able to explain linkages between population change, reproductive health improvements and socioeconomic development
- Identify data sources for, calculate and apply key measures and indicators of population, reproductive health and economic welfare

- Interpret data analyses to make informed policy or program decisions

Participants are expected to discuss assigned readings, engage in group work, and prepare a data-informed final presentation. Participants are encouraged to enhance the course's quality by sharing their own professional experiences through interaction with other participants and course instructors.

For more information, contact Monnie Heminthavong, MPH, CHES, Training Program Officer, Bill and Melinda Gates Institute for Population and Reproductive Health, phone: 410-502-0693, gatessi@jhspsh.edu, www.jhspsh.edu/gatesinstitute.

Summer Institute in Tropical Medicine and Public Health

The Department of International Health sponsors an annual Summer Institute in Tropical Medicine and Public Health during June, July and August. The institute consists of four two-week intensive courses that focus on selected areas of tropical medicine and related public health issues.

The institute is designed for health professionals who want a focused exposure to infectious disease problems and control measures relevant to developing countries. Students gain expertise in clinical tropical medicine, travel medicine, parasitology, community health, child and public health, principles and methods of epidemiology, and disease control programs, appropriate technologies for water supply and sanitation, and management of disease control programs. Students interested in other relevant courses offered during the regular academic year as part of the tropical diseases curriculum should refer to "Interdepartmental

and Interdivisional Programs" in the Academic Information chapter.

For more information, contact Ashley Simmons, phone: 410-614-3639, email: tropmed@jhspsh.edu or visit www.jhspsh.edu/tropic.

Fall Institute in Health Policy and Management - Barcelona, Spain

The Department of Health Policy and Management and the Agència de Salut Pública de Barcelona and Parc de Salut Mar in collaboration with the Universitat Pompeu Fabra and Universitat Autònoma de Barcelona, support the Fall Institute in Health Policy and Management, offered in Barcelona, Spain. The Fall Institute serves as a venue for health professionals to begin or enhance their education in public health, health policy and medical care. Senior faculty from the U.S. and European institutions provide courses in one to four day duration that are available for Johns Hopkins academic credit or for noncredit/continuing education. The Fall Institute takes place each year in November.

For information on the institute offerings, visit the institute website at www.jhspsh.edu/dept/hpml/continuing_ed/fall_institute.

Winter Institute in Public Health

In January, the School offers a two-week winter institute. The primary goal is to provide short-term intensive courses for part-time degree candidates. The courses are also offered for audit for nondegree seeking students. The institute offers courses in areas including biostatistics, epidemiology, international health, environmental health sciences, molecular microbiology and immunology, health policy and management, and population, family and reproductive health.

For more information on winter institute courses for part-time degree-seeking students, contact the MPH program office at 410-955-1291 or email mphprog@jhsph.edu.

For information on courses for audit, contact Helen Walters at 410-614-5985, email hwalters@jhsph.edu or visit the School's website at www.jhsph.edu/winter.

SPECIAL LECTURESHIPS

The Anna M. Baetjer Lecture—Anna Baetjer (ScD 1924 and Professor Emerita) was a leader in establishing the field of environmental toxicology and occupational health. The Anna Baetjer lecture in environmental health sciences was established by her friends, family, and colleagues, after her death in 1983, to honor Dr. Baetjer's contributions to occupational health.

The Leroy E. Burney Lecture—Leroy E. Burney, MD, MPH, was the eighth Surgeon General of the United States Commissioned Corps (1956–1961). His seminal report linking smoking to lung cancer provided the template for every Surgeon General who followed, and a legacy for all those in health promotion and disease prevention who struggle to control tobacco use. After his death in 1998, Dr. Burney's family, friends, and colleagues established an annual Schoolwide lecture to honor his contributions to public health.

The J. Douglas Colman Lecture—In 1974, friends and family of the late Dr. J. Douglas Colman established a memorial fund to support a periodic lecture by an outstanding individual on the subject of medical care evaluation, quality of care, and modes of financing medical care.

The Edward and Nancy Dodge Lectureship—Established to honor Dr. Edward Dodge (MPH, 1967) and his late wife Nancy for their generous support of the Center for a Livable Future, this annual lecture given by a distinguished visiting scholar addresses the public health implications of ecosystem change resulting from our personal and policy choices.

The Dean's Lectures—These lectures provide a forum to encourage and promote the interchange of information and ideas among professionals in the fields of public health practice and research, while celebrating the recent appointment or promotion of professors in the School.

Delta Omega Lectureship—The Alpha Chapter of the Delta Omega Honor Society sponsors a guest lectureship at their annual induction dinner.

The Larry Ewing Lectureship—Larry Ewing was a professor of population dynamics at the School and associate director of the Johns Hopkins Population Center. When he died in 1990, friends, faculty, colleagues, and former students of Dr. Ewing established a memorial fund to support an annual lecture by an outstanding visiting scientist in the field of reproductive biology.

The George G. Graham Lecture—George G. Graham, MD, served on the faculty for more than four decades and was an internationally known expert in child nutrition. The Middendorf Foundation established this annual lecture which is dedicated to improving the lives of children and mothers throughout the world with better nutrition.

The Dr. Lawrence Grossman Lectureship—Larry Grossman served as chair of the Department of Biochemistry and Molecular Biology from 1975 to 1989. In 1991, Dr. Grossman's friends, colleagues, former students and family established this endowed fund to honor Dr. Grossman and support an annual lecture in Biochemistry.

The John H. Hanks Lectureship in Immunology and Microbiology—In 1990 family, friends, faculty, colleagues, and former students established an endowed fund to honor Dr. Hanks' memory as an eminent scientist with a periodic lectureship on the topics of immunology and microbiology.

The Roger M. Herriott Lectureship—In 1975 friends and associates honored Dr. Roger M. Herriott upon his retirement as the chairman of the Department of Biochemical and Biophysical Sciences by establishing a fund to support a periodic lecture in biochemistry and molecular biology.

The Harold and Marilyn Menkes Memorial Lectureship—Friends, faculty, colleagues, and former students of Drs. Harold and Marilyn Menkes established this memorial fund in 1987 to support an annual lecture by a leading pulmonary scientist.

The Cecile Pickart Fund—A faculty member since 1985, Cecile Pickart was an early pioneer in the emerging field of study centered on a small protein called ubiquitin that played a critical role in many biological processes. This fund brings together outstanding scientists in the biochemistry research community.

The Daniel Joseph Raskin Lecture—

Established by his mother, Vivian Raskin, this annual lecture honors the work of the late Daniel J. Raskin who was a highly skilled human factors investigator and a tireless advocate for transportation safety and injury prevention.

Maryland Family Network Sandra J. Skolnik Memorial Lecture—

Established by the Maryland Family Network in memory of Sandra J. Skolnik, a visionary leader in early childhood education and advocacy this annual lecture focuses on systems, programs and/or additional approaches that address children's well-being.

Administrative Regulations

CATEGORIES OF STUDENTS

Degree Students

Students must maintain continuous enrollment at the Johns Hopkins Bloomberg School of Public Health at the minimum credit level required for acceptable registration status for the degree program until the program is terminated by either award of degree or official withdrawal. The official student categories are as follows:

In Residence

This category designates students who are pursuing graduate degree work under the direction and supervision of the full-time faculty of the School. This work may be full-time or part-time and may include periods when students are enrolled in formal courses, doing research work, or writing their dissertation. Students who are in residence register for credit and are assigned grades.

Residence status as applied here has no direct relation to where a student is physically located. In some situations, graduate degree work may be done at locations other than the Bloomberg School provided that the adequacy of the direction and supervision of the student by full-time faculty of the School has been ensured. Individuals in these circumstances who register appropriately receive full credit toward fulfilling residence requirements for the degree as set forth in the catalog. See the Tuition and Fees chapter for tuition fee assessment.

Post-certified Student Status

A post-certified student in a doctoral program is a student in good academic standing who has completed the residence requirements, has

unconditionally passed the preliminary oral examination and the departmental written comprehensive examination, and has fulfilled the outside course requirements. A post-certified master's student has satisfactorily completed the residence and outside course requirements as well as the written departmental comprehensive examination (if applicable). A post-certified student who is engaged in full-time dissertation research, field placement, or the equivalent, under the direction and supervision of the faculty of the Bloomberg School, must maintain quarterly registration in a recognized student status.

Leave of Absence

Leave of absence refers and is limited to students in a degree program requiring continuous enrollment who, while in good academic standing, are forced to withdraw temporarily from graduate work due to reasons beyond their control, such as illness, military service, financial exigency, or pressing personal reasons justifying an interruption of the degree program. Leaves of absence are typically limited to one year except for military service. Students requiring additional terms of leave beyond the one year must reapply. Students who have had federal financial aid may be subject to additional restrictions and should check with the Financial Aid Office before extending a leave of absence beyond two terms. No more than two years of leave may be granted. The period is regarded as an approved break in study. This does not mean, however, that a student working on a thesis who has completed all other degree requirements is entitled to a leave of absence.

Students planning to request a leave of absence must file a petition, which is signed by the departmental chairman, the student's adviser,

appropriate staff members in the area of Student Services, and the Office of Records and Registration. This form is available from the Office of Records and Registration. An active file fee of \$50 per term is assessed for each term within the leave of absence period. Prior to resuming the degree program, students on leave of absence must notify the department chairman and the director of the Office of Records and Registration. Upon return from leave of absence status, students must register for a minimum of two successive terms before completion of their degree programs.

Important

The failure of a student to register without obtaining an approved leave of absence status will be considered a withdrawal. The student considered to be withdrawn must be formally readmitted before resuming a program of study. Upon readmission, a student must be registered for a minimum of two consecutive terms prior to completion of their degree program.

Time Limitations

To maintain degree candidacy:

- Students enrolled in master's degree programs must fulfill all requirements within the time limits prescribed for the program
- Doctoral students must fulfill all requirements within seven calendar years after matriculation. The academic clock is stopped for periods in which the student is approved for leave of absence

Special Students

All students who are not officially registered in one of the degree programs in the Bloomberg School are classified as special students. This may be because they have not yet attained degree status or are not seeking a School degree and are taking

selected courses for their own professional purposes. Tuition charges are applied to such students according to the number of credits for which they are registered. Special students must adhere to established registration and course change deadlines and are obliged to follow all the general academic and administrative policies that apply to degree candidates at the School. Special student categories are as follows:

Regular

Special students may be registered for full-time or part-time coursework for which they will receive academic credit although they are not enrolled in a degree program. Such students need to submit complete applications and fees to Admissions Services and gain acceptance in advance from the chairman of the department to which they are applying. If admitted to a degree program, the special student's residence time and accumulated credits may be applied toward the degree, contingent upon approval of the appropriate department or the MPH Program Office.

However, the total number of accumulated credits for application may not exceed one-half of the number of credits required for the degree. These credits may be applied to any degree program and may be no older than three years at the time of matriculation. Any credits earned during the term of matriculation will also count toward the degree program.

Limited

This category includes persons who are permitted to enroll for selected courses of special interest, and whose attendance is limited to those courses for which the individual instructor has given explicit consent to enter. No more than 16 credit units of coursework may be accumulated by a special student limited.

Coursework successfully completed as a Special Student Limited may be applied to degree programs but does not ensure admission to any program. These credits may be no older than three years at the time of matriculation. The application fee is paid upon making application to a degree program or to special student regular status.

A student who has been terminated, dismissed, or withdrawn may not reenroll in the School as a Special Student Limited. Such students must be formally readmitted to a program or department before registering for a course.

General Preventive Medicine and Occupational and Environmental Medicine Residents

All General Preventive Medicine (GPM) and Occupational and Environmental Medicine (OEM) residents who have completed the MPH program and are not enrolled in another degree program in the School, but are enrolled in either of these residency programs, are special student residents.

Residents who have completed the MPH program must register full-time each term until they complete their residency requirements. These credits are usually in special studies and research, but selected coursework may also be appropriate. Students in this category must adhere to established registration and course change deadlines, and are obliged to follow all the academic and administrative policies that apply to degree candidates at the School. Full-time tuition is assessed per-term during the resident's training period. The resident's special studies and research registrations are graded on a pass/fail basis each term during the training period, and an official academic record (transcript) and a file will be maintained and updated. Upon satisfactory completion of the

program designed for the resident, the director of the GPM residency program or the director of the OEM residency program will notify the director of the Office of Records and Registration in writing.

University Interdivisional Registrations

Interdivisional registration permits students in other schools of the University to be admitted to courses at the Bloomberg School on a space-available basis without the formalities of application. Likewise, Bloomberg School students may enroll interdivisionally in courses offered by other divisions. When a course is taken "interdivisionally" it is part of the student's home academic record. An interdivisional registration form must be submitted to the student's home school for review; final approval for enrollment is determined by the division hosting the course. Students are expected to have met any course registration restrictions and obtained any enrollment approvals prior to submitting the interdivisional request.

Because not all divisions of the University share the same grading policies or academic calendar, interdivisional registrants should consult their home division's Office of Records and Registration to learn the appropriate grade and credit conversions among divisions.

Students registered full-time during the nine-month academic year need not pay additional tuition to the host division that has approved the interdivisional registration. There is no interdivisional registration for the Winter Intersession or Summer Institute.

Bloomberg School students will not earn academic credit for courses that are lower level undergraduate. Courses numbered below xxx.300 are

considered lower level undergraduate, e.g., AS 381.101, Beginning Hindi I.

Enrollments in other University divisions need not be taken “inter-divisionally.” Those students who want to pursue coursework that has no applicability to the Bloomberg School program may register directly with the other University division; fees will be assessed at that division’s rates.

ACADEMIC YEAR

The Bloomberg School year is comprised of five academic terms as well as a summer institute and a winter intersession. Each term includes a minimum of 37 class days and is scheduled approximately as follows:

Summer InstitutesMay–July
 Summer-Regular Term July–Aug
 First Term.....Sept–Oct
 Second TermNov–Dec
 Winter IntersessionJanuary
 Third Term.....January–March
 Fourth Term..... March–May

At the discretion of the faculty, additional class time may be arranged when weather conditions force the cancellation of classes.

The four numbered terms are considered the regular academic year. The summer term is not obligatory but may be counted as a term of academic residence for degree candidates who satisfactorily complete credit units during this period.

REGISTRATION

Persons who are enrolled in formal courses of study, who do research work under the supervision and direction of the Bloomberg School faculty, or who otherwise receive academic credit for professional experience or training from the faculty and scientific or educational facilities of the School are required to register during established registra-

tion periods. Included among those who must register are those students and trainees who:

- Are either entering or continuing in a degree program
- Are students in academic post-certified status: defined as master’s or doctoral degree candidates who have successfully passed their qualifying examinations, have fully completed their residence and outside coursework requirements for the degree, and are engaged in dissertation research or the equivalent. Please see the “Post-certified Student Status” section
- Are participating in the residency program in general preventive medicine or occupational and environmental medicine, or are classified as postdoctoral fellows in a department of the School
- Are not degree candidates but are attending classes either full- or part-time as regular or limited special students. Auditors must register
- Are participating for academic credit in regular or special summer programs or sessions sponsored by the School or any of its departments

Doctoral and ScM students must be registered in residence during their term of completion. To maintain degree candidacy, students must maintain continuous enrollment at the minimum credit level required for acceptable registration status for the degree program.

Late registration occurs during the scheduled add/drop periods of each term. A \$100 late registration fee is added to the tuition charges. Under no circumstances can changes be made to registrations during the last two weeks of a term. Registration for students is contingent upon tuition accounts being current. No excep-

tions will be made to this policy unless special arrangements have been made through the Student Accounts Office in advance of registration.

COURSE CREDIT

The Bloomberg School grants academic credit only to students who are officially registered. Credits are referred to as “units.” One unit is equivalent to eight hours of instructional contact per term. Academic credit for a course is granted only if the following conditions have been met:

- The student has officially registered and completed all course requirements, including examinations, and has received a passing grade
- The student has been admitted to the School, either as a special student or a degree candidate or has registered as a special student limited. Retroactive conversion of non-credit units to academic credit units is not permitted. Likewise, a registration for audit cannot retroactively be converted to credit status. Students registered as special students limited may accumulate up to 16 credits total. After 16 credits have been earned, application to and acceptance in special student regular or degree status is required

Coursework is represented in terms of unit values. For formal courses, the number of credit units normally is equal to the number of hours of formal instruction divided by 8. The maximum allowable load per term is 22 units. A minimum of 12 credit units must be carried for full-time status. However, at least 16 credit units of successfully completed course units is typically required to count as full-time in acquiring academic residence. *Note: Audited courses count toward tuition calculation and*

the 22 credit per term limit but do not count toward full-time enrollment. Exceptions to the residence requirements on a part-time basis may be made only by direct action of the appropriate Schoolwide academic committee. Units associated with audited, undergraduate, or informal courses, or courses taken to satisfy entrance conditions, are not credited in the School programs.

GRADING SYSTEM

Purpose

The grading system at the Bloomberg School serves to document the academic progress of students. The system is designed to recognize superior work and provide indications of serious problems in academic work. Current students are expected to view their grades periodically by logging onto ISIS Self Service, <https://isis.jhu.edu/sswf>.

Descriptive Interpretation

Two grading systems are used by all instructors in submitting grades. One is a traditional letter grading system and the other is a pass/fail option.

Quality

<i>Grade</i>	<i>Points</i>	<i>Meaning</i>
A	4.0	Excellent
B	3.0	Good
C	2.0	Fair (satisfactory)
D	1.0	Poor
F	0.0	Fail
P	n/a	Pass

In addition, the letter “I” is used to designate incomplete, “W” to indicate withdrawal, “MT” for multiple-term courses (grade assigned in a subsequent term), “MR” or “X” in cases where the instructor fails to report grades. (Note: I, MT, MR and X grades are not final grades.)

The designation “AU” indicates audit. Field Placement, Thesis Research, Postdoctoral Research,

and Special Studies and Research are graded strictly pass/fail.

No course credit will be acquired for courses in which a grade of F (fail), I (incomplete), or MR or X (grade not received from course instructor) is received. No course credit will be acquired for undergraduate courses taken interdivisionally at other divisions of the University. Because not all divisions of the University share the same grading policies, the grades awarded by faculty are based on the procedures of the course’s home division.

The grades that appear on students’ academic records reflect any appropriate conversions.

Interdivisional registrants are advised to direct any questions to the Office of Records and Registration of their home division.

Satisfactory Academic Progress

Satisfactory academic progress is measured by the following as they relate to one another:

- A minimum grade point average of 2.5 for graduation in the MPH, MHS, MSPH and ScM degree programs and 2.75 for graduation in the MHA programs. Academic departments may have higher grade point average requirements
- A minimum grade point average of 2.75 for graduation in a doctoral program. Academic departments may have higher grade point average requirements
- Grades of A, B, C, or P (pass) in all courses required by the School or by the student’s department
- Written documentation of successful completion of all Bloomberg School and departmental degree requirements within the established time limitations. (Refer to the “Graduation” sections in each

degree program description for specific requirements)

- Confirmation of satisfactory performance by the student’s department and/or adviser as required. Each term the progress of students is reviewed and those students not making satisfactory progress in terms of the cumulative grade point average and completion of requirements within established deadlines are identified for all academic departments. Whether a D in a particular course is considered an acceptable grade for a particular program will be determined by each department or program office. Whether a D is considered acceptable to serve as a prerequisite will be determined by the course’s sponsoring department

Pass/Fail Option

Students at the Bloomberg School may elect to take courses on a pass/fail basis only with the consent of their academic adviser. Each department has determined for its own students which courses may be taken on a pass/fail basis. Students should consult their departmental requirements for specific grading requirements when considering the pass/fail option. Students who must submit grades to employers, to funding agencies, or to other academic programs should also consult the appropriate offices before electing the pass/fail option.

Instructors are expected to evaluate student performance without regard to grading status and to give students appropriate feedback regarding their performance throughout the term. A grade of P will be recorded on the official grade roster for those students who have elected the pass/fail option and whose performance would otherwise be rated as A, B, or C. For students who perform poorly,

instructors will assign a grade of D or F.

If an adviser, student, or department needs to know the specific grade a student earns, the student should not enroll as pass/fail. There will be no retroactive changes from regular grading to pass/fail and vice versa. If a student transfers to a program that requires a standard letter grade for a course that the student completed pass/fail, the student must repeat the course or obtain a waiver from the department. After the add/drop period, a pass/fail change is treated as a registration change with a \$50 late payment fee. Under no circumstances can changes be made to registrations during the last two weeks of a term.

Current students are expected to review their registration periodically by logging onto Student Self Service, <https://isis.jhu.edu/sswf>.

Deadlines for filing pass/fail requests will be adhered to without exception. Pass/fail forms cannot be accepted after the published deadline for each term. All students should consider carefully before exercising the pass/fail option. Pass/Fail or letter grades, once elected, may not be reversed on the student's official academic record.

Incompletes

The designation “incomplete” (I) will be assigned by an instructor and entered on a student's transcript when the requirements for a course have not been completed on time. An incomplete must be made up and replaced by a final grade within 120 days after the conclusion of the course, or before graduation, whichever occurs first.

In the event an Incomplete is not made up within the above stated time period, a final grade of I/F will be assigned. When a final grade is assigned to replace an incomplete, the final grade will be shown, but the

letter I on the transcript will remain as well.

Repeated Courses

If a course is repeated, both grades will be shown on the student's academic record, and the quality points for both will be included in the student's grade point average.

Registration Changes

Changes in course registration may be made without penalty up to the end of the second week in any regular term. For courses offered during the summer, and winter intersession terms, course-specific add/drop deadlines will apply. Students must obtain the instructor's approval for each course added to their official registration during the course change period. It is the instructor's prerogative to deny a student's request to add a class during the add/drop period. The adviser's permission is the only approval required for a student dropping a course during the prescribed add/drop period. A student may not add a course after the add/drop period without the consent of the course instructor. Additionally, changes to and from “audit” are not permitted after the add/drop period. The student's adviser must approve all registration changes. In the event of an approved withdrawal after the course change deadline, the letter W will be entered on the student's transcript. A late fee of \$50 will be assessed for each course change (excluding withdrawal) after the add/drop period; furthermore, there will be no refund of tuition for any withdrawals from courses after the add/drop period. Under no circumstances can changes be made to registrations during the last two weeks of a term.

Current students are expected to review their registration periodically by logging onto Student Self Service, <https://isis.jhu.edu/sswf>.

Registration Changes—Multi Term and Internet Courses

Internet-based courses at the School adhere to the registration and add/drop dates of the academic calendar. For multi-term courses, enrollment in part I necessitates enrollment in part II. If a student subsequently drops or fails to register for part II, a grade of W (withdrawn) will be assigned for the first part. Tuition for the first part will not be refunded. Students may not register for part II without having enrolled in part I. After the two-week add/drop period, students have another four weeks to withdraw. A grade of W will be assigned for the current term (and previous term[s] if it is a multi-term course) and no tuition will be refunded.

Audits

Tuition will be assessed for audit and credit course registrations. All courses taken for audit must have the instructor's approval. Courses may not be changed from credit to audit or vice versa after the designated add/drop period. No exceptions can be made after the add/drop period has ended.

Note: audited courses count toward tuition calculation and the 22 credit per term limit but do not count toward full-time enrollment.

Reporting of Grades

Instructors will submit final grades to the Office of Records and Registration within ten days after the conclusion of the term in which their courses are given. Once a final grade is awarded and entered on a student's transcript, the grade may not be altered without the approval of the Committee on Academic Standards. In the event that this committee approves an alteration for reasons other than error, the original grade will be noted in a transcript comment. Any request for a grade

change must be submitted within 120 days of the date upon which a course concludes in accordance with the School's academic calendar. In the case of a graduating student, the grade change must be submitted prior to the last day of the term of graduation.

Grades of X, MR or blank not resolved within 120 days of the date upon which a course concludes will be processed as withdrawals resulting in a "W" on the transcript. A late fee of \$50 will be assessed and there will be no tuition refund. The Bloomberg School reserves the right to amend the above terms and conditions when in its sole judgment such changes are deemed necessary. Current students are expected to review their grades periodically by logging onto Student Self Service, <https://isis.jhu.edu/sswf>.

TRANSCRIPTS

Students who want transcripts of their Bloomberg School academic records or who want them forwarded elsewhere may submit online requests at www.jhsph.edu/student_affairs/registrar/transcripts.html, submit a signed request by postal mail or complete a transcript request form in person in the Office of Records and Registration. Requests should be submitted at least seven days before the transcript is needed. In cases of extreme urgency, a rush order for a transcript may be requested. A fee of \$10 will be assessed for rush requests for transcripts to be picked up or sent by standard mail. A fee of \$15 will be assessed for rush requests to be sent via overnight mail to U.S. addresses and a \$22 fee will be charged for overnight delivery to foreign addresses (please note: Rush fees are charged per "mail to" address; an additional \$5 fee will be charged per transcript for requests in excess of 5). There is a nominal fee charged for non-rush requests. Rush request transcripts will be available

within 24 business hour of receipt of order. Partial transcripts of a student's record will not be issued. Official transcripts that were originally submitted as part of the student's application file may not be released to either the student or a third party.

GRADUATION

Degrees are conferred three times a year. Diplomas bear the University conferral date in the summer, winter or spring. The graduation ceremony is held once annually and is open to all graduates of that academic year. The School has its own convocation ceremony, typically conducted the day before Commencement, during which time doctoral students are hooded and master's candidates receive their diplomas.

All financial obligations must be satisfied prior to graduation. Diplomas and transcripts will not be issued to those students who have outstanding account balances from any University office.

ACADEMIC ETHICS CODE

The Bloomberg School's Academic Ethics Code can be viewed on the portal at https://my.jhsph.edu/Resources/PoliciesProcedures/ppm/PolicyProcedureMemoranda/Students_01_Academic_Ethics.pdf.

The students and faculty of the Bloomberg School have a joint responsibility for maintaining the academic integrity and high standard of conduct of this institution.

Students enrolled in the Bloomberg School assume an obligation to conduct themselves in a manner appropriate to the Johns Hopkins University's mission as an institution of higher education. A student is obligated to refrain from acts that he or she knows, or under the circumstances has reason to know, impair the academic integrity of the

University. Violations of academic integrity include, but are not limited to: cheating; plagiarism (including plagiarism from websites); knowingly furnishing false information to any agent of the University or inclusion in academic records; violation of the rights and welfare of animal or human subjects in research; and misconduct as a member of either Bloomberg School or University committees or recognized groups or organizations.

All members of the academic community are responsible for the academic integrity of the University. Students and faculty alike must work together to minimize the possibility of violations of academic integrity. The Academic Ethics Board, composed of six students and four faculty, is responsible for working with the Bloomberg School community to prevent academic ethics violations, and for conducting formal hearings of suspected violations when they occur.

Faculty are responsible for the conduct of examinations, for announcing the ground rules for all work in a course at the beginning of the term in which the course is offered, and for the security of examination papers and teaching laboratories. Proctoring is at the discretion of the instructor.

All members of the Johns Hopkins community are responsible for reporting violations of academic ethics, to an appropriate faculty member or to one of the deans responsible for student affairs.

Students are required to complete an online academic ethics module (https://my.jhsph.edu/Resources/PoliciesProcedures/ppm/PolicyProcedureMemoranda/Students_01_Academic_Ethics.pdf) that reviews the Academic Ethics Code and provides case studies of academic ethics violations.

STUDENT CONDUCT CODE

The students, faculty and staff of the Bloomberg School have the shared responsibility to conduct themselves in a manner that upholds the law and respects the rights of others.

The Student Conduct Code is based upon the support of students, faculty and staff who must accept the responsibility to live honorably, to hold other members of the community to the same high standard of conduct, and to take action when necessary to safeguard the interests of the University and its community. Students enrolled in the Bloomberg School assume an obligation to conduct themselves in a manner that upholds the law and respects the rights of others. They are responsible for maintaining the academic integrity of the institution and for preserving an environment conducive to the safe pursuit of the School's educational, research, and professional practice missions. This code begins on the day of first registration in the School and is enforceable until a degree has been conferred. It governs behavior by students that occurs on or off University property and is enforceable throughout the entire matriculation period, regardless of whether classes are in session or the student is enrolled in classes. The code also covers students who are not enrolled in a degree program but are enrolled in any educational course or program offered by the Bloomberg School. The Conduct Code covers students of the Bloomberg School even while participating in educational and research activities in other divisions of the University or in other institutions.

The Conduct Code is not intended to replace law or to provide non-Hopkins community members with a mechanism to redress personal grievances. Some acts of misconduct may also constitute violations of law.

The University's policy is to cooperate fully with law enforcement authorities. Any disciplinary proceedings held by the University are independent of any criminal proceedings arising out of the same incident.

All students will be presumed to have knowledge of the provisions of this code as a consequence of enrollment in the Bloomberg School. Lack of familiarity with the provisions of this code will not serve as a defense to any actions violating student conduct as defined by the code.

Please note that the Bloomberg School must report to the alleged victim on the results of any disciplinary proceedings against a student who is the alleged perpetrator of any crime of violence or non-forcible sex offense.

A complete copy of the student conduct code is available on the portal: https://my.jhsph.edu/Resources/PoliciesProcedures/ppml/PolicyProcedureMemoranda/Students_06_Student_Conduct_Code.pdf as well as from the office of the Associate Dean for Student Affairs.

HUMAN SUBJECTS

The Bloomberg School is committed to protecting the rights and welfare of individuals participating as subjects in research studies. This commitment is essential to responsible conduct of human subjects research. To meet this obligation, the Bloomberg School has two duly constituted standing Institutional Review Boards (IRB) comprised of members of the faculty and community. IRB X (Expedited) and IRB FC (Full Committee) are responsible for reviewing research studies, including research methods, procedures, consent forms, and all other appropriate forms and survey instruments for all research projects, regardless of

funding or location, which involve human subjects.

All faculty and students who are involved in human subjects research must meet the compliance training requirements of the Bloomberg School IRB. It is the responsibility of students and faculty to make certain that approval is obtained from the IRB before beginning any research involving human subjects. The IRB is also responsible for determining whether certain research activities qualify for Exempt status under the regulations and institution policy.

For IRB announcements and updates, and for additional information and requirements on conducting human research, please contact the Bloomberg School's IRB Office, Room E1100, Wolfe Street Building (410-955-3193); email at irboffice@jhsph.edu or visit our website at www.jhsph.edu/irb.

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

Many faculty and students in the University do research involving animal subjects. The care and use of these subjects are regulated by the Animal Welfare Act, which is implemented by the U.S. Department of Agriculture. The University has one assurance with the federal government (the Office of Laboratory Animal Welfare [OLAW]) and, therefore, the University has one animal care and use committee (IACUC). Faculty from the Bloomberg School, the School of Medicine, and the Homewood campus serve on this committee. All animal users must be registered with the Animal Exposure Surveillance Program (AESP). This program is managed by the Occupational Health Services, Church Home Hospital, 98 N. Broadway, Room 421. The AESP can be reached at 410-955-6211. An approved pro-

tocol MUST be obtained before animals can be purchased. Questions involving submissions of protocols to the IACUC should be addressed to Mickie Bell-Frazier or Vanessa Girton at 443-287-3738. An online Internet training module is available at <https://secure.lwsevers.net/jhmrct> (click on “Courses,” then select “Animal Care and Use”). This training module must be completed by all animal users. Visit the Animal Care and Use Committee website at www.jhu.edu/animalcare.

UNIVERSITY POLICY STATEMENTS

Campus Security Act

In accordance with the Crime Awareness and Campus Security Act of 1990 (P.L. 102-26), as amended, and regulations promulgated thereunder, the University issues an Annual Security Report, which describes the security services at each of the University’s divisions and reports crime statistics for each of the campuses. The report is published in the University’s official newspaper, *The Gazette*, and a printed copy of the annual crime report may be obtained from any campus director or Security Department, or by stopping by the Homewood Campus at 14 Shriver Hall, or by calling 410-516-4600.

All Johns Hopkins faculty, staff, and students are encouraged to read and print out the report from www.jhu.edu/-security and report all criminal incidents promptly to their respective security department or other security authority.

Policy on Accommodation for Persons with Disabilities

Johns Hopkins University does not discriminate on the basis of gender, marital status, pregnancy, race, color, ethnicity, national origin, age, disability, religion, sexual orientation, veteran status or other legally pro-

tected characteristic in any student program or activity administered by the University or with regard to admission or employment.

A person with a disability is defined by the Rehabilitation Act of 1973 and by the Americans with Disabilities Act of 1990 as an individual who has a physical or mental impairment that substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment. For faculty, staff, and students with disabilities it is important to provide to the University a comprehensive evaluation of a specific disability, from an appropriate qualified diagnostician, that identifies the disability, describes the current level of functioning in an academic or employment setting, and lists recommended accommodations. The University provides appropriate, necessary, and reasonable accommodations in programs and facilities for those individuals who are qualified. This documentation should be submitted to Betty H. Addison, Senior Director of Student Life Services, Johns Hopkins Bloomberg School of Public Health, 2017 E Monument Street, Baltimore, MD 21205, 410-955-3034. Ms. Addison will submit the documentation to the Director, ADA Compliance and Disability Services, Peggy Hayeslip, for review and determination of reasonable and appropriate accommodations. Depending on the accommodation, there may be a time delay before accommodations can be in place. Documentation should be submitted to the School’s disability services director at least three weeks prior to the start of the term to ensure that accommodations are provided in a timely manner.

For questions and concerns regarding physical and programmatic access, specific campus accommodations, resolution of complaints and prob-

lems, faculty and staff concerns, and identification of other support services, please contact Peggy Hayeslip, Director, ADA Compliance and Disability Services in the Office of Institutional Equity, 3400 North Charles Street, 130 Garland Hall, Homewood Campus via email: phayeslip@jhu.edu or phone: 410-516-8075, TTY: 410-516-6225.

Photography and Film Rights Policy

The Johns Hopkins University reserves the right from time to time to film or take photographs of students, faculty and staff engaged in teaching, research, clinical practices, and other activities, as well as casual and portrait photography or film. These photographs and films will be used in publications such as catalogs, posters, advertisements, recruitment and development materials, as well as on the University’s website, for various videos, or for distribution to local, state, or national media for promotional purposes. Classes will be photographed only with the permission of the faculty member.

Such photographs and film—including digital media—which will be kept in the files and archive of the Johns Hopkins University, will remain available for use by the University without time limitations or restrictions. Faculty, students, and staff are made aware by virtue of this policy that the University reserves the right to alter photography and film for creative purposes. Students, faculty and staff who do not want their photographs used in the manner(s) described in this policy statement should contact the Office of External Affairs, Department of Marketing and Communications.

Faculty and students are advised that persons in public places are deemed by law to have no expectation of privacy and are subject to being photographed by third parties. The Johns

Hopkins University has no control over the use of photographs or film taken by third parties, including without limitation the news media covering University activities.

Policy on Possession of Firearms on University Premises

The possession, wearing, carrying, transporting, or use of firearm or pellet weapon is strictly forbidden on University premises. This prohibition also extends to any person who may have acquired a government-issued permit or license. Violation of this regulation will result in disciplinary action and sanctions up to and including expulsion, in the case of students, or termination of employment, in the case of employees. Disciplinary action for violations of this regulation will be the responsibility of the divisional student affairs officer, dean or director, or the vice president for human resources, as may be appropriate, in accordance with applicable procedures. Any questions regarding this policy, including the granting of exceptions for law enforcement officers and for persons acting under the supervision of authorized University personnel, should be addressed to the appropriate chief campus security officer.

Policy on JHU Unique Student Identifier (“Hopkins ID”)

The Hopkins ID is a six character alphanumeric identifier which uniquely identifies a member of the Johns Hopkins community. The purpose of the Hopkins ID is for identification of individuals at Johns Hopkins in connection with routine institutional business. It is intended to replace social security numbers for this purpose, thus reducing the risk of identity theft. The Hopkins ID is not used for authentication or access to any systems or services, and like names, it is neither private nor confidential. It will be used solely by

institutional officials in carrying out official business activities.

Policy on Student Social Security Number Protection and Use

Johns Hopkins University is committed to ensuring privacy and proper handling of confidential information it collects and maintains on students, faculty and staff, including the Social Security Number (SSN) which is required for state and federal government reporting purposes. It is the policy of the University to protect the privacy of the student SSN and to place appropriate limitations on its use throughout admission, financial aid, billing and registration processes—both within and outside of the University information systems. The collection, use and dissemination of student SSNs or any part thereof for other purposes is strongly discouraged.

This policy outlines acceptable use of the student SSN, limits use to business purposes only and establishes procedures to assure that University employees and students are aware of and comply with the Family Educational Rights and Privacy Act of 1974, the Maryland Social Security Number Privacy Act and other applicable laws and regulations.

- JHU considers the student SSN or any part thereof to be “personally identifiable information” under the Family Educational Rights and Privacy Act of 1974 (FERPA).
- No part of a student SSN may be publicly displayed or released (e.g., via e-mail to multiple students, student rosters, bulletin boards, etc).
- The student SSN may be collected as part of the application process and required for registration at JHU. The student SSN is also generally required for certain gov-

ernment reporting and as part of applying for financial aid, billing and employment.

- The risk of unauthorized disclosure of the student SSN increases with each additional electronic or paper copy of the SSN. Divisional leadership is responsible for ensuring that the number and scope of physical and electronic repositories of SSN are kept to the minimum necessary.

To view the policy in its entirety, please visit www.jhu.edu/news_info/policy/ssnuse.html.

Policy on Alcohol and Drug Abuse and a Drug-Free Environment

The Johns Hopkins University recognizes that alcoholism and other drug addiction are illnesses that are not easily resolved by personal effort and may require professional assistance and treatment. Faculty, staff and students with alcohol or other drug problems are encouraged to take advantage of the diagnostic, referral, counseling and preventive services available through the University. Procedures have been developed to assure confidentiality of participation, program files and medical records generated in the course of these services.

Substance or alcohol abuse does not excuse students, faculty or staff from neglect of their employment or academic responsibilities. Individuals whose work or academic performance is impaired as the result of the use or abuse of alcohol or other drugs may be required to participate in an appropriate diagnostic evaluation and treatment plan. Further, use of alcohol or other drugs in situations off campus or removed from University activities that in any way impairs work performance is treated as misconduct on campus. Students are prohibited from engaging in the unlawful possession, use or distribu-

tion of alcohol or other drugs on University property or as a part of University activities.

It is the policy of the University that the unlawful manufacture, distribution, dispensation, possession or use of controlled substances is prohibited on the University's property or as a part of University activities. Individuals who possess, use, manufacture or illegally distribute drugs or controlled dangerous substances are subject to University disciplinary action, as well as possible referral for criminal prosecution. Such disciplinary action of faculty and staff may, in accordance with this policy, range from a minimum of a three day suspension without pay to termination of University employment. Disciplinary action against students may include expulsion from school.

As a condition of employment, each faculty and staff member and student employee must agree to abide by this policy, and to notify the divisional Human Resources Director of any criminal conviction related to drug activity in the workplace (which includes any location where one is in the performance of duties) within five days after such conviction. If the individual is supported by a federal grant or contract, the University will notify the supporting government agency within ten days after receiving notice.

University Policy on Award of Degrees

The University does not guarantee the award of a degree or a certificate of satisfactory completion for any course of study or training program to students enrolled in any instructional or training program. The award of degrees and certificates of satisfactory completion is conditional upon satisfaction of all current degree and instructional requirements at the time of such award; compliance

with the University and divisional regulations; and satisfaction of faculty's bona fide expectations for the student's performance. No member of the faculty is obliged to provide students or graduates with an evaluation or letter of recommendation that does not accurately reflect that faculty member's true opinion and evaluation of academic performance and conduct.

Policy Against Discrimination (Including Sexual and Non-Sexual Harassment)

Preamble

The Johns Hopkins University is committed to providing its staff, faculty and students the opportunity to pursue excellence in their academic and professional endeavors. This opportunity can exist only when each member of our community is assured an atmosphere of mutual respect. The free and open exchange of ideas is fundamental to the University's purpose. It is not the University's intent in promulgating this policy to inhibit free speech or the free communication of ideas by members of the academic community.

Policy

The University is committed to maintaining learning and working environments that are free from all forms of harassment and discrimination. Accordingly, harassment based on an individual's gender, marital status, pregnancy, race, color, ethnicity, national origin, age, disability, religion, sexual orientation, gender identity or expression¹, veteran status, or other legally protected characteristic is prohibited. The University will not tolerate harassment, sexual harassment or retaliation in the workplace or educational environment whether committed by faculty, staff, or students, or by visitors to Hopkins while they are on campus. Each member of the community is responsible for fostering civility, for

being familiar with this policy, and for refraining from conduct that violates this policy.

For the purposes of this policy, harassment is defined as:

- (a) any type of behavior which is based on gender, marital status, pregnancy, race, color, ethnicity, national origin, age, disability, religion, sexual orientation, gender identity or expression, veteran status, that
- (b) is so severe or pervasive that it interferes with an individual's work or academic performance or creates an intimidating, hostile or offensive working or academic environment.

Harassment when directed at an individual because of his/her gender, marital status, pregnancy, race, color, ethnicity, national origin, age, disability, religion, sexual orientation, gender identity or expression, personal appearance, veteran status, or any other legally protected characteristic may include, but is not limited to: unwanted physical contact; use of epithets, inappropriate jokes, comments or innuendos; obscene or harassing telephone calls, e-mails, letters, notes or other forms of communication; and, any conduct that may create a hostile working or academic environment.

Sexual harassment, whether between people of different sexes or the same sex, is defined to include, but is not limited to, unwelcome sexual advances, requests for sexual favors, sexual violence and other behavior of a sexual nature when:

- (a) submission to such conduct is made implicitly or explicitly a term or condition of an individual's employment or participation in an education program;
- (b) submission to or rejection of such conduct by an individual

is used as the basis for personnel decisions or for academic evaluation or advancement; or

- (c) such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creates an intimidating, hostile or offensive working or educational environment.

Retaliation against an individual who complains of discriminatory harassment under this policy, is strictly prohibited. Intentionally making a false accusation of harassment is also prohibited.

Responsibilities

The University is committed to enforcement of this policy. Individuals who are found to have violated this policy will be subject to the full range of sanctions, up to and including termination of his/her University affiliation.

All individuals are expected to conduct themselves in a manner consistent with this Policy.

Staff, faculty and/or students who believe that they have been subject to discriminatory harassment are encouraged to report, as soon as possible, their concerns to the Office of Institutional Equity, their supervisors, divisional human resources or the Office of the Dean of their School.

Individuals who witness what they believe may be discriminatory harassment of another are encouraged to report their concerns as soon as possible to the Office of Institutional Equity, their supervisors, divisional human resources or the Office of the Dean of their School.

Complainants are assured that reports of harassment will be treated in a confidential manner, within the bounds of the University's legal obli-

gation to respond appropriately to any and all allegations of harassment.

Managers, including faculty managers, who receive reports of harassment should contact human resources or the Office of Institutional Equity for assistance in investigating and resolving the issue.

Managers, including faculty managers, are required to implement corrective action where, after completing the investigation, it is determined corrective action is indicated.

The University administration is responsible for ensuring the consistent application of this policy.

Procedures

Inquiries regarding procedures on discrimination complaints may be directed to the Vice Provost for Institutional Equity, or the Title IX Coordinator, Director of Equity Compliance and Education, Garland Hall, 130, Homewood Campus, 410-516-8075, 410-516-6225 (TTY). To view the policy in its entirety, including specific examples of harassment, please visit <http://web.jhu.edu/bin/k/o/Anti-Harassment-Policy.pdf>.

¹For the purposes of this policy, "gender identity or expression" refers to an individual's having or being perceived as having a gender-related self-identity, self-image, appearance, expression or behavior, whether or not those gender-related characteristics differ from those associated with the individual's assigned sex at birth.

Student Grievance Procedure

On occasion, disputes arise between students and other members of the Bloomberg School community. The Bloomberg School encourages individuals involved in such disputes to resolve the matter directly. For those disputes that cannot be resolved informally, a Student Grievance Procedure has been created to provide students or student groups with a formal process to seek resolution of a grievance. A grievance covered by these procedures is a complaint by a

student or group of students alleging that they have been adversely affected in their capacity as students.

Students may use this process to seek resolution to a situation in which they believe they have been harmed due to an arbitrary or capricious act, or failure to act, or a violation of a Johns Hopkins University or Bloomberg School procedure or regulation by an instructor or other member of the faculty or Bloomberg School administrator or body.

Some conduct is governed by other policies in the Bloomberg School or by the University at large. As a result, the Student Grievance Procedure does not handle complaints or disputes that are governed by those policies. Additionally, disputes that are personal in nature and do not involve the Grievant's academic activities are not covered by this policy. For specific complaints/disputes not covered by the policy, please consult the official Student Grievance Procedure document.

A complete copy of the Student Grievance Procedure is available on the portal at https://my.jhsph.edu/Resources/PoliciesProcedures/ppm/PolicyProcedureMemoranda/Students_07_Student_Grievance_Procedure.pdf or a copy may be obtained from the Associate Dean for Student Affairs in Suite E1002, Wolfe Street building.

Policy Against Violence

The Johns Hopkins University is committed to providing a learning and working environment that is safe to all members of the University community. The University will not tolerate violent acts on its campuses, at off-campus locations administered by the University, or in its programs. This policy of "zero tolerance" extends not only to actual violent conduct but also to verbal threats and intimidation, whether by

students, faculty, staff, or visitors to the University.

The University urges individuals who have experienced or witnessed incidents of violence to report them to Campus Security. Alternatively, students are urged to report concerns about violence to the divisional office responsible for student matters, faculty to the divisional office responsible for faculty matters, and staff to the applicable human resources offices.

The University will not permit retaliation against anyone who, in good faith, brings a complaint of campus violence or serves as a witness in the investigation of a complaint of campus violence.

Enforcement

Information regarding incidents of violent conduct and threats of violence will be investigated, and, if warranted, disciplinary action will be taken in accordance with applicable procedures. The University will notify law enforcement authorities of criminal conduct. In addition, the University may refer individuals accused of violations of this policy for an assessment of the likelihood that they will carry out violent acts. If the continued presence of an individual on campus threatens or disrupts the conduct of University business, the individual may be suspended from participation in University programs or activities pending the outcome of the assessment.

When advised of circumstances warranting intervention, the University will render assistance by contacting local or federal law enforcement agencies as appropriate. Individual members of the University community who receive threats of bodily harm or who are the targets of harassing or stalking behaviors are urged to contact Campus Security and to avail themselves of the services offered by

student counseling offices and the Faculty and Staff Assistance Program.

Every effort will be made to respect the privacy of all individuals involved in the matter. However, the necessity to investigate the matter and to cooperate with law enforcement authorities may require the disclosure of otherwise confidential information.

Individuals accused of engaging in incidents of campus violence may seek legal counsel at their own expense. Individuals and their attorneys are reminded that attorneys do not participate in any internal University hearing.

Campus vendors are reminded that their employees who conduct business on the University premises must conform their conduct to the requirements of this policy. The University reserves the right to remove from campus vendor employees who engage in acts prohibited by this policy.

For additional information, please visit the University's website at www.jhu.edu/news_info/policy/violence.html.

Weather Emergency Policy

In the event of snow or other weather emergency, the senior vice president for finance and administration and the provost will decide whether and when to curtail operations of the University. The Johns Hopkins Weather Emergency Line and Website are the best sources of complete Hopkins information.

Weather Emergency Line

Baltimore area: 410-516-7781
Outside Baltimore: 800-548-9004

Weather Emergency Website

<http://webapps.jhu.edu/emergencynotices>

Be sure to listen to or read the entire announcement, because exceptions may be contained later in the message.

Notice of Use of Student/Employee Images

Students and employees who are present in facilities operated by the Bloomberg School are subject to having their images captured, such as by photograph, video, or electronic means. In addition to the use for security of personnel and facilities, the School reserves the right to use images of students and employees in their ordinary activities to promote the School. Such images may be used in printed publications, electronic format on the Internet, or other media. By your presence in these facilities you consent to capture of your image and its use by the School.

Bloomberg School Notification of Family Educational Rights And Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

- 1) The right to inspect and review the student's education records within 45 days of the day the University receives a request for access.

Students should submit to the registrar or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

- 2) The right to request the amendment of the student's education records that the student believes is inaccurate.

Students may ask the University to amend a record that they believe is inaccurate. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate.

If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment.

Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

- 3) The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests.

A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility. Upon request, the University discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

- 4) The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA.

The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5901

For specific information on the University Policy on Family Educational Rights and Privacy, refer to www.jhu.edu/news_info/policy/ferpa.html.

Student Services and Organizations

STUDENT AFFAIRS

Student Affairs is a comprehensive student services unit in the Johns Hopkins Bloomberg School of Public Health that provides advising to students, faculty and staff on academic policies, financial support and information management, and helps to create links between the academic mission of the Bloomberg School and public health careers. Student Affairs brings together the functions of several offices, and collaborates with many other units, to serve students from the time of their initial inquiry through graduation and beyond. Student Affairs is comprised of: Admissions Services, Disability Support Services, Records and Registration, Career Services, Financial Aid, SOURCE (Student Outreach Resource Center), Student Life and Student Affairs Operations.

LIVING ACCOMMODATIONS

Reed Hall

The Johns Hopkins Medical Institutions provide a limited number of accommodations in the Lowell J. Reed Medical Residence Hall for single students or married students not accompanied by their spouses. This facility is located within easy walking distance to the Bloomberg School. Reed Hall consists of two air-conditioned wings with a connecting lobby. The West Wing offers single rooms with a large community bath and shower on each floor. Building codes prohibit cooking in the West Wing rooms. However, students are allowed to use a microwave in the West Wing.

The East Wing consists of 4-person and 8-person suites with common living, kitchen, and bathroom areas

with adjacent private bedrooms. In both wings room furnishings include bed, chest of drawers, desk, desk lamp, desk chair, bookshelves, closet, carpet, and Venetian blinds. Residents of both wings must provide their own bedding and towels. In addition, residents in the East Wing must provide their own dishes, silverware, and utensils.

Other facilities in Reed Hall include a TV lounge, study lounges, vending concession area, self-service laundry, recreation room, computer room, and high-speed Internet access.

The Denton A. Cooley Recreation Center is located adjacent to Reed Hall. Membership to the Cooley Center is free to all full-time degree students and full-time Special Students. Faculty, staff, fellows, spouses of students, and other students of the medical institutions may join for a yearly membership fee. The recreation complex includes a full-size gymnasium, indoor running track, racquetball courts, weight room, exercise areas, and locker rooms with saunas. An outdoor pool is available on a membership basis.

Reed Hall Room Reservation

Reservations for room rentals in Reed Hall must be made in advance of arrival. Single rooms are available from approximately \$525–\$600 per month depending on size. Suites in the East Wing range from \$625–\$675 per month per person. A one-month security deposit is required. An application for on-campus housing is available on the “Admitted Students” section of Admissions Service’s website (www.jhsph.edu/admissions) in the spring.

Off-Campus Housing

Information regarding off-campus housing can be obtained by contacting the Off-Campus Housing Office at Reed Hall, 1620 McElderry Street,

Baltimore, MD 21205 or by phone at 410-955-3905. The Off-Campus Housing Office provides students with listings of available housing accommodations throughout the city and county of Baltimore as well as printed information on apartment complexes, city bus routes, landlord tenant laws, Baltimore City schools and nursery schools, and furniture rental options. Maps and guides to Baltimore are also available through this office.

Information on both on- and off-campus housing can be obtained at: www.hopkinsmedicine.org/som/students/life/housing/index.html

RECREATIONAL AND CULTURAL OPPORTUNITIES

Baltimore is located in a region rich in American history and has historic and scenic attractions within easy reach. There are many cultural and recreational opportunities to enrich student life. A city of contrasts, Baltimore ranks among the largest of the industrial and seaport cities.

Among the cultural resources is the Baltimore Museum of Art, which houses an outstanding collection of contemporary and classical painting and sculpture and features special exhibits, lectures, and art classes. One of the most important collections of art, tracing civilization from the ancient empires through the nineteenth century, can be found at the Walters Art Museum.

The Johns Hopkins Medical Institutions and the University in general host a variety of art exhibits, performances, workshops, lectures, and film series. Many of these cultural programs are open to the general public as well as to students, faculty, and staff. The University’s Office of Special Events presents a free Wednesday Noon Series, and special student rates are available for ticketed events. In addition, students

of the School are invited to attend film and lecture series presented by other local colleges. For almost forty years, the Shriver Hall Concert Series has been Baltimore's premier classical music presenter. The series presents eight to 10 concerts per season in the Shriver Auditorium, located on the Homewood campus, featuring the world's finest classical chamber ensembles and soloists. Regular and student subscriptions are available for the entire season. A special student rush ticket is offered one hour prior to each concert.

Different from the Shriver Hall Concert Series, but also based on the Homewood campus at Shriver Hall, is one of the area's leading community orchestras, Hopkins Symphony Orchestra. This talented pool of Hopkins students, faculty, and staff, as well as community members from as far away as Washington, D.C., and Virginia, practice and perform on the Homewood campus. Each year under the direction of internationally acclaimed music director, Jed Gaylin, Hopkins Symphony presents four exciting symphonic concerts with world renowned guest soloists and three conducted chamber concerts. Discount tickets are available for all JHU affiliates, and Hopkins students are admitted for free with a valid student ID.

Fine music is also available from the Peabody Conservatory of Music and the Baltimore Symphony Orchestra. Baltimore regularly attracts outstanding jazz, folk, and rock artists as well as the ballet. For those who enjoy the theater, Broadway shows are presented at the France-Merrick Performing Arts Center/Hippodrome Theatre, and contemporary drama is produced by a resident company at Center Stage. Harborplace, blending the National Aquarium, the Baltimore Convention Center, and many restaurants and unusual shops, is a fascinating and attractive destina-

tion. Shows, fairs, and ethnic festivals held throughout the year draw large crowds to the inner harbor area.

In addition, the Social and Cultural Affairs Committee of the School's Student Assembly works year-round on creating opportunities for students to network with other students, faculty, and staff. Some of the popular events include fall welcome party, Spring Tonic (talent show by students, faculty and staff) and a formal event in the fall. For more information on upcoming events, please visit: www.jhsph.edu/assembly/social_cultural.html.

COMMUNITY INVOLVEMENT

SOURCE (Student Outreach Resource Center) is the community service and service-learning center for the JHU Schools of Medicine, Nursing, and Public Health. SOURCE provides academic, professional and personal development opportunities through community outreach and service-learning partnerships with community-based organizations.

SOURCE serves as a channel for students, faculty and staff to connect with community organizations and local projects. SOURCE provides a way for students to enrich their education by applying theory to practice and helps students develop an appreciation for working with community-based groups through community service, volunteer positions, internships and practica, federal work-study opportunities, research, short-term consultancies, community outreach course placements and other involvement opportunities. SOURCE partners with 100 community-based organizations of various types, including some of the following: advocacy organizations, chronic/infectious disease prevention groups, community clinics, cultural and ethnic groups,

environmental organizations, mental health organizations, public schools and much more. SOURCE also partners with dozens of service-based student groups. A full directory of partnering community-based organizations is available online. SOURCE works with organizations throughout Baltimore, and has a particular but not exclusive focus on the East Baltimore neighborhoods close to the Johns Hopkins Medical Institutions (JHMI) campus. SOURCE participants apply their community outreach and public health skills while making a difference in the community. For more information, email source@jhsph.edu or visit www.jhsph.edu/source.

PARKING FACILITIES

Registered Bloomberg School students are eligible for discounted monthly parking at the Church Home Garage located on East Baltimore Street between Broadway and Caroline.

Parking access is sold in the Support Services Office located in the Wolfe Street Building Room W3041. Payment for parking may be made by term or in advance for the balance of the academic year.

Shuttle services are provided from the parking lot to the school and schedules may be obtained online at the website provided below or in the:

- Business Office - Wolfe Street Building - W1101
- Support Services Office - Wolfe Street Building W3041
- Johns Hopkins Hospital Parking Office - Harvey/Nelson Room 108

For complete details including rates, hours of operation, shuttle schedules and maps, please visit the Support Services website at:

www.jhsph.edu/supportservices/parkingandtransportation/.

For more information, contact the Support Services Office, 410-955-1197.

UNIVERSITY HEALTH SERVICES

All JHSPH full-time students are charged an annual health services fee of \$450.00. This fee is billed to every full-time student regardless of whether they have purchased the Student Health Plan (SHP) and is required for students who have purchased a comparable external health insurance plan.

The fee grants all full-time students access to the on-campus University Health Services Clinic (UHS) and access is no longer restricted to only those students who had purchased the Student Health Plan.

Information describing the services provided by the health center may be obtained in the Student Affairs Office, suite E1002 Wolfe Street Building, or the Student Accounts Office, suite W1100 Wolfe Street Building. Each student is assigned a UHS Primary Care Physician. For further information regarding the UHS Clinic, please visit their website at www.hopkinsmedicine.org/uhs.

Student Health Insurance

All full-time and foreign students are required to be enrolled in a qualified health benefit plan. At the time of registration, students must provide written proof of enrollment in a plan that meets standard guidelines in the State of Maryland. To accommodate students, who do not have existing insurance coverage, the School of Public Health offers the Student Health Program. Brochures describing the plan are made available through the Student Accounts Office, Suite W1101. Additional information on the Student Health

Plan can be found at (www.jhsph.edu/student_affairs/studenthealthinsurance.html).

Students currently enrolled in the Student Health Program who are expected to graduate or permanently leave the University will receive written notification that they are automatically terminated from the plan. However, under the Consolidated Omnibus Budget Reconciliation Act (COBRA), students leaving or graduating from the University have the option of extending their existing coverage for up to 18 months. Students must contact the Student Accounts Office within 60 days to be reinstated in COBRA and are responsible for all premiums. For questions pertaining to student health insurance, please email insurance@jhsph.edu.

JHMI INTERNATIONAL SOCIETY

The JHMI International Society, part of the Office of International Services, was founded in 1959 to assist the international visitor in establishing social acquaintances and to provide programs for cultural, social, and educational exchange. Activities include a welcome reception, social gatherings, and tours to nearby places of interest. A bimonthly newsletter and referral to English language instruction are also available.

For more information, please contact Dacia Gauer, internationalsociety@jhmi.edu.

OFFICE OF INTERNATIONAL SERVICES

The Office of International Services assists students, scholars, faculty and staff on the medical campus. It is a University office staffed by University employees who perform a variety of functions to assist international

visitors in obtaining and maintaining legal status while present in the U.S..

The office sponsors visiting faculty, postdoctoral fellows, house officers, nurses, degree candidates, and other persons with a bona fide University or Hospital affiliation. In addition to assisting the non-citizen in dealing with the Department of Homeland Security, the U.S. Department of State, the U.S. Department of Labor, the office houses the Johns Hopkins International Society, which provides services to assist internationals with social and cultural adjustment.

All foreign students, fellows, and visiting scholars on the medical campus, regardless of sponsorship, and whether immigrant or nonimmigrant, are required upon arrival to visit the Office of International Services to provide the necessary passport and immigration information vital to the records of the university. The office is located directly across from the hospital at 1620 McElderry Street on the first floor of Reed Hall. The Office of International Services, which is comparable to the foreign student adviser offices found on many university campuses, acts as liaison between Hopkins and various government agencies. Once having seen a student's credentials, the office can advise a student accordingly on issues such as legal status, extension of legal status, travel, visa revalidation, employment eligibility and dependent information.

A representative from the Office of International Services will be at the Bloomberg School during orientation and will be able to review travel documents and answer questions at that time.

Registration in the Bloomberg School is not considered complete until the Office of International Services has

documented a student's legal status in the U.S..

For more information, please visit www.hopkinsmedicine.org/intlsvcs/.

CAREER DEVELOPMENT

The Career Services Office provides career planning and job search assistance to all students of the Bloomberg School. Seminars, forums, and individual counseling sessions are provided to aid students in focusing their career objectives, developing resumé and curricula vitae and matching new competencies and skill sets with current job openings. The career resource library, which includes many resource books, is a useful tool for job seekers. JHSPHConnect, an electronic career management system, is utilized to assist students in their job search and contains hundreds of job and internship postings. Students are able to logon 24 hours a day to search for jobs using this global system, upload resúms, cover letters, and other job search materials.

A career fair is held during the third term to introduce students to public health personnel in the field. Other services include several alumni networking receptions, mock interview sessions by appointment, a Women in Leadership panel, information about public health agencies and the services they provide as well as onsite interviewing. In addition, a one-day soup-to-nuts career course is offered during the winter intersession.

STUDENT GOVERNMENT

The Student Assembly is the annually elected student governing body of the Bloomberg School. It serves as a focus for student concerns and activities at the School and represents student views and interests to the administration and faculty. Students have an important voice in School

affairs through their participation in School committees.

Accomplishments of the Student Assembly include sponsorship of seminars and community outreach projects. The Student Assembly also hosts several social events throughout the year, including an end of the year party and the annual Winter Gala.

For more information, visit: www.jhsph.edu/assembly.

DEANS FOR STUDENTS NETWORK

The Deans for Students Network (DFSN) facilitates clear pathways of communication among the deans and individual students and the student body at large. The purposes of the network are the following:

- to facilitate student access to the services of the deans for student affairs
- to improve communication between/among deans and students
- to promote a positive, supportive, and culturally sensitive atmosphere in dean/students relationships
- to provide a forum for deans to communicate and assess their student-related activities
- to develop, revise, and communicate problem-solving algorithms to meet the changing needs of the student body
- to translate student needs into institution wide policies and guidelines for which the DFSN will serve as advocates to the administration, the Student Assembly, and the student body

The responsibilities and activities of the DFSN are currently shared among Michael Ward, associate dean for student affairs and James Yager, senior associate dean for academic affairs, with input from and collabo-

ration with student members to the network.

DELTA OMEGA PUBLIC HEALTH HONOR SOCIETY, ALPHA CHAPTER

Established in 1924 at the Bloomberg School, Delta Omega recognizes outstanding achievement in the field of public health. The society encourages scholarship and research among students undertaking graduate study in public health. The annual election of students, faculty, and alumni to membership in the society is based upon outstanding achievements and contributions to the field of public health. Each year the Alpha Chapter awards scholarships for research projects and prizes for a poster competition. For more information, contact the Johns Hopkins Bloomberg School of Public Health, 615 N. Wolfe Street, E2148, Baltimore, MD 21205; 410-614-5019 or www.jhsph.edu/delta_omega/.

SOCIETY OF ALUMNI

The Society of Alumni is a professional organization of graduates of the Bloomberg School. Dedicated to providing fellowship, networking, continuing education, and strengthening alumni ties to the School, the society is represented worldwide by regional public health chapters. Alumni working worldwide in every facet of the profession are available to network with students and fellow alumni. For more information, contact Ms. Philippa Moore, Director of Alumni Relations, Society of Alumni, Johns Hopkins Bloomberg School of Public Health, 615 N. Wolfe Street, E2148, Baltimore, MD 21205; 410-614-5019; email: pmoore@jhsph.edu, or visit www.jhsph.edu/alumni/.

Financial Assistance

The Financial Aid Office administers all student loan programs plus the Federal Work-Study program at the Johns Hopkins Bloomberg School of Public Health. In addition to determining a student's eligibility for loan assistance and work-study, the Financial Aid Office provides financial aid counseling to all aid applicants. It is important for prospective students to note that the decision to offer or deny financial aid is totally separate from the decision to offer or deny admission to the School.

Eligibility for financial assistance is based on a combination of factors such as financial need, registration status, and availability of funds. For need-based loans and work-study, financial need is determined by using a standardized formula, established by law, which calculates an Expected Family Contribution (EFC) for the student. The EFC amount is used to compute a student's eligibility for Federal Student Aid.

To receive Federal Student Aid, an applicant must:

1. Enroll as a regular student in an eligible program
2. Register for the appropriate credits per term
3. Maintain satisfactory academic progress
4. Be a U.S. citizen or eligible non-citizen and have a valid Social Security Number
5. Not be in default on a federal student loan or owe a repayment on a federal student grant
6. Register with the Selective Service, if required

Financial aid regulations stipulate that an aid recipient must maintain satisfactory academic progress.

Failure to maintain satisfactory academic progress may result in the cancellation of a student's eligibility to receive additional financial aid. Also, a change in the student's enrollment or funding status may affect his or her eligibility for federal student aid.

When a student withdraws within an academic term, the student's eligibility to retain financial aid will be recalculated to cover the enrollment period for which the student did maintain eligibility.

FELLOWSHIPS, SCHOLARSHIPS, AND TRAINEESHIPS

General Information and Method of Application

A variety of fellowships, scholarships, and traineeships are funded by the federal government, the private sector, and the Bloomberg School.

Fellowship or traineeship support from the Public Health Service and other agencies of the U.S. government is usually limited by law to citizens and permanent residents of the U.S.. This support may be for specific or general areas of study.

Please note that each department at the Bloomberg School administers their own academic scholarship program. Therefore, students should contact the department of their major interest and request specific information about departmental scholarship opportunities.

Departmental Scholarships

Many departments offer funding support which includes stipends, insurance, tuition, and fees. The amount and type of this assistance varies and specific departments may only offer tuition support to students.

Since departmental scholarship aid is awarded by the departmental chairperson, requests for scholarship aid

should be submitted directly to the appropriate academic department. Individuals who apply to the MPH program are automatically considered for scholarship assistance by the MPH office.

For additional information about departmental funding, degree candidates should contact the chairperson of the department to which they intend to apply.

Master's Tuition Scholarships (MTS) for Master of Science, Master of Science in Public Health, Master of Health Science and Master of Health Administration Candidates

Master's Tuition Scholarships worth up to 75% of the School's tuition are available to eligible ScM, MSPH, MHS and MHA students following the successful completion of 64 academic credits. A scholarship award of less than 75% of tuition will be made when some other form of tuition support is available to the student. Receipt of an MTS award is limited to four academic terms. Candidates for the MTS are recommended by their academic departments. Students should contact their academic departments or the Financial Aid Office for eligibility/criteria.

Student Funding Resources

The primary responsibility of Student Funding Resources is to assist students, postdoctoral fellows and faculty in the identification of and application for grant opportunities. The time frame for receiving funding will vary from a few months to a year, depending on the specific opportunity. Therefore, it is important to plan ahead and allow ample preparation time for your funding application. Additional information about specific funding opportunities and the application process is available

from the Student Funding Resources website at www.jhsph.edu/SFR.

State Aid

Generally, state aid comes from the student's state of legal residence. Students should contact their state student aid agency for information about financial assistance.

Postdoctoral Training

The Johns Hopkins Bloomberg School of Public Health provides opportunities for postdoctoral training in all departments. Individuals interested in postdoctoral training should first establish contact with a member of the faculty with whom they wish to work. The research interests of the School's faculty can be found at the School's website (www.jhsph.edu) by clicking on Departments or the Faculty Directory. For more detailed information about postdoctoral training at the School visit www.jhsph.edu/GER/Postdocs.html.

Research Awards

Opportunities for support from various research sources are usually available within most departments. Students should contact their department for additional research award information.

FEDERAL STUDENT LOANS AND FEDERAL WORK-STUDY

General Information and Method of Application

A student must have a complete financial aid application file in order to receive consideration for Federal Student Aid. Application information is available on the Financial Aid website at www.jhsph.edu/student_affairs/financial.

The recommended filing date for new students is March 15. The recom-

mended filing date for returning students is May 1.

Student Loans

Loans, unlike scholarships or work-study, are borrowed money that must be repaid with interest. Student loans are financial obligations, so think about the amount of money you will have to repay before you take out a loan. Federal student loan eligibility is limited to U.S. citizens and eligible non-citizens. Persons who are in this country on a student or visitor visa are not eligible for federal student loans.

Federal Direct Student Loans—

Federal Direct Loans allow students to borrow money from the federal government to pay for education expenses. If you are a student enrolled in an eligible program on at least a half-time basis, you may be eligible to receive a Direct Loan. Under the Direct Loan Program, the U.S. Department of Education makes loans, through schools, directly to students. The Direct Loan program simplifies the loan application process and eliminates the need for an outside lender, such as a bank or credit union. Direct Loans are either subsidized or unsubsidized.

- **Federal Direct Subsidized** Loans are awarded on the basis of financial need. The federal government will pay the interest on the loan while the student is in school and during specified deferment periods.
- **Federal Direct Unsubsidized** Loans are not awarded on the basis of need. The student will be charged interest from the time the loan is disbursed until it is paid in full.

Both Subsidized and Unsubsidized loans have a fixed interest rate of 6.8%.

Grad Plus Loan—A Grad Plus loan allows students to borrow the difference between the total cost of education minus any aid the student will receive. Borrowers are required to pass a basic credit check and the interest rate is fixed at 7.9%.

Federal Perkins Loan—A Perkins Loan is a low interest (5%) loan for students with exceptional financial need. Johns Hopkins University is the lender and the loan is made with government funds. You must repay this loan to Johns Hopkins University.

Private Loan Funds—Several alternative student loan programs are offered by private lending institutions. Private loans are credit-based, are not subject to the Federal Need Analysis Methodology, and may be used to supplement other forms of financial assistance.

Federal Work-Study Program

The purpose of the Federal Work-Study Program is to stimulate and promote the part-time employment of students who are in need of these funds to help meet the cost of post-secondary education. This program also encourages eligible students to participate in community service activities that will benefit the nation and engender in the students a sense of social responsibility. A student's earnings during an academic year are limited by the student's demonstrated financial need and the availability of program funds. Federal Work-Study positions are assigned on a first-come, first-served basis.

VETERANS' BENEFITS

The Bloomberg School (serving as a liaison to the Veterans Administration) makes provisions for individuals who wish to continue their education under the laws pertaining to veterans' education benefits. Eligible students must apply

to the Veterans Administration for education benefits. Students are required to pay the usual fees to the Bloomberg School at the time of registration. Additional information regarding veterans' benefits may be obtained from the Financial Aid Office.

FOREIGN STUDENTS

Financial Certification

Applicants for admission from other countries should arrange for their funding as soon as they apply for admission. Students typically are informed of scholarship awards from the Bloomberg School prior to enrollment. If you have not been formally awarded a scholarship before the start of the academic year, it is unlikely that you will receive a scholarship after you arrive at the University. The Bloomberg School has no mechanism for tuition waivers.

Foreign students should be prepared to show clear documentation as to how they will support themselves for tuition and living expenses during their entire program. If applicable, the School must receive official certification from the student's sponsor of the source and amount of financial support (tuition and living expenses) before the Certificate of Eligibility (I-20 form or DS 2019) needed to obtain a visa can be issued to an accepted international student. Those students who plan to support themselves from personal funds must provide a letter from a bank in the U.S. indicating that sufficient funds are on deposit to cover tuition and living expenses for the first year of the program.

Financial Assistance

Financial assistance for international students who are not permanent residents of the U.S. is limited. International students are not eligible for Federal Student Aid funds—Direct Loans, Perkins Loans, or Federal Work-Study. Most international students coming to the Bloomberg School are supported by their governments or private health organizations. International students should contact the department to which they intend to apply for information regarding their eligibility for scholarship assistance.

BLOOMBERG SCHOOL SCHOLARSHIPS AND AWARDS

Students registered full-time in the Bloomberg School are eligible for consideration for various scholarships, research fellowships, and awards. All students are advised to review the bulletin boards and the Student Funding Resources website, located via the school's website at www.jhsph.edu/SFR, for scholarship announcements. Detailed information is available through the Director of Graduate Education or the Committee on Honors and Awards. Awards made available through the School or departments include:

Helen Abbey Fund—Supports a second-year (or later) doctoral candidate in biostatistics who has a commitment to teaching after graduation.

Cheryl Alexander Memorial Fund—Supports Students in the Department of Population, Family and Reproductive Health whose focus is on adolescent health.

Aoyama-Kita Scholarship—Provides scholarship support to public health physicians from Japan, Korea, and Malaysia who will pursue careers in public health practice in those countries, and/or who demonstrate an avid research interest in public health issues affecting those countries.

Apgar/Bramley/Clifford Scholarship—Supports female physicians pursuing public health degrees with a major focus on maternal and child health.

Baker, Reinke, Taylor Scholarship in International Health—Supports graduate students in the Department of International Health. Preference will be given to students working in the following areas: organization of health delivery systems, community-based health care or injury control in less developed countries.

Frederik B. Bang Fund—Recognizes students who are engaged in doctoral research in a topic relevant to pathobiology.

The A. Ralph and Sylvia E. Barr Fellowship in Vector Biology—Supports a doctoral or postdoctoral student in the W. Harry Feinstone Department of Molecular Microbiology and Immunology working with vectors of infectious diseases in their natural habitats.

Randy E. Bass Award—Supports a student focusing on occupational medicine.

J. Howard Beard Fellowship—Supports beginning Master of Public Health students who are graduates of the Johns Hopkins School of Medicine or enrolled in the joint MD/MPH program. Preference is given to candidates interested in local or state public health work.

Marilyn Bergner Award in Health Services Research—Supports a doctoral student working in the area of health services research in the Department of Health Policy and Management.

Marjorie F. and Joseph I. Berman Family Award—Provides financial assistance to deserving students.

David and Patricia Bernstein Scholarship—Supports graduate students at the School, with a preference given to students who are pursuing a Master of Public Health degree.

Dr. Henry K. and Lola Beye Scholarship—Awarded to a physician pursuing a graduate degree in the Department of International Health.

Eleanor A. Bliss Honorary Fellowship—Provides support for a doctoral student in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

David and Elinor Bodian Scholarship Fund—Provides annual support to a doctoral student in any department at the School whose dissertation research is at a critical juncture.

Cele and Pete Boruk Endowment—Provides support to nurses and nursing students studying public health at the school.

Miriam E. Brailey Fund—Supports graduate training and research in epidemiology.

Brown Scholars in Community Health—Supports doctoral students with an interest in community health.

Georgeda Buchbinder Fund—Supports students, junior faculty, or other priority projects in international health at the discretion of the Chairman of the Department of International Health.

Trudy Bush Fund—Provides tuition support to students pursuing an MHS degree in the Department of Epidemiology with a specialization in women's health.

Otis and Calista Causey Fellowship in Immunology—Recognizes outstanding PhD students in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

Center for a Livable Future Doctoral Fellowship—Awards up to \$67,000 to JHU doctoral students who are committed to the discovery and application of knowledge in the Center's main program areas. Visit www.jhsph.edu/clff/research_new/fellows/fellows_prog.html for an application.

Bacon Field Chow Memorial Fellowship—Provides tuition support to outstanding doctoral students working in the area of human nutrition research.

Clements-Mann Fellowship—Supports outstanding graduate students in the Department of International Health whose studies are focused in vaccine sciences.

Caroline Cochran Scholarship Fund in Population and Reproductive Health—Provides tuition assistance to incoming and continuing graduate students in the Department of Population, Family and Reproductive Health who are interested in population and reproductive health.

Ruth B. and J. Douglas Colman Scholarship—Provides support to an outstanding student in the general preventive medicine residency program whose focus is on health policy.

Jean Coombs Fund—Supports doctoral dissertation research by students in the Department of Epidemiology, concerning cancer research or childhood diseases.

Donald A. Cornely Scholarship Fund in Maternal and Child Health—Provides support for a doctoral student in the Department of Population, Family and Reproductive Health whose research has application for the practice of maternal and child health.

Frances A. Coventry Fund—Provides support for outstanding Bloomberg School students.

June Culley Scholarships in Biostatistics and Health and Policy Management—Provides support for doctoral students in the departments of Biostatistics and Health Policy and Management.

Dean's Alumni Advisory Council Scholarship—Provides tuition support to deserving incoming or continuing students whose careers in public health will be dedicated to the global defense of human life through the prevention of disease, disability and premature death.

Edward J. Dehne Award in Population Dynamics—Supports doctoral students working in the area of reproductive health and family planning in the Department of Population, Family and Reproductive Health.

Delta Omega Scholarship—Supports students whose research proposals demonstrate merit.

Dr. J. Harold Drudge Scholarship—Provides support for parasitology students in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

Louis I. Dublin and Thomas D. Dublin Fund for the Advancement of Epidemiology and Biostatistics—Supports graduate student education at the interface of biostatistics and epidemiology.

Dyar Memorial Fund—Supports a graduate student in the Department of Epidemiology seeking an MD degree.

Jane and Steve Dykacz Endowment Fund in Medical Statistics—Awarded to a student whose research fosters biostatistical research and practice to advance our understanding of human health and disease.

Endowed Student Support Fund—Supports students undertaking research projects on injury control or population control in developing countries with preference given to students conducting research in China, India, Indonesia, and Brazil.

Environmental Health Engineering Student Development Fund—Supports student development, educational goals and objectives for the Division of Environmental Engineering in the Department of Environmental Health Sciences.

The Eskridge Family Student Support Fund for International Students—Provides tuition support to an outstanding international student.

Endowed Fellowship in Family Planning and Reproductive Health—Supports graduate students or postdoctoral fellows in the Department of Population, Family and Reproductive Health working in the area of family planning and reproductive health.

The Charlotte Ferencz Scholarship in the Department of Epidemiology—Supports incoming students in the Department of Epidemiology whose research projects focus on birth defects, with preference given to projects related to the etiology of congenital heart disease.

Dr. Louis Fink MPH Capstone Award—Awarded to the best MPH capstone paper focused on the environmental causes of human neurological diseases and/or public policies.

Nancy Fink Fund for Scholarship and Service—Supports master's degree students in the Department of Epidemiology.

Charles D. Flagle Fund—Awarded to a doctoral student in the Department of Health Policy and Management whose work is in the area of health services research, including technology assessment and medical informatics.

Ruth Freeman Memorial Fund—Recognizes academic performance and an outstanding thesis of a graduating or continuing nurse doctoral student.

Martin Frobisher Fellowship Fund—Provides support for doctoral students in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

The Reed Frost Scholarship—Funded each year from contributions from alumni around the world, this scholarship is awarded to selected incoming MPH students who show exceptional ability and promise.

General Preventive Medicine Residency Endowment—Provides tuition and stipend support for outstanding first year general preventive medicine residents.

The Pearl and Jeremiah German Scholarship in Gerontology—Provides tuition assistance and/or stipend support to an incoming doctoral student in the Department of Health Policy and Management with a declared interest in gerontology.

Alice J. Gifford Fund for Occupational Health Nurses—Supports graduate education for nurses in occupational and environmental health and related research conducted by nurses at the School.

GlaxoSmithKline Preventive Medicine Residency Scholarship—Provides support to an outstanding first-year general preventive medicine resident.

Ellen B. Gold Fund for Epidemiology—Supports outstanding graduate students in the Department of Epidemiology with financial need who are within the first 5 yrs of studies/research in human epidemiology.

Goodermote Humanitarian Award Scholarship—Supports Students with a demonstrated commitment to international health and to improving the public health of populations affected or displaced by civil unrest, war or natural disasters.

Howard C. and Jane R. Goodman Fund—Provides tuition support for an MPH student.

J.B. Grant Field Experience Fund—Provides support to a Master of Public Health student who is committed to improving world health.

Bernard & Jane Guyer Scholarship Fund—Provides support to graduate students in the Department of Population Family and Reproductive Health whose primary focus is in maternal and child health.

William Haddon, Jr. Fellowship in Injury Prevention—Provides support to a new or continuing full-time doctoral student in the Department of Health Policy and Management, working in the area of injury control and prevention.

Dr. Bettylee Hampil Fellowship—Supports a doctoral student in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

C. Esther and Paul A. Harper Award in Population and Family Health Sciences—Supports graduating doctoral students in the Department of Population, Family and Reproductive Health whose research focuses on population issues, and students studying maternal and child health whose academic performance has been judged outstanding.

Health, Behavior and Society Distinguished Research Awards—Supports special research or training opportunities and dissertation research for students in the Department of Health, Behavior and Society.

Health Policy and Management Fellowship Support—Provides tuition support to incoming doctoral students in the Department of Health Policy and Management.

Hegner, Cort, Root Memorial Scholarship Fund in Immunology and Infectious Disease—Supports a doctoral candidate in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

Carlton and Estelle Herman Award in Parasitology, Vector Biology and Animal-Borne Disease—Supports doctoral students in the W. Henry Feinstone Department of Molecular Microbiology and Immunology whose research work in parasitology, vector biology and animal-borne diseases demonstrates great promise.

Diana Hess Memorial Fund—Provides support to students in the Department of International Health. Preference is given to those planning to work in Africa.

The Richard J. and Margaret Conn Himelfarb Student Support Fund—Supports doctoral students whose research focuses on autoimmunity, the epidemiology of diabetes, or other areas related to diabetes, particularly Type I.

Lillian Hiss/Ethel Crosby Scholarship Fund—Provides support to students with a nursing degree, based on academic achievement and financial need.

The Sibley and Catherine Hoobler Award for Excellence in Public Health and Medicine—Awarded to students pursuing studies in the Johns Hopkins Schools of Public Health and Medicine.

Lee M. and Maxwell C. Howard Scholarship Fund for International Students—Provides support to an international student.

Humanitarian Assistance Scholarship Fund—Supports students committed to improving humanitarian response and health for refugees, displaced persons and populations affected by conflict and natural disasters.

John C. Hume Doctoral Award—Provides support to a continuing doctoral student in Health Policy and Management.

John C. Hume Fund for Academic Excellence and Promise in an MPH Student—Awarded to a Master of Public Health student for academic excellence and professional promise.

Johnson & Johnson Community Health Care Scholars—Public health doctoral candidates from the School are selected from a competitive pool to provide technical assistance for two consecutive years to community health care organizations receiving support from Johnson & Johnson.

Elsa Orent Keiles Fellowship in Biochemistry and Human Nutrition in International Health—Provides tuition support for graduate students with demonstrated financial need in the Department of Biochemistry and Molecular Biology and the Division of Human Nutrition in the Department of International Health.

Young J. Kim Memorial Scholarship—Provides support to international masters and doctoral level students whose studies focus on demography and population research.

Wendy Klag Memorial Fund—Provides support to students who are working on issues related to the health and well-being of children.

Kocherlakota Award in Biostatistics—Presented to the most outstanding master's level student in the Department of Biostatistics.

Dr. Michael Koenig Memorial Fund—Supports doctoral students in the Department of Population Family and Reproductive Health who plan to travel internationally for their dissertation research.

Josephine Kohn and Family Fund—Provides support to incoming or continuing international doctoral students in the Department of Population, Family and Reproductive Health whose focus is on family planning and reproductive health, and who intend to return to their home country.

Morton Kramer Fund for the Application of Biostatistics and Epidemiology in Research on the Prevention and Control of Mental Disorders—Provides an annual award to an outstanding doctoral student in the Department of Mental Health who has demonstrated excellence in application of biostatistical and epidemiological methods to the solution of problems in research dedicated to advancing our knowledge of the epidemiology and prevention of mental disorders.

Dr. C. W. Krusé Memorial Fund—Presented to a doctoral student for scholarly achievement and an outstanding dissertation in the division of Environmental Health Engineering in the Department of Environmental Health Sciences.

Harry D. Kruse Fellowship in Nutrition—Presented annually to a continuing full-time student who has demonstrated outstanding academic performance and professional potential in the field of nutrition and public health.

Harry D. Kruse Publication Award in Human Nutrition—Recognizes as an outstanding, early career, professional achievement the publication of a first-authored manuscript on human nutrition.

The Dr. Harry J. Lawler Award Fund—Provides support to an outstanding student in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

The Cynthia and Robert Lawrence Scholarship—Provides support to a student whose public health interests have a direct bearing on the priorities of the Center for a Livable Future.

Lazzara Family Foundation Scholarship for Obesity Prevention—Tuition assistance for worthy students whose concentration is in nutrition/childhood obesity.

Paul V. Lemkau Scholarship Fund—Given to a Department of Mental Health student or fellow who has made a significant difference in the community life of the department.

Abe Lilienfeld Scholarship Fund—Supports exceptional doctoral or masters students concentrating in the discipline of epidemiology.

Edward and Kathy Ludwig Scholarship Fund—Provides support to students in the School's doctoral program.

Carol Eliasberg Martin Scholarship in Cancer Prevention—Provides annual support to an outstanding doctoral student or postdoctoral fellow whose work holds promise for preventing cancers that affect women, with a focus on breast and ovarian cancer.

Dr. Cynthia Maung Endowed Scholarship Fund—Supports medical students who are completing their third or fourth year of medical training who wish to complete a Master of Public Health degree.

Margaret Merrell Fund—Provides support for students in the Department of Biostatistics in recognition of excellence in research.

Mary B. Meyer Memorial Fund—Supports doctoral or postdoctoral students in the Department of Epidemiology whose research focuses on the epidemiology of reproduction and infant/child health.

The Harvey M. Meyerhoff Scholarship in Cancer Prevention—Provides fellowship support to students in the Department of Epidemiology whose focus is in cancer prevention.

Janice Eddy Mickey Endowed Scholarship—Supports students who are committed to improving health and human rights worldwide.

Minority Health Award—Given to students with a demonstrated commitment to minority health issues.

Dr. and Mrs. Roscoe M. Moore, Jr. Scholarship in the Department of Epidemiology—Supports a doctoral student in the Department of Epidemiology, with preference given to graduates of historically black colleges and universities.

Morgan-James Scholarship Fund—Supports an outstanding student pursuing a graduate degree in the Department of Environmental Health Sciences, whose interest is radiation health sciences.

Endowed Scholarship in the Health of Mothers and Children—Provides annual support to one or more graduate students whose interests, research and career plans are focused on improving the health and saving the lives of mothers and children.

Lisa L. Paine Graduate Fellowship in Nurse-Midwifery—Honors and supports experienced nurse-midwives seeking a graduate degree in the Department of Population, Family and Reproductive Health to better fulfill the widening public health role for maternal and child health research, education, and service.

John and Alice Chenoweth Pate Fellowship—Supports a woman health professional wishing to pursue postdoctoral opportunities in maternal and child health.

The David Paton Scholarship in Preventive Medicine—Provides support to a general preventive medicine resident.

The Marcia G. Pines Award in Bioethics and Public Health—Given annually for the best student paper in bioethics and public health.

Harry J. Prebluda Fellowship in Nutritional Biochemistry—Provides fellowship support for outstanding students focusing on nutritional biochemistry and metabolism.

Procter and Gamble Fellowship—Supports masters, doctoral and post-doctoral students committed to advancing health and well-being of women and children through the provision of clean water and improved nutrition.

Ruth Rice Puffer Fund for International Student Support—Supports a masters or doctoral student studying at the School who is not a U.S. citizen.

Victor P. Raymond Memorial Fund—Provides scholarship support to a continuing doctoral student in the Department of Health Policy and Management whose work has relevance at the national and state level.

Nancy A. Robertson Scholarship in Injury Prevention—Provides support to doctoral and postdoctoral students in the Department of Health Policy and Management who are doing research in injury prevention.

The Dr. Lloyd and Mae Rozeboom Scholarship—Supports students in the W. Harry Feinstone Department of Molecular Microbiology and Immunology who are studying medical entomology/vector biology.

The R. Bradley Sack Family Scholarship Award—Supports outstanding doctoral students studying infectious disease programs in the developing world.

Dorothy and Arthur Samet Student Support Fund in Epidemiology—Supports students in the Department of Epidemiology.

Sandvold-Hydle Family Scholarship—Provides scholarship support to students in the Department of Health Policy and Management with consideration given to students, particularly public health nurses and midwives, who have committed to work in local, state and federal public health sectors.

Edyth H. Schoenrich Student Scholarship Fund—Supports deserving students at the School.

Keerti V. Shah Fund—Supports students working in the area of translational research in infectious disease in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

Carl Swan Shultz Endowment Fund—Presented to an outstanding doctoral student in the Department of Population, Family and Reproductive Health whose work focuses on reproductive health, family planning, demography, or reproductive biology.

Lucy Shum Memorial Scholarship—Supports students who are working in the area of public health policy for mental health issues.

The Jean and Sidney Silber Fund in Population, Family and Reproductive Health—Provides stipend support to a student in the Center for Adolescent Health Promotion and Disease Prevention interning and/or working on a research project in partnership with a community organization.

Charlotte Silverman Fund in the Department of Epidemiology—Supports students and/or junior faculty in the Department of Epidemiology whose focus is on epidemiology and policy.

John Snow, Inc. Award in International Health—Provides financial assistance to outstanding, second-year MHS students in the Department of International Health who are engaged in an international health internship.

John Paul Stapp Endowed Scholarship—Supports students whose research and study focus on aviation safety, highway safety, or biomechanics.

Ernest Lyman and Helen Ross Stebbins Scholarship—Awarded on the basis of academic achievement, scholarship, field experience, and ambitions in public health professional practice.

Nancy Stephens Student Support Fund—Provides small grants to assist master's or doctoral students in the Department of International Health who are within two terms of anticipated graduation.

Anna Huffstutler Stiles Scholarship—Supports outstanding masters degree students in the Department of Epidemiology.

David Leslie Swift Fund in Environmental Health Engineering—Supports masters, doctoral and postdoctoral students from the Division of Environment Health Engineering.

Mary and Carl Taylor Fund—Provides support to a student working in the area of international bioethics.

Kann Trowbridge Fund—Provides fellowship support to a U.S. doctoral student in the Department of Population, Family and Reproductive Health who has demonstrated outstanding academic achievement, financial need and is committed to promoting national efforts in family planning and reproductive health.

Watt/Hansell Endowment—

Established to bring a public health perspective to medical education, this endowment provides tuition support to outstanding Hopkins medical students who wish to pursue public health training and vice versa.

Katharine E. Welsh Fellowship in Immunology and Infectious Disease—

Supports outstanding students in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

The Willian Endowment for Excellence in Science—

Awarded to a U.S. doctoral student in the Department of Population, Family and Reproductive Health working in the field of maternal and child health whose work focuses on issues of health policy and management for women and children.

The Ruth G. Wittler Student Scholarship Fund—

Provides support to students working in the laboratory sciences in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

Robert D. and Helen S. Wright Fund—

Presented to continuing doctoral students in the Department of International Health, who expect to contribute to the improvement of public health in Africa, particularly Nigeria.

Dr. Chun Hui Yen and Wang Pei Yen Scholarship Fund—

Provides annual scholarship support to a student from Taiwan or China who has demonstrated academic excellence and financial need. Preference will be given to students pursuing MPH or DrPH degrees who have expressed an interest in disease control or health systems.

John P. Young Memorial Fund—

Provides support to an outstanding student in health finance and management in the Department of Health Policy and Management.

Fund in Recognition of Laurie Schwab Zabin for Population and Family Planning Students—

Supports graduate students at the School who are focusing their studies on family planning and reproductive health. Preference will be given to students who are U.S. citizens planning to work in other countries, but the fund may also be used for U.S. students committed to working in disadvantaged areas of the U.S.

Tuition and Fees

TUITION

Tuition at the Johns Hopkins Bloomberg School of Public Health for the 2011-2012 academic year for full-time enrollment for a four-term, nine-month academic year is \$42,816. Tuition for the 2011-2012 academic year for the eleven-month, full-time MPH program is \$53,520. Tuition is charged on a per-credit basis for students granted permission to pursue a degree program for an extended period of time. For the 2011-2012 academic year, the charge is \$892 per credit. Information regarding these charges can be obtained from the Records and Registration Office or the Student Accounts Office.

Fees for audited courses are based on the number of credits as if the course were taken for academic credit. Tuition for post doctoral students is \$800 for the four-term academic year. For special students, tuition is assessed for courses taken in accordance with the established schedule of fees per credit unit.

Schedule of Payments

Payment due dates for all degree-seeking students for summer term through fourth term are as follows. Please note: All special students must pay at the time of registration.

Summer	July 22, 2011
1st Term	September 16, 2011
2nd Term	November 18, 2011
Winter	February 17, 2012
3rd Term	February 17, 2012
4th Term	April 20, 2012

Electronic statements are posted on the web on the second Thursday of each month. The payment due date for each statement is the following Friday with the exact date listed on each individual statement. You have

access to view your current balance and pay your bill at any time through the self-service website, <http://isis.jhu.edu/sswf>.

A document from an organization stating its intention to financially support the student will be accepted as payment at the discretion of the Student Accounts Office. Tuition and related fees may also be paid by cash, check, Discover, MasterCard, Visa, or American Express.

Refund Policy

Students receive a 100% tuition refund for any course dropped prior to the end of the add/drop period. However, there is no tuition refund after the add/drop period. This policy applies to complete registration withdrawals as well as individual course withdrawal. During weeks three and four of the term, students who receive federal student financial aid must consult with the Financial Aid Office prior to any withdrawals from the School.

FEES

Matriculation Fee

All new degree candidates entering academic year 2011-2012 either full-time or part-time will be assessed a one-time matriculation fee of \$500. The fee is designed to offset costs associated with registration, record keeping, and graduation, including diploma printing.

Activity Fee

All new degree candidates will be assessed a one-time activity fee of \$40.

Late Registration Fee

A fee of \$100 is assessed for registering after the specified registration date. A fee of \$50 is assessed for changing courses after the specified add/drop deadline. Late fees are

assessed without exception and are applied each academic term, including summer.

Late Payment Fee

A fee of \$100 is assessed without exception for self-payment portions of tuition paid after the payment due date for each term.

Collection Fee

All delinquent accounts that are sent to an outside collection agency will be assessed a fee in the amount of 15% of the account balance. This fee must be paid along with the account balance in order to have your financial hold removed from your JHU account.

Transcript Rush Order Fees

Transcripts should be ordered at least seven working days before they are needed. Students may submit an online request for transcripts at www.jhsph.edu/student_affairs/registrar/transcripts.html or complete a transcript request form in person in the Records and Registration Office.

In cases of extreme urgency, a rush order for a transcript may be requested. A fee of \$10.00 will be assessed for rush requests for transcripts to be picked up or sent by standard mail. A fee of \$15 will be assessed for rush requests to be sent via overnight mail to U.S. addresses and a \$22 fee will be charged for overnight delivery to foreign addresses (please note: Rush fees are charged per "mail to" address; an additional \$5 fee will be charged per transcript for requests in excess of five). There is a nominal fee charged for non-rush requests. Rush request transcripts will be available within 24 business hours of receipt of order. Partial transcripts of a student's record will not be issued. Official transcripts that were originally submitted as part of the student's

application file may not be released to either the student or a third party.

Returned Check/Returned ACH Fee

A fee of \$25 is assessed without exception for any check or electronic ACH payment returned to the School by a banking institution. The University reserves the right to not accept future payments by personal checks or electronic ACH from any student once a fee has been assessed.

Course Materials Fee

Some courses have mandatory fees to cover the cost of reproducing instructional materials for those courses. These fees are listed on the course schedules for each term and will be charged to your student account.

Leave of Absence Fee

The University will assess a \$50 fee per term (excluding summer) for students who are on official leave of absence.

Health Clinic Fee

Effective July 1, 2011, all JHSPH full-time students will be charged the health services fee quarterly, \$112.50 each term. This fee is billed to all full-time, on-campus students regardless of whether he or she has purchased the Student Health Plan (SHP).

Insurance

The University requires that all full-time and international students be covered by the Student Health Plan offered through the University. Individual, two-party, and family coverage are available through the School. However, this requirement will be waived with proof of comparable coverage.

Students may only enroll, make changes or terminate their Student Health Plan during open enrollment in July or September. You must have

proof of a life event for all other times of the year. Your account will be charged health insurance premiums on a term basis.

Summer Term July & August
 1st TermSept. & Oct.
 2nd TermNov. & Dec.
 3rd TermJan., Feb. & March
 4th TermApril, May & June

Premiums are due by the payment due date for each term. Effective July 1, 2011, monthly premiums for 2011-2012 are:

- \$256 for individual
- \$632.50 for two-party
- \$845 for family

These premiums are subject to change. It is the student's responsibility to notify the Student Accounts Office when insurance coverage should be terminated. Students will be responsible for all charges resulting from the failure to provide such cancellation notification without exception. The Student Accounts Office reserves the right to cancel medical coverage without further notice for any student who is no longer enrolled. The Student Affairs Office should be contacted for health insurance brochures and information at 410-614-5116.

Housing

All rent charges for Reed Hall will be posted to your student account. These charges will be posted on a term basis and due on the payment due date for each term. (Please see the "Insurance" section above.) For more information on rates and availability, you must contact the Housing Office at 410-955-3905.

Binding of Thesis

Students in degree programs that entail submission of a thesis or dissertation are assessed a charge for binding of the manuscript. Payment is due in the Records and Registration

Office after the student's thesis has been officially approved and at the time that copies are deposited in the Records and Registration Office for binding. Doctor of Philosophy students must also comply with special regulations of the Graduate Board of the University concerning microfilming of the dissertation and the related fee.

Other Costs

Costs associated with completion of a satisfactory investigation in the principal subject and its presentation in the form of a thesis are the ultimate responsibility of the student. Some departments offer financial assistance to cover these costs. Students should contact their department for estimates of such costs and information on assistance.

Biochemistry and Molecular Biology

For a complete listing of current Faculty in the Department of Biochemistry and Molecular Biology, please visit <http://faculty.jhsph.edu/facultylist.cfm>.

GOALS OF THE DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

The goals of the Department of Biochemistry and Molecular Biology within the Johns Hopkins Bloomberg School of Public Health are to increase current knowledge of the biochemical and molecular basis of normal and abnormal cellular processes, and to train highly qualified scientists who, through research, teaching, and service will continue to provide new insights into the biochemical, molecular, and biophysical underpinnings of biomedical issues that have an impact on the health of the public. Critical biomedical issues centered in reproduction are addressed by the Department's Division of Reproductive Biology.

EDUCATIONAL PROGRAMS OF THE DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

The Department offers the following degree programs: PhD in Biochemistry and Molecular Biology; Master of Health Science (MHS) in Reproductive and Cancer Biology; and Master of Science (ScM) in Biochemistry and Molecular Biology. Please consult our Department handbook for more detailed information on our programs available at www.jhsph.edu/dept/bmb/resources_links/index.html.

PhD Program of the Department

The PhD program in the Department of Biochemistry and

Molecular Biology is designed for individuals who wish to prepare for a career in academic research/teaching, government research, or industrial research. This program is suitable for individuals with a bachelor's degree in biology, chemistry, biochemistry or molecular biology. MD-PhD students who wish to conduct their PhD research in the Department are given very serious consideration. The PhD in Biochemistry and Molecular Biology emphasizes molecular studies of multi-protein systems, molecular and cellular biology, enzymology, molecular genetics, biophysics, and biochemical nutrition. This research has applications to cancer, aging, neurological diseases, and environmentally based diseases. The PhD specializing in Reproductive Biology emphasizes reproductive physiology, molecular endocrinology, and cellular, molecular and developmental biology, with applications to aging, fertility/infertility regulation, reproductive toxicology and reproductive tract disease.

Applicants to the PhD program must submit the results of the Graduate Record Examination and General Aptitude Test. The Subject Test in chemistry, biochemistry, molecular and cell biology, or biology is strongly recommended. Significant undergraduate research experience is highly desirable. All PhD students of the Department of Biochemistry and Molecular Biology have a common core curriculum during the first year. In their first year all students are required to take Molecular Biology and Genomics, Macromolecular Structure and Analysis, Biochemical and Biophysical Principles, Genetics, Cell Structure and Dynamics, Organic Mechanisms in Biology, Pathways and Regulation, Computational Biology and Bioinformatics, and Genome Integrity and Cancer. In addition, students must take

two of the following electives: Great Experiments in Biology, Developmental Biology, Mechanisms in Bioorganic Chemistry, Neurobiology, Epigenetics, HIV Biology, Virology, or Introductory Molecular Immunology. First-year students also participate in a three quarter Core Research Literature course (120.852) that is directed by Department faculty. In addition, students spend about one-half of their time conducting laboratory research; each student rotates through five different laboratories, spending six to seven weeks in each laboratory. At the end of each period, students present an oral report on their work to their fellow first-year students and the faculty, and receive a formal, written evaluation of their performance during that rotation. At the end of the fifth rotation, students choose their thesis mentor. Students are given their first choice of mentor as much as possible.

In the second year, students who are specializing in reproductive biology take either Molecular Endocrinology (120.621) or Molecular Reproduction (120.622), Reproductive Biology for Biomedical Scientists (if not taken in first year). Those students with an interest in environmental health take Principles of Toxicology (187.610) and Environmental Health (180.601). All students are required to take a Research Ethics course (550.860) and Public Health Perspectives in Research (550.860) or Responsible Conduct of Research (550.600) dependant upon their source of funding.

In addition, prior to their PhD oral qualifying exam, students must complete nine credit units of coursework outside the Department, but within the Bloomberg School. Three of the nine credit units must be taken outside the laboratory science departments. These non-laboratory

departments include Biostatistics, Epidemiology, Health Behavior and Society, Health Policy and Management, International Health, Mental Health, and Population, Family and Reproductive Health. Students are also required to take, prior to graduation, two additional courses of their choice within BMB. Finally, a rich array of seminar programs and journal clubs are available to all students. To help prepare students for their research careers, and to evaluate their ability to conduct research, students take two departmental oral exams. The subject of the first exam is the student's thesis topic. During their first summer, students write a five-page research proposal and defend it orally before a departmental committee. The subject of the practice exam, which is given in the summer of the second year, is chosen by a jury of your peers and your faculty adviser.

In addition to the departmental oral exams, all candidates for the PhD degree at Johns Hopkins University must pass the University Graduate Board oral exam, usually taken at the end of the second year. Upon completion of the program, a dissertation, based on results obtained during the student's independent research and prepared in a format suitable for publication, will be presented in a public seminar and defended in a final oral examination. Experience indicates that a minimum of four years is necessary to fulfill all PhD requirements, and that the average student requires about five years.

Master's Programs of the Department

The Department offers the Master of Health Science (MHS) Degree in Reproductive and Cancer Biology. The MHS program requires nine months of coursework and the writing of a scholarly, library-based thesis. The program is designed

for students seeking graduate-level coursework and/or exploring career options in the health sciences. Many of the students who enroll in this program wish to improve their chances for medical or other professional schools, while others may opt to pursue advanced graduate work or positions in industry. Students who complete the coursework required for the MHS program may request to transfer to the ScM program in Biochemistry and Molecular Biology, a laboratory-based program that requires an additional year of study, the completion of original research, and the writing of a research-based thesis. Students who transfer to the ScM program do not receive the MHS degree and may elect not to complete the thesis. Typically, ScM students present their findings at national meetings and publish their results in peer-reviewed journals. Some ScM students continue on to advanced graduate study (MD, PhD, DVM, DDS), while others obtain research positions in industry or elsewhere. There is substantial flexibility in coursework. Students in the Reproductive and Cancer Biology Program will be required to take the following courses: Introduction to Molecular Biology (120.602), Fundamentals of Reproductive Biology (120.620), Molecular Biology of Disease (120.603), Public Health Perspectives (550.865-.866), Research Ethics (550.860), Molecular Endocrinology (120.621), Genome Integrity and Cancer (120.624), Molecular and Cellular Mechanisms of Reproduction (120.622). and MHS Thesis in Reproductive and Cancer Biology (120.870). Strongly recommended for those without adequate background: Introduction to Biochemistry (120.600-601). Students are expected to participate in journal clubs and seminar programs of the Department.

Graduate Interdepartmental Program in Molecular Epidemiology (IPME)

The Interdepartmental Program in Molecular Epidemiology (IPME) offers specialized cross-training in epidemiology (Department of Epidemiology) and the laboratory sciences (departments of Biochemistry and Molecular Biology, Environmental Health Sciences, and Molecular Microbiology and Immunology). As a result of the complete sequencing of the human genome and rapid advances in high through-put molecular techniques, epidemiology is poised to move beyond measuring associations of exposures with disease occurrence to assessing the underlying biological mechanisms of pathogenesis. The objective of the Interdepartmental Program in Molecular Epidemiology is to provide candidates with solid training in the complementary disciplines of epidemiology and laboratory molecular biology/genetics to encourage interdisciplinary approaches to solving public health problems. Candidates will select an academic training program based on the requirements for the individual departmental PhD and ScM requirements (see department-specific ScM requirements for the IPME) structured around a core curriculum in Molecular Epidemiology. The core curriculum will ensure a broad theoretical basis in the following subject areas: epidemiology, biostatistics, molecular biology, cellular biology, genetics, physiology/immunology, molecular epidemiology, and laboratory rotations.

The integrative aspects of the interdisciplinary model include a system of co-advising (advisers from doctoral and master's departments) and integration of PhD and ScM research into a single dissertation. The IPME dissertation will include results of both master's and doctoral research

(which must be thematically related) and a chapter integrating the laboratory and epidemiologic approaches to the research topic. Successful candidates of the Interdepartmental Program in Molecular Epidemiology will be concurrently awarded a PhD in the core department and a Master of Science degree in the joint department. Admission to the IPME will follow standard admission procedures for the PhD and ScM departments, with final approval by the Molecular Epidemiology Advisory Council. Prior laboratory experience/training is required for admission to the IPME.

General Areas of Research

The areas of emphasis in the Department of Biochemistry and Molecular Biology include the following research issues:

Biochemical Nutrition—cellular growth control.

Biophysics—biopolymer structure and interaction; fluorescence spectrometry of protein conformation and function, and of protein-protein interactions.

Nucleic Acid Chemistry—chemical and enzymatic synthesis of oligonucleotides and oligonucleotide analogs.

Structural Biology—x-ray crystallography; protein and nucleic acid structure.

Cellular and Molecular Biology—molecular carcinogenesis; regulation of chromosomal DNA replication; signal transduction mechanisms; DNA repair; genome integrity; nuclear transport; protein turnover during erythroid differentiation; mechanisms of heat shock protein function; control of eukaryotic gene expression during differentiation and alterations in gene expression during neoplastic transformation; mechanisms of DNA rearrangement;

eukaryotic genome structure and sequencing; mechanisms of malarial parasite invasion; control of stem cells by diet; control of meiotic maturation; mechanisms of neurodegeneration; eukaryotic growth control; bacteriophage and bacterial genetics; mechanisms of bacterial transformation, transfection, and recombination.

Biochemistry and Enzymology—mechanisms of DNA replication, recombination, and repair; kinetics of enzyme action; peptide chemistry and protein structure; enzyme mechanisms; mechanisms of molecular chaperone action and targeting; role of ubiquitin- and sumo-protein modifications in cellular processes.

Reproductive Biology—human male sex differentiation and development; gene function during development; hormonal and neural regulation of seasonal reproductive behavior; regulation of structure, function and aging of Leydig cells in the mammalian testis; molecular mechanisms of androgen action in target tissues; function and control of prostate growth in relation to normal physiology, benign prostatic hyperplasia, and cancer; hormonal and molecular regulation of mammalian spermatogenesis; interactions between Sertoli and germ cells in the mammalian testis; oocyte maturation; sperm egg interaction during fertilization; development of methods for contraception and prevention of sexually transmitted diseases; effects of environmental toxicants on the reproductive tract.

Biostatistics

The Department of Biostatistics at the Johns Hopkins Bloomberg School of Public Health offers training at the doctoral or master's degree level. Courses are offered in probability, statistical theory, statistical methodology, foundations of statistics, statistical computing, statistical genetics, and bioinformatics. The Department provides exceptional opportunities for students to acquire range and depth in modern aspects of statistics with applications to the biological, medical, environmental, behavioral, and health sciences.

Students are strongly encouraged to refer to the departmental website www.biostat.jhsph.edu for more information about our academic programs and offerings.

DEGREE PROGRAMS

Doctor of Philosophy

Applicants to the PhD program in biostatistics should have done undergraduate work in the biological, physical, or social sciences or mathematics and have strong quantitative skills. Knowledge of calculus and linear algebra is highly desired. Applicants must also submit results of the Graduate Record Examination. A typical curriculum for the PhD is described below. Depending upon their individual preparation, entering students may be placed in advanced standing, or they may find it advantageous to select courses initially from both the first year and second year lists.

Year One

140.671-672 Introduction to Probability I-II OR 550.620-621 Probability Theory I-II
 140.673-674 Introduction to Statistical Theory I-II
 140.751-4 Advanced Methods In

Biostatistics I-IV
 110.405-Analysis I*
 Electives

* *Upon approval of the graduate program director, students who have previously taken real analysis may be able to waive this requirement.*

Year Two

140.755-756 Advanced Methods in Biostatistics V-VI
 140.771-772 Advanced Statistical Theory I-II
 550.600 Responsible Conduct of Research OR 306.665 Research Ethics and Integrity: U.S. and International Issues
 Electives

Year Three

550.865 Public Health Perspectives on Research (if not taken in previous years)
 Electives/Special studies/Thesis research

Years Four-Five

Electives/Special studies/Thesis research

Comprehensive written examinations covering course material are taken at the end of the first year. Research leading to a dissertation may involve development of new theory and methodology, or it may be concerned with applications of statistics and probability to problems in public health, medicine, or biology.

Master of Science

The Master of Science is a two-year program that emphasizes statistical methods, biometry, statistical computing, and epidemiology. Applicants to the ScM program should have a baccalaureate degree or its equivalent at the time they expect to begin their graduate studies. They should have a major in one of the biological, physical, or social sciences, or mathematics, and have strong quantitative interests. The first

year curriculum consists of required coursework in methods (140.651-4) and theory (140.646-9) as well as electives. During the second year, students may choose from a wide range of courses to meet their individual needs. Master of Science candidates are required to take 64 units of coursework and pass a comprehensive written exam at the end of the first year. A thesis is required and usually involves applications of statistical methods to health or medical data. ScM students are also required to take the 550.865 Public Health Perspectives on Research course as well as a course in research ethics (either 550.860 Research Ethics and Integrity or 306.665 Research Ethics and Integrity: U.S. and International Issues).

Master of Health Science in Biostatistics

The MHS degree is intended for individuals who require more than minimal knowledge of biostatistics in the conduct of their research. It is not intended as a terminal degree for professional biostatisticians. Applicants are expected to be engaged in active research in a health-related field and already have an advanced degree in one of the health sciences (e.g., MD, PhD). The MHS program involves one year of coursework (64 units). Students must take the first-year comprehensive written exam and must demonstrate competence in material covered by the courses in 140.651-654 and 140.646-649. Additionally, MHS students are also required to take the course 550.865 Public Health Perspectives on Research as well as a course in research ethics (either 550.860 Research Ethics and Integrity or 306.665 research Ethics and Integrity: U.S. and International Issues). A culminating data analysis project, documenting the statistical ideas and skills developed in the coursework, is required.

Concurrent Schoolwide Doctoral/ Master of Health Science Program in Biostatistics

This program provides doctoral students in other departments the opportunity to pursue an MHS in Biostatistics concurrently with their doctoral program. The administrative requirements and certifications by the faculty as set forth in the existing Policy and Procedure Memoranda for the respective doctoral degrees apply to the doctoral degree requirements of the concurrent Schoolwide Doctoral/Master of Health Science program in Biostatistics. Students must have been accepted into one of the doctoral programs in the Bloomberg School. With the primary department's approval, the student may apply to the Master of Health Science program in Biostatistics. Students already in residence may also apply to the program. Specific details about sequencing of courses, etc., are arranged in conjunction with the doctoral program involved. Sixty-four units in biostatistics and other areas are required. These units must be taken over the course of the student's first two or three years in residence in the doctoral program. The curriculum is the same as that for MHS candidates in biostatistics. The Biostatistics graduate program works with the student and the student's adviser in the primary department to suggest course sequencing and discuss any problems that might arise. Students must take a written comprehensive examination and complete a culminating data analysis project. Upon completion of these requirements, the student is then eligible for award of the Master of Health Science in Biostatistics degree.

Master of Health Science in Bioinformatics

Program Director:
Ingo Ruczinski, PhD

The Department of Molecular Microbiology and Immunology and the Department of Biostatistics have developed a Master of Health Science (MHS) program in bioinformatics. The program's philosophy is to combine strong quantitative foundations with a broad cross-disciplinary experience. The degree is intended as a two-year program, though a one-year degree may be possible for students with more extensive prior training. The program emphasizes biology, statistical methods, computing, and hands-on research participation. Applicants to the MHS program are expected to have a baccalaureate degree or its equivalent at the time they expect to begin their graduate studies. They should have a strong quantitative and computational interest as well as a major in the biological sciences, physical sciences, mathematics, or engineering. A strong background in calculus, biology, and chemistry is assumed. A minor in computer science or equivalent computational experience is also required. Students are required to take 16 credits each term in their first year, including at least 12 credits outside of biostatistics. A minimum of 64 credits are required to graduate. Required courses include biostatistics (140.651-652), molecular biology (120.602-603), computing (140.636-637 and 140.776) introductory bioinformatics (260.602) and a laboratory course in molecular techniques (260.609). Completion of the degree also requires a culminating bioinformatics project and the development and posting of a web portfolio - a student website including links to one or more software development projects demonstrating proficiency in bioinformatics and typically including the culminating project as well as coursework.

CONCURRENT DOCTORAL DEGREE/ MHS IN BIOINFORMATICS

This program provides doctoral students in other departments the opportunity to pursue an MHS in Bioinformatics concurrently with their doctoral program. The administrative requirements and certifications by the faculty—as set forth in the existing Policy and Procedure Memoranda for the respective doctoral degrees—apply to the doctoral degree requirements of the concurrent Schoolwide Doctoral/ Master of Health Science program in Bioinformatics. Students must have been accepted into one of the doctoral programs in the Bloomberg School. With the primary department's approval, the student may apply to the Master of Health Science program in Bioinformatics. Students already in residence may also apply to the program. Specific details about sequencing of courses, etc., are arranged in conjunction with the doctoral program involved. The degree requires 64 units in bioinformatics and other areas.

These units must be taken over the course of the student's first two or three years in residence in the doctoral program. The curriculum is the same as that for MHS candidates in bioinformatics. The bioinformatics program directors work with the student and the student's adviser in the primary department to suggest course sequencing and discuss any problems that might arise. Completion of the degree also requires a culminating bioinformatics project and the development and posting of a Web portfolio—a student website with links to one or more software development projects demonstrating proficiency in bioinformatics and typically including the culminating project as well as coursework.

OTHER PROGRAMS

The Department may accept a few students who do not seek degrees (special students and postdoctoral fellows) for periods of at least one academic year. This provision is intended for mature students who wish to undertake specialized study or research.

Guide To Introductory Biostatistics Course Sequences

140.611-612. This two-course sequence covers the major biostatistical methods and concepts used in public health practice and research. Students learn to interpret reports and papers that use common biostatistical concepts and methods, including inferences about a single sample, comparisons of multiple samples, linear and logistic regression, and survival analysis. Emphasizing interpretation and concepts rather than data analysis, this sequence develops understanding of statistical methods rather than developing a student's own data analysis skills.

140.615-616. This two-course sequence covers the basic concepts and methods of statistics with application in the experimental biological sciences. Topics include experimental design and cover statistical ideas and methods pertinent to data collected by laboratory scientists. Statistical computing using the freely available statistical software, R, is integrated into this sequence.

140.621-624. This four-course sequence prepares students to conduct their own data analysis or participate the design and analysis of data from public health practice or research studies. Covering statistical ideas and methods similar to those of 140.611-612, the course provides opportunity to put concepts into practice. This sequence is aimed at master's and doctoral students who intend to analyze data themselves or contribute meaningfully to a group of practitioners/researchers doing so.

Statistical computing, using the package STATA, is integrated into this sequence.

140.651-654. Though the learning objectives and content of this four-course sequence are very similar to those of 140.621-624, linear algebra and multivariable calculus are used as tools of instruction. This sequence is designed for master's or PhD-level students in biostatistics or students with strong quantitative skills in other disciplines.

Environmental Health Sciences

The Department of Environmental Health Sciences (EHS) is a dynamic group of faculty and students exploring the impact of chemical, biological, and physical agents on human health. We work to: discover the sources and distribution of these agents; understand individual response at the molecular, cellular, organ, and whole-body levels; assess environmental risk; and devise prevention and intervention strategies.

Current thinking on the environment and health has propelled us to consider how the built environment and the social environment influence human health beyond the traditional focus on hazardous agents. We are also pursuing the health effects of global environmental change, including global warming, persistent organic pollutants, and ecosystems change.

Students in EHS come from diverse backgrounds, and grow to appreciate the effects of the natural, built, and social environments on human health. Our broad, multidisciplinary approach creates a collaborative and supportive learning atmosphere for every student, while assisting them in developing lifetime careers in public health.

The diversity of the Department of Environmental Health Sciences lies across its four divisions:

- Environmental Health Engineering
- Occupational and Environmental Health
- Physiology
- Molecular & Translational Toxicology

This model offers students many exceptional opportunities for course

selection, research, and training in a setting that enables students to pursue a wide range of environmental health science interests.

Our relationships with the Johns Hopkins School of Medicine and the School of Nursing ensure that our research can be rapidly translated into prevention strategies. In addition, our Department houses 1 of 22 National Institute of Environmental Health Sciences core Centers, enhancing our unique academic environment.

For more detailed information on departmental resources and programs, visit www.jhsph.edu/dept/ehs.

DEGREE PROGRAMS

EHS trains public health professionals and researchers in diverse disciplines and promotes the translation of public health science into practice and policy. We offer educational programs that lead to both master's and doctoral degrees. We also offer postdoctoral training and specialized certificate programs.

Our programs are as follows:

Doctor of Philosophy (PhD)

- Environmental Health Engineering
- Occupational and Environmental Health
- Respiratory Biology and Lung Disease
- Molecular & Translational Toxicology

Doctor of Public Health (DrPH)

Master's Programs

- MHS in Environmental Health
- MSPH in Occupational & Environmental Hygiene Full-time or Part-time/Internet-based

Certificate Programs

- Certificate in Environmental and Occupational Health

- Certificate in Humane Sciences and Toxicology Policy

For more information about programs or courses offered by the Department of Environmental Health Sciences or to locate application information, please visit our website at www.jhsph.edu/dept/ehs. To speak to a representative of the Department or to arrange a campus visit to meet with faculty and students, contact the Academic Programs Manager, Nina Kulacki at 410-955-2212 or nkulacki@jhsph.edu.

Master's Programs

Two master's programs are offered by the Department of Environmental Health Sciences to meet the academic and professional goals of its students. The academic MHS in Environmental Health is typically used as a foundation for future academic training such as medical school or doctoral programs. The professional MSPH in Occupational and Environmental Hygiene is designed for students who wish to begin or advance professional careers in occupational and environmental hygiene after graduation. The MSPH program also offers a part-time/Internet-based option. In addition, the Department also offers a bachelor of Arts/master's (BA/MHS or MSPH) program in collaboration with the Johns Hopkins University Krieger School of Arts and Sciences for undergraduates in the Public Health major.

Environmental Health

The MHS program in Environmental Health is designed to address the academic and practice needs of students in the diverse environmental health field. For some, it serves as a foundation and provides direction for further academic training in medical school or doctoral programs. For others, the knowledge base it

provides allows them to successfully pursue positions that incorporate environmental health perspectives and practice activities. The Program is based in coursework and uses as its capstone activity the writing and presentation of a literature-based essay on an environmental health topic of the student's choosing.

Typically, this degree is obtained during a one year (nine-month), full-time Program. In addition to completing a set of core courses, students select one of three specialty track curricula. These tracks provide focus and depth to their programs and enhance understanding in a specific area of environmental health.

Human Toxicology and Pathophysiology is designed for students interested in: laboratory-oriented approaches to the study of chemical and biological agents in the environment that affect health; the mechanisms through which they do so, and, for some, how these factors relate to the process of assessing and reducing health risk.

Population Environmental Health is especially popular with students whose interests in environmental health extend toward epidemiologic approaches to the study of environmental exposures and disease, and to the development of strategies of prevention and intervention at the population level.

Sustainability and Global Environmental Health is directed toward the interests of students who wish to develop a broad-based understanding of: the factors that are driving current changes in the global environment, the ways in which these changes may affect human health at the individual and population levels, and the available and emerging options to address these global impacts in a sustainable fashion. In addition to track completion,

students with an interest in the Risk Sciences or the Humane Sciences may complete courses to obtain a Certificate in these areas while a student in the Program.

Note: The MHS in Environmental Health is one of three master's level programs in the broad area of environmental sciences offered by the University. The others are in the Johns Hopkins University Krieger School of Arts and Sciences, <http://advanced.jhu.edu/> and the Whiting School of Engineering, www.epp.jhu.edu/. The three programs have a collaborative arrangement in which a student in one of the programs may take up to two elective courses from an approved list in the other two programs.

Occupational and Environmental Hygiene

The MSPH in Occupational and Environmental Hygiene is designed for students who wish to begin or advance professional careers in occupational and environmental risk assessment.

Training covers principles of risk analysis and management in the workplace and the general environment. The programs include coursework in the following areas: toxicology, epidemiology, biostatistics, occupational health, occupational and environmental hygiene, air pollution, environmental sampling techniques, program management and risk analysis.

The full-time program is accredited by the Applied Sciences Accreditation Commission of ABET and designed to prepare students to pass the Certified Industrial Hygienist (CIH) examination given by the American Board of Industrial Hygiene.

Students may enroll in a full-time program or may select a part-time/Internet-based program. Both

options confer the same degree and students must meet the same academic requirements.

Graduates go on to professional careers in occupational and environmental hygiene and program management within consulting, private industry, and government sectors. The full-time program is an 18 month program and includes a summer internship. The part-time program typically takes 2.5–4 years to complete and includes an internship.

BA/Master's Program (BA/MHS or MSPH)

The Department of Environmental Health Sciences offers early graduate school admission to students enrolled in the public health studies program at the Johns Hopkins University Krieger School of Arts and Sciences. Graduate credits taken at the Bloomberg School while in the combined program apply towards the BA. One half of these credits (up to 16) may also be used to fulfill MHS or MSPH degree requirements. Students in this program will receive co-advising from both schools.

A waiver of the requirement for standardized test scores for matriculation into the MHS will be granted to students who achieve a GPA of 3.0 or better in Public Health coursework taken at the Bloomberg School during their senior year while in the program. The application fee for BA/MHS or MSPH applicants is waived.

Both the MHS in Environmental Health and MSPH in Occupational and Environmental Hygiene (full-time program) participate in this program. Applicants must specify which program they wish to pursue in their application.

DOCTORAL PROGRAMS

The Department of Environmental Health Sciences awards the Doctor of Philosophy (PhD) and the Doctor of Public Health (DrPH). Students in the PhD programs select from one of four areas to focus their academic studies and research: Environmental Health Engineering, Occupational and Environmental Health, Respiratory Biology and Lung Disease or Molecular and Translational. Since the DrPH program provides a broader, more comprehensive course of study, the DrPH student establishes a personalized curriculum based on the student's academic and professional experience and goals.

Candidates for doctoral degrees offered by the Department of Environmental Health Sciences are expected to develop the ability to express research ideas verbally and in writing, and to develop skills in critical reading, discussion, and evaluation of scientific literature. The subject matter of student research should reflect the interest of departmental faculty in the area of concentration and serve to expand the knowledge-base relevant to human health.

Doctor of Philosophy (PhD) Programs

Program in Environmental Health Engineering

Research undertaken by candidates for doctoral degrees in environmental health engineering focuses on exposure assessment methods and models for recognizing, evaluating, and controlling hazards in the workplace and community environment. Research training employs principles and methods in chemistry, biology, physics, and includes development and evaluation of biomarkers of exposure. The concentration in Environmental Health Engineering provides a wide

spectrum of interdisciplinary research opportunities for doctoral students interested in airborne and waterborne routes of exposure as well as chemical and microbiological agents. Specific areas of ongoing research include water and health, air pollution, and occupational hygiene. Candidates for research training should have a strong background in the physical, chemical, and biological sciences, including college-level physics and calculus.

Program in Occupational and Environmental Health

Doctoral research in occupational and environmental health leads to competency in one of the several domains of occupational or environmental health, including occupational, environmental, and molecular epidemiology; validation and application of biomarkers to human studies; application of mechanistic knowledge from clinical or laboratory toxicology to human studies; population health management and health promotion, especially in the workplace; and intervention studies focused on disease prevention. Areas of importance for study include the identification of causal factors; the precise delineation of dose-effect relationships; the development of techniques for early identification of adverse effects; contributions to scientific basis of monitoring including biologic and health effects monitoring; the evaluation of the effectiveness of preventive measures including health promotion; and an understanding of important pathophysiological mechanisms involved in the development of occupational and environmental disease. The research of faculty advisers in the concentration includes particular strength in central nervous system, peripheral nervous system, renal musculoskeletal, pulmonary, and cancer outcomes. Newer initiatives include assessment of the health risks associated with global environmental change, the

built environment, urban sprawl and the social environment. Candidates should have a strong background in the physical, chemical and biological sciences, including college-level calculus.

Program in Respiratory Biology and Lung Disease

Research toward a doctoral degree in Respiratory Biology and Lung Disease leads to competency in at least one of several domains focused on cardiopulmonary pathophysiology, including altered immunologic defenses, genetic susceptibility, and the effects of toxic chemicals, inhaled pollutant gases and particles. Students develop their knowledge and expertise in general subject areas relevant to: normal and pathologic structure and function in human and animal models; genetic and environmental factors underlying various lung diseases; systems physiologic approaches; and writing scientific papers and grant proposals. Students in this program come from a wide spectrum of backgrounds including, biology, physiology, toxicology, chemistry, biomedical engineering, or pharmacology.

Program in Molecular and Translational Toxicology

The unique aspect of the Molecular & Translational Toxicology program is that it is based in a department of environmental health sciences in the largest school of public health in the world. The Program emphasizes advanced training and research on the molecular, biochemical, pathobiological, and physiological mechanisms through which environmental, chemical, physical, and biological agents cause human disease. Training and research is done by employing laboratory-based studies and clinical and population-based trials.

Program faculty and their doctoral students conduct mechanistic and

translational research on: the causes of breast, liver, lung and prostate cancer, inflammatory processes in cardiomyopathy, signal pathway disruption in cardiac hypertrophy, chronic obstructive pulmonary disease (COPD), autoimmunity, neurodevelopmental disorders, and identification of “pathways of toxicity.”

Doctor of Public Health (DrPH) Program in Environmental Health

The Doctor of Public Health program emphasizes the application of in-depth public health knowledge to problem solving and the development of skills necessary to assess and solve occupational and environmental health challenges at regional, national, and international levels.

The Program appeals to public health students and practitioners who want to improve lives and prevent disease. The DrPH has both a full-time and part-time option. Part-time status may be requested at any time during a full-time student’s academic career. This allows DrPH students up to nine academic years to complete the Program.

The typical DrPH student holds an MPH or its equivalent and has been working as a public health practitioner for two or more years. Many pursue their studies part-time, and maintain an active public health practice through their work.

Students develop the skills to analyze and assess complex environmental risks and problems and to design and implement intervention strategies that reduce risks and resolve environmental problems.

Please see the “DrPH” section of the Academic Information chapter for more information.

ADMISSIONS INFORMATION

Candidates are considered eligible for admission into the master’s or doctoral programs offered by the Department of Environmental Health Sciences after demonstrating outstanding potential for achievement as determined from Graduate Record Examination (GRE) scores and their academic record. GREs are generally required of all applicants. It should be noted that students successful in the graduate program generally have combined scores of at least 1200 in the verbal and quantitative sections.

For those who have a DVM, MD or other acceptable post-graduate degree or relevant experience in the field, the requirement for the GRE may be waived upon request. For public health majors applying to the BA/MHS or MSPH program, standardized test scores are not required for admission review, however, they may be required for matriculation into the master’s program if satisfactory academic progress (as defined in the EHS Student Handbook) is not maintained in JHSPH courses taken during the senior year. References, work history, and career objectives are also important factors in the evaluation of candidates. A strong academic record, including achievements in mathematics and science, is required. Candidates who have not achieved at least a B average (or equivalent) in science and mathematics are required to demonstrate outstanding ability in other criteria to be considered eligible for doctoral study. Specific programs may require additional requirements, which are outlined in the program descriptions available online at www.jhsph.edu/dept/ehs.

Foreign applicants for whom English is not the native language must demonstrate their proficiency in English by scoring 600 or better

on the paper-based Test of English as a Foreign Language (TOEFL) examination (250 on the computer-based test) or 7 or better on the International English Language Testing System (IELTS).

Personal interviews are not generally required. However, students are strongly encouraged to visit the School and Department. Such visits can be arranged and can include meetings with specific faculty and students if desired. Visits can be coordinated independently or as part of a formal event such as Visitors’ Day or Recruitment Weekend, which is arranged for selected doctoral applicants in January or February each year.

Acceptance into an academic program does not imply that funding in support of tuition or stipend is available. The availability of financial support must be pursued separately with the division, program or Department.

Prospective students who are interested in scheduling a campus visit should contact the Academic Programs Manager at 410-955-2212 or nkulacki@jhsph.edu. Application information is available at www.jhsph.edu/admissions/application_instructions/.

ADDITIONAL EDUCATIONAL OPPORTUNITIES

Occupational and Environmental Medicine Residency

This program is designed to train occupational and environmental medicine specialists for careers in any of the major sectors of the field—academia, industry, government, clinical practice, or labor—and provide expertise in both clinical and preventive occupational and environmental medicine. The program is fully accredited for the academic and practicum years by the

Accreditation Council for Graduate Medical Education. The residency is a two-year program. The academic year involves coursework leading to an MPH degree, plus certain experiences specific to the residency such as seminars, research projects, and plant visits. The second, or practicum, year consists of rotations in a variety of settings, including clinical rotations at the Center for Occupational and Environmental Health and rotations in government, industry, and union settings. The program offers particular clinical depth in clinical toxicology, pulmonary medicine, and neuro-behavioral toxicology. An optional third year may be spent in a postdoctoral research fellowship for trainees interested in academic careers.

Admissions requirements include graduation from an approved medical school and one year of acceptable clinical internship. Educational Commission for Foreign Medical Graduates (ECFMG) certification is required for all foreign medical graduates. The most competitive candidate will already have completed residency training in another clinical specialty (e.g., internal medicine, family practice). Programs leading to dual board-eligibility in occupational and environmental medicine and internal medicine, pulmonary medicine, and other clinical specialties may be possible by special arrangement. Applicants for admission are considered separately by the residency and the MPH Admissions Committee. Completed applications should be received by October 31. Personal interviews are generally required and conducted in late November and early December. Candidates are notified of the residency's decisions on December 15. In general, all residents receive stipend support, tuition support, and health, life, and disability insurance. For further information, contact the

administrator, Occupational and Environmental Medicine Residency program at 410-955-3362.

Occupational and Environmental Health Nursing

The Occupational and Environmental Health Nursing (OEHN) program prepares nurses for positions in private sector organizations as well as academia, consulting and government agencies. It is supported by the National Institute for Occupational Safety and Health as part of the Johns Hopkins Education and Research Center (ERC) for Occupational Safety and Health. Graduates fill a unique and growing need for nurses who wish to apply their professional skills to program management, research, and problem solving to prevent adverse effects of workplace and community exposures on human health. Degrees are offered at the doctoral and master's levels. The program builds on other existing departmental and School degree programs and offers the following degrees: Doctor of Philosophy (PhD) in the Division of Occupational and Environmental Health, Doctor of Public Health (DrPH) in the Department of Environmental Health Sciences, and the Schoolwide Master of Public Health (MPH). Students may combine the MPH with the MSN degree from the School of Nursing in a joint MSN/MPH option.

Within each degree option, there are opportunities to incorporate coursework in specific areas of interest, such as disaster preparedness, worker health promotion, occupational injury prevention, and the use of biomarkers of exposure and susceptibility. In addition to an academic focus on nursing and environmental health, curriculum requirements include epidemiology, biostatistics, exposure assessment, injury prevention, management and

policy, and toxicology as it relates to human health. Requirements of the master's or doctoral degree programs are also integrated into the course of study. Applicants should have excellent quantitative skills, a strong background in health sciences, and supportive references and must be accepted into the respective master's or doctoral program. Because the program supports nurses who want to expand their nursing background to the field of occupational and environmental health, prior experience in this field is not required. For additional information, contact Dr. Sheila Fitzgerald, OEHN Program Director at sfitzger@jhspsh.edu or 410-955-4082 or Dr. Jacqueline Agnew, ERC Director, at jagnew@jhspsh.edu or 410-955-4037.

Program on Global Sustainability and Health

This program is engaged in examination of the drivers, consequences and implications of global environmental change in light of the three main complicating challenges of shrinking supplies of inexpensive petroleum and financial and political obstacles to achieving a more sustainable future. The PGSH has a curriculum with courses, for example, on the public health impacts of climate change, ecosystem degradation, biodiversity and species losses, energy scarcity, the food system, the built environment, and related topics. The Program also has several ongoing research projects that students can be involved with to varying degrees, including for doctoral thesis research. Students in the MPH, MHS, MSPH, DrPH and PhD programs are encouraged to participate in the activities of the program. For additional information, visit the program website at: www.jhsph.edu/dept/ehs/research_centers/Sustainability/index.html or contact Dr. Cindy Parker at

ciparker@jhsphe.edu or Dr. Brian Schwartz at bschwartz@jhsphe.edu.

Graduate Interdepartmental Program in Molecular Epidemiology

The Graduate Interdepartmental Program in Molecular Epidemiology (IPME) offers specialized cross-training in epidemiology (Department of Epidemiology) and the laboratory sciences (Departments of Biochemistry and Molecular Biology, Environmental Health Sciences, and Molecular Microbiology and Immunology). As a result of the complete sequencing of the human genome and rapid advances in high through-put molecular techniques, epidemiology is rapidly moving beyond measuring associations of exposures with disease occurrence to assessing the underlying biological mechanisms of pathogenesis.

The objective of the Interdepartmental Program in Molecular Epidemiology is to provide candidates with solid training in the complementary disciplines of epidemiology and laboratory sciences to encourage interdisciplinary approaches to solving public health problems. Candidates will select an academic training program based on the requirements for the individual departmental PhD and ScM requirements (see department-specific ScM requirements for the IPME) structured around a Core Curriculum in Molecular Epidemiology. The Core Curriculum will ensure a broad theoretical basis in the following subject areas: epidemiology, biostatistics, molecular biology, cellular biology, genetics, physiology/immunology, molecular epidemiology, and laboratory rotations. The integrative aspects of the interdisciplinary model include a system of co-advising (advisers from doctoral and master's departments) and integration of PhD and ScM research into a single

dissertation. The IPME dissertation will include results of both master's and doctoral research (which must be thematically related) and a chapter integrating the laboratory and epidemiologic approaches to the research topic. Successful candidates of the Interdepartmental Program in Molecular Epidemiology will be concurrently awarded a PhD in the core department and a Master of Science degree in the joint department.

Admission to the IPME will follow standard admission procedures for the PhD and ScM departments, with final approval by the Molecular Epidemiology Advisory Council. Prior laboratory experience/training is required for admission to the IPME. For more information, contact Dr. Paul Strickland at 410-955-4456, pstrickl@jhsphe.edu or Dr. Patti Gravitt at pgravitt@jhsphe.edu.

Certificate Programs

Three certificates are offered by the Department of Environmental Health Sciences: The Certificate in Environmental and Occupational Health, The Certificate in Health and Human Rights and The Certificate in Humane Sciences and Toxicology Policy. Qualifications and course options for each certificate are noted in the program description at www.jhsphe.edu/academics/programs/certificates. It is recommended that all students who plan to obtain a certificate should contact the Office of Educational Programs to inform the Department of their intent so that arrangements can be made to meet with a program director and discuss course options. Also, the Department must be informed in writing as soon as possible, but no later than the first week of the term in which the final course is to be taken. The Department's Academic

Programs Manager may be contacted at 410-955-2212, nkulacki@jhsphe.edu, Office E7039.

The Certificate Program in Environmental and Occupational Health educates and trains students to address major environmental health issues facing public health professionals today. The Certificate addresses:

- Sources of environmental agents - their distribution in community and work environments
- Transfer routes to humans and possible health effects
- The basic biological mechanisms underlying the association between prior exposure and subsequent development of adverse health effects
- Control strategies and interventions

A selection of online courses is available for students who wish to complete the certificate via the Internet.

For students interested in using the Certificate as a lead-in to the Part-time/Internet-based MSPH in OEH, program, please contact Carla Reinhard: creinhar@jhsphe.edu.

The Certificate is open to:

- Non-degree candidates who want to begin their formal training in environmental health (such as public health professionals currently practicing environmental/occupational health who are seeking formal training)
- Current degree candidates at the School

The Certificate Program in Health and Human Rights is designed to:

- Increase understanding and foster positive attitudes among health professionals regarding the key linkages among human rights

ideals, legal guarantees of human rights, and the promotion and protection of public health.

- Elaborate and explain details regarding the vital roles of health professionals in promoting human rights, especially the right to health, and building a culture of human rights.
- Build familiarity with international human rights standards, instruments, and the numerous state-based and international laws related to human rights, especially those that impact upon the health of populations and individuals.
- Introduce the skills needed to investigate, analyze, and document abuses of human rights as they relate to health and public health practice.

Courses in the Certificate Program are also designed to provide a knowledge base that allows students to begin to develop skills that promote human rights in health policies, health programs and in the education of other health professionals. The Certificate Program introduces skills that are used to investigate, analyze and document abuses of human rights as they relate to both public health practice and clinical practice.

The Certificate Program is open to any student in any degree-granting program at The Johns Hopkins University. Total course credits required for the Certificate are 16 and must include successful completion of all coursework and active participation in the Term II and Term III Seminar on Health and Human Rights.

The Certificate Program in Humane Sciences and Toxicology Policy provides students with an understanding of the principles that govern the relationship between biomedical researchers and laboratory animals;

demonstrates the application of transgenic, in vitro, computational, non-mammalian and non-animal research in toxicology; and illustrates the ways in which humane science and alternatives are used in setting regulatory standards and making environmental health policy decisions. The program is open to persons who hold undergraduate or graduate degrees in public health or the biomedical sciences. It is also open to any student in a degree-granting program at the University, although it is anticipated that most enrollees will be students at the Bloomberg School. Persons who are members of Institutional Animal Care and Use Committees (IACUC) and/or involved in animal welfare issues are encouraged to participate in this certificate program.

Postdoctoral Fellowship

The postdoctoral fellowship program provides concentrated training with individual faculty from the Department. Applicants for postdoctoral positions first identify a member of the EHS faculty with whom they wish to work and correspond directly with him/her. They become postdoctoral students in the program after confirming availability of a position with a faculty member, submitting an application, and receiving a formal appointment letter from the Academic Programs Manager.

Postdoctoral students spend virtually all their time conducting research in the laboratory of their faculty mentor. While the focus is on conducting research, in consultation with their faculty mentor, postdoctoral students have the opportunity to take selected courses that may advance their training and research capabilities. Attending and giving seminars, journal clubs, and participating in research retreats are also an integral part of the postdoctoral training experience.

Interested applicants should also follow application procedures as specified by the Office of Admissions, which is available at www.jhsph.edu/GER/Postdocs.html.

Winter Institute

The Department of Environmental Health Sciences occasionally offers courses during the Bloomberg School Winter Institute. These courses are offered for academic credit and may be used toward the completion of a degree. An updated list of courses offered each year may be found at www.jhsph.edu/academics/continuing_ed/institutes/.

ACADEMIC DIVISIONS

Environmental Health Engineering

Division Director:

Peter S. J. Lees, PhD, CIH
plees@jhsph.edu; 410-955-3009

The mission of the Division of Environmental Health Engineering (DEHE) is to improve public health through interdisciplinary research, professional training, and practice. Divisional researchers seek to prevent or minimize the adverse effects of physical, chemical, and biological agents by identifying and studying their sources, fate, and transport in both occupational and non-occupational environments, and by developing and evaluating control strategies that effectively protect human health. Exposure assessment is an integrating theme for the division because of its critical linkage to risk assessment. Divisional research and training in exposure assessment employs principles and methods in chemistry, biology, physics, and mathematical modeling and includes development and evaluation of biomarkers of exposure. Researchers study all potential routes of human exposure with particular emphasis on air and water. We provide an accredited program in Occupational and

Environmental Hygiene (accredited by the Applied Sciences Accreditation Commission of ABET, 1111 Market Place, Suite 1050, Baltimore, MD 21202) and our activities are supported by a number of education and research centers: Center for Water and Health; NIEHS Center in Urban Environmental Health; NIOSH Occupational Safety and Health Education and Research Center; Center for Childhood Asthma in the Urban Environment, and the Particulate Matter Research Center.

Occupational and Environmental Health

Division Director:
Paul Strickland, PhD
pstrickl@jhsphe.edu; 410-955-4456

The mission of the Division of Occupational and Environmental Health is to prevent disease and injury related to occupational and environmental stressors, and to promote health among individuals and in populations through research, professional practice, and teaching. Divisional faculty members are involved in a wide range of research projects, commonly characterized by studies of disease etiology, prevention, or control in human populations. Research activities include a prominent focus on occupational, environmental, and molecular epidemiology; biomarkers and their development; validation, and demonstration of utility for prevention; development, validation, and effectiveness of medical surveillance activities; occupational and environmental health policy; evaluation of the health effects of global environmental change, urban sprawl, and the built environment; interaction between genetic factors and occupational and environmental exposures in causing disease; the impact of health conditions on ability to work; and causes, risk factors, diagnosis,

and treatment of occupational and environmental diseases and injuries.

Respiratory Biology and Lung Disease

Program Director:
Wayne Mitzner, PhD
wmitzner@jhsphe.edu; 410-955-3612

Research toward a doctoral degree in Respiratory Biology and Lung Disease leads to competency in at least one of several domains focused on cardiopulmonary pathophysiology, including altered immunologic defenses, genetic susceptibility, and the effects of toxic chemicals, inhaled pollutant gases and particles. Students develop their knowledge and expertise in general subject areas relevant to: normal and pathologic structure and function in humans and animal models; genetic and environmental factors underlying various lung diseases; systems physiologic approaches; and writing scientific papers and grant proposals.

The research in most labs has a primary focus on the pathobiology of the cardiopulmonary system. Examples of specific research targets of doctoral students include investigations of: pulmonary epithelium, airway smooth muscle, pulmonary endothelium, innate and adaptive immune responses, control of ventilation, and genetic factors underlying lung disease, particularly asthma and emphysema. Students in this program come from a wide spectrum of backgrounds including, biology, physiology, toxicology, chemistry, biomedical engineering, or pharmacology.

Molecular and Translational Toxicology

Division Director:
James Yager, PhD
jyager@jhsphe.edu; 410-955-3348

Toxicology is a discipline in which the basic principles of chemistry, cell and molecular biology, and physiology are brought to bear upon investigations of the adverse effects of chemical agents on living systems. Some examples of trials using mechanism-based chemopreventive interventions with effectiveness determined through biomarker analysis include: studies on chemoprevention of aflatoxin-induced liver cancer in China, immunomodulation and prevention of COPD, and chemoprevention of breast cancer.

Faculty participate in numerous training programs and centers that enrich their research and doctoral student advising. Some programs are: the Johns Hopkins Center in Urban-Environmental Health and the Training Program in Environmental Health Sciences, both of which are supported by the National Institute of Environmental Health Sciences, the Johns Hopkins Oncology Center supported by the National Cancer Institute, and the Center for Alternatives to Animal Testing.

Epidemiology

Epidemiology is the study of the incidence and prevalence of diseases and of the determinants of health and disease risk in human populations. Epidemiologic evidence provides a basis for preventive approaches in medicine and public health.

The Department's mission is to provide education and training of the highest quality in epidemiology, to conduct epidemiologic research and health situation analyses of the highest caliber to promote health and prevent disease, and to provide service to the Johns Hopkins Bloomberg School of Public Health and to local, national, and international communities on issues that involve the discipline.

The Department of Epidemiology offers a broad selection of educational and research programs. These include infectious diseases and chronic diseases encompassing cardiovascular and cerebrovascular diseases, congenital malformations, cancer, and occupational diseases. Human genetics, statistical epidemiology, social and behavioral studies, health disparities and health outcomes, are of major interest. The faculty is involved in planning and evaluating community health programs for various diseases, and these activities provide excellent training opportunities for students.

The mission of the Department of Epidemiology is to improve the public's health by training epidemiologists and by advancing knowledge concerning the causes and prevention of disease and the promotion of health. As the oldest autonomous academic department of epidemiology in the world, the Department of Epidemiology of Johns Hopkins University has maintained leadership in fulfilling this mission. The

specific goals of the Department are as follows:

- Provide the highest quality education in epidemiology and thus prepare the next generation of epidemiologists
- Advance the science of epidemiology by developing new methods and applications
- Use epidemiologic methods to investigate the etiology of disease in human populations
- Use epidemiologic methods to assess population health needs and to evaluate health care delivery
- Develop methodology for translating epidemiologic research findings into clinical medicine and public health programs
- Develop approaches for applying the findings of epidemiologic research in the formulation of public policy and to participate in formulating and evaluating the effects of such policy

Generally, students specialize in a selected area of interest, but every effort is made to provide as broad a background in epidemiology as possible.

Degree candidates in the Department of Epidemiology are expected to complete the four-course sequence comprising the epidemiologic research track. The Epidemiologic Research Track has been developed to be comprehensive and prepare our students for world-class research careers. At the end of the sequence, we expect that our students will have a strong understanding of epidemiologic inference and multi-level modeling, be able to design and analyze epidemiologic studies, and effectively interpret and report results from such studies.

Similar to the Biostatistics core sequences, we strongly recommend that students enroll in all courses of

the Epidemiologic Research track, as the scope of topics can only be understood within the broader context of the sequence. The first three courses (340.751 to 340.753) will form the required core sequence for all Epidemiology master's, doctoral and Master of Public Health (MPH) students (in the Concentration in Epidemiological and Biostatistical Methods for Public Health and Clinical Research) and the fourth course (340.754 - Methodologic Challenges in Epidemiologic Research), a culminating integrating experience, is required of Epidemiology doctoral students and will be taken by students from other departments or programs as required by those programs.

The proposed sequence of courses is synchronous with the Biostatistics 620 sequence, which also focuses on design issues in Term 2 and regression models in Term 3. This will allow certain details of statistical methodology to be taught in the Biostatistics sequence at roughly the same time the methods are covered in the Epidemiology sequence.

Degree candidates are required to complete a four-course sequence in either Statistical Methods in Biostatistics or Methods in Biostatistics. Students also complete courses within the area that they selected as their focus of interest. In addition to the courses listed, the Department conducts seminars in which speakers from other institutions or agencies deal with applied epidemiological problems, and faculty members and students discuss their current or planned research, and Journal Clubs designed as forums for students and faculty to examine current research in selected fields of interest.

DEGREE PROGRAM OVERVIEW

Programs of study offered lead to five degree programs: Master of Health Science (MHS), Master of Science (ScM), Doctor of Public Health (DrPH), Doctor of Science (ScD), and Doctor of Philosophy degrees (PhD). Completion of the requirements for a master's degree in the Department of Epidemiology generally takes two years; a doctoral degree requires at least three or four years, with an average of 4.5 years. Additional time may be required for those who have a limited background in the biological sciences at the time of admission. Postdoctoral training without a degree goal is also available.

Additionally, the approved residency program in general preventive medicine is affiliated with the Department. A total of three years of training is specified, of which one or more may be academic, and the balance devoted to supervised field experience. Applications may be accepted for the entire period of training.

DEGREE PROGRAMS IN EPIDEMIOLOGY

- BA/MHS
- MHS and ScM
- PhD and ScD
- DrPH

Master's Programs

The Department provides broad training in general epidemiology and in

- Cancer Epidemiology
- Cardiovascular Disease Epidemiology
- Clinical Epidemiology
- Epidemiology of Aging
- General Epidemiology and Methodology
- Genetic Epidemiology

- Infectious Disease Epidemiology
- Occupational and Environmental Epidemiology

Master's students complete a minimum of 64 credits in epidemiology required and elective courses, pass a written comprehensive exam, write a 30–50 page publishable manuscript, and present their research in a Master's Poster Symposium to the Department and School.

Doctoral Programs

The Department provides a broad set of training opportunities in general epidemiology and in specific focused areas, including the following:

- Cancer Epidemiology
- Cardiovascular Disease Epidemiology
- Clinical Epidemiology
- Clinical Trials
- Epidemiology of Aging
- General Epidemiology and Methodology
- Genetic Epidemiology
- Infectious Disease Epidemiology
- Occupational and Environmental Epidemiology

The various areas of concentration offer both required and elective courses and the students are expected to tailor their curricula, working with their advisers to create a comprehensive plan of study and research. Faculty interests cover many specific and general topics. Incoming students may want to link with faculty who have shared interests, although this is not required.

The Department's broad research portfolio is the foundation for research training. In addition, the Department houses a number of special resources and facilities that enhance learning.

The doctoral programs in epidemiology are comprised of two years of full-time coursework followed by two to three years of intensive and independent research. Students may design their research to be completed in any appropriate setting locally or throughout the world. Doctoral students complete a minimum of 129 credits, serve as teaching assistants for a methods course, pass a written comprehensive exam and two oral exams, present their proposed research to their research group and the Department, attend a professional conference, write a grant application, and write and publicly defend an independent research project for their dissertation.

DrPH Program in Epidemiology

The DrPH program is offered on a full- or part-time basis. The part-time DrPH requires a prior or concurrent full-time year of coursework at Johns Hopkins. Candidates are expected to develop research in one of the areas listed above and customize their programs based on their professional goals.

Graduate Interdepartmental Program in Molecular Epidemiology (IPME)

The Interdepartmental Program in Molecular Epidemiology (IPME) offers specialized cross-training in epidemiology (Department of Epidemiology) and the laboratory sciences (departments of Biochemistry and Molecular Biology, Environmental Health Sciences, and Molecular Microbiology and Immunology). As a result of the complete sequencing of the human genome and rapid advances in high through-put molecular techniques, epidemiology is poised to move beyond measuring associations of exposures with disease occurrence to assessing the underlying biological mechanisms of pathogenesis.

The objective of the Interdepartmental Program in Molecular Epidemiology is to provide candidates with solid training in the complementary disciplines of epidemiology and laboratory molecular biology/genetics to encourage interdisciplinary approaches to solving public health problems. Candidates will select an academic training program based on the requirements for the individual departmental PhD and ScM requirements (see department-specific ScM requirements for the IPME) structured around a Core Curriculum in Molecular Epidemiology. The Core Curriculum will ensure a broad theoretical basis in the following subject areas: epidemiology, biostatistics, molecular biology, cellular biology, genetics, physiology/immunology, molecular epidemiology, and laboratory rotations.

The integrative aspects of the interdisciplinary model include a system of co-advising (advisers from doctoral and master's departments) and integration of PhD and ScM research into a single dissertation. The IPME dissertation will include results of both master's and doctoral research (which must be thematically related) and a chapter integrating the laboratory and epidemiologic approaches to the research topic. Successful candidates of the Interdepartmental Program in Molecular Epidemiology will be concurrently awarded a PhD in the core department and a Master of Science degree in the joint department. Admission to the IPME will follow standard admission procedures for the PhD and ScM departments, with final approval by the Molecular Epidemiology Advisory Council. Prior laboratory experience/training is required for admission to the IPME.

ADDITIONAL EDUCATIONAL OPPORTUNITIES

A combined MD/PhD program in epidemiology is available to students enrolled in the medical sciences doctorate at the Johns Hopkins University School of Medicine. Additionally, an approved residency program in general preventive medicine is affiliated with the Department. A total of three years of training is specified, of which one or more may be academic, with the balance devoted to supervised field experience. Applications may be accepted for the entire period of training.

The BA/MHS program in Epidemiology accepts applications from juniors (third-year students) at Johns Hopkins University for entry in the BA/MHS combined program. Current JHU undergrads should plan to submit their applications no later than February of their junior year, and enroll in the Fundamentals of Epidemiology course. Upon admission, the BA/MHS applicant will be assigned an adviser, and be expected to take courses and participate in the general offerings of the Department during the senior year. Upon completion of the BA requirements, these students would enroll in the core methods courses in Epidemiology and Biostatistics as masters students.

SPECIAL RESOURCES AND FACILITIES

The working relationships that the Department enjoys with other departments within the University—and with a number of institutions concerned with health and disease both in the U.S. and abroad—offer students opportunities to broaden their experience. These resources include the George W. Comstock Center for Public Health Research and Prevention in Washington County, Md.; the Johns Hopkins

School of Medicine and the Johns Hopkins Hospital and Sidney Kimmel Comprehensive Cancer Center; metropolitan Baltimore hospitals; the Social Security Administration; the Maryland State Department of Health and Mental Hygiene; the Baltimore City Health Department; and a number of institutions in other cities. Students and faculty may also conduct research with the National Center for Health Statistics, the Frederick Cancer Research Center of the National Cancer Institute, the National Institutes of Health, the Walter Reed Army Institute of Research, the U.S. Veterans Administration, the Armed Forces Institute of Pathology, the Centers for Disease Control and the World Health Organization. Our students also enjoy rotations with our collaborative centers at Chiang Mai University, Thailand, and in Blantyre, Malawi. Additional learning opportunities for students and fellows can be found at www.jhsph.edu/researchcenters.

Within the Bloomberg School, joint programs with other departments are also possible. A number of joint programs are affiliated with interdepartmental centers: the Center for Clinical Trials, the Johns Hopkins Sidney Kimmel Comprehensive Cancer Center, Institute for Global Tobacco Control, the Center for Health Disparities Solutions, the Center for a Livable Future, the Center for Global Health, the Risk Sciences and Public Policy Institute, and the Welch Center for Prevention, Epidemiology and Clinical Research. More information on each of these Centers and Institutes can be found at www.jhsph.edu/researchcenters.

The Certificate in Risk Sciences and Public Policy is an interdepartmental program offering research and training opportunities designed to bridge science and public policy. The Risk Sciences and Public Policy

Institute serves as an academic focus for addressing the critical science and policy issues inherent in managing disease risks from environmental and occupational exposures. Research by the faculty at the Institute focuses on strengthening the application of science-based risk analysis and encouraging innovative public health solutions to complex risk problems. For more information, contact Mr. Ronald White at 410-614-4961 or rwhite@jhsp.h.edu.

The Certificate in Gerontology is designed for doctoral students and postdoctoral fellows who are pursuing an “academic” master’s degree (either ScM or MHS) involving a research-oriented thesis. It is intended for students at the Bloomberg School who are committed to a career in the field of gerontology and who wish to be recognized as broadly trained in core competencies as well as in their particular area of specialization. For more information, contact Mr. Brian Buta at 410-502-3412 or bbuta@jhmi.edu.

The Epidemiology Students’ Organization, (ESO), is comprised of all master’s, doctoral, and post-doctoral students in the Department of Epidemiology. As a faculty and administration-independent organization, our mission is to promote the professional development of students in the Department and to act as an advocate for student needs. This is accomplished by working with faculty, administration, and other student organizations in the Bloomberg School. Our goal is to create an environment that facilitates discussion, student-student interaction, and networking.

Professional Epidemiology Methods

The Department also offers a set of courses in the Professional Epidemiology Methods track focused

on the application and interpretation of epidemiologic research on public health problems, and as utilized in health departments, health interventions, and health policy. The Professional Epidemiology Methods Track has been developed in response to growing needs of students who desire experience with epidemiology beyond Principles of Epidemiology (340.601) but do not plan to design etiologic or clinical research. The track uses a competency-based approach covering the competencies required for a frontline epidemiologist, public health program leader and senior scientist. The Professional Epidemiology Methods track utilizes a public health problem solving framework.

The focus of this sequence is on the application of epidemiology to public health problems, understanding the role of epidemiology in the decision-making process to implement change in public health practice as utilized in health departments, health programs and interventions, and health policy. In this two course sequence, we expect students to develop the core epidemiology competencies of health situation analysis, public health surveillance and health promotion complemented by competencies in communications, leadership, and analytic assessment skills.

The sequence of courses in the Professional Epidemiology Methods track meets the needs of master’s and doctoral students who will rely on epidemiologic evidence in public health practice and policy development. It also maps well with the current MPH curriculum, allowing graduating students to focus on their capstone project after the third term.

A combined MD/PhD program in Epidemiology is available to students enrolled in the medical sciences doctorate at the Johns Hopkins University School of Medicine.

ADMISSION

In addition to meeting the general admission requirements of the Bloomberg School, individuals applying to the Department should have at least a university-level bachelor’s degree with coursework in biology, mathematics, and statistics. While no specific undergraduate major is specified, candidates should have coursework in biology, microbiology, biochemistry, anatomy, physiology, genetics, mathematics and calculus. A statistics course is also preferable. Those whose area of interest is infectious disease epidemiology must have a solid background in microbiology. Genetic epidemiology applicants should have courses in genetics and molecular or cellular biology. It is strongly recommended that applicants to the Clinical Epidemiology program have a background in biomedical/clinical sciences or experience in clinical research. We encourage all undergraduates to take one full year of calculus, plus courses in biology, microbiology, genetics, and statistics. Cell biology and biochemistry are also very helpful in understanding the mechanics of disease. Additional coursework in economics, geography, and world history are extremely helpful in putting public health research and advocacy in greater context.

Admission to the doctoral programs is limited to those individuals with significant prior training or experience in epidemiology or related fields, including medicine and other health areas, and a master’s degree in a health-related field. Applicants to the DrPH program must hold an MPH or its equivalent.

All applicants to degree programs in the Department are required to submit the results of a recent (less than three years) general Graduate Record Examination (GRE).

Admission to the master's program does not guarantee subsequent admission to the doctoral program. All applicants for doctoral programs are evaluated based on prior professional experience, academic excellence and their potential as independent public health/epidemiologic researchers.

In the Statement of Objectives and Plans, applicants should clearly indicate the degree program desired and the area of concentration, if known; very briefly describe their background and accomplishments; and spend most of the essay discussing the relevance of these accomplishments to epidemiology and their area of interest. It is critical that applicants emphasize their academic and research goals in epidemiology and in public health.

Health, Behavior and Society

MISSION

The Department of Health, Behavior and Society at the Johns Hopkins Bloomberg School of Public Health utilizes a multidisciplinary, multi-level approach to study the determinants of disease and injury, and to develop, test and disseminate effective public health interventions. The Department is interested not only in the behavior of individuals, but also in their genetic predispositions, social context, physical environment and policy milieu. We emphasize theoretical, methodological and applied studies in three signature areas:

- social determinants of health, and structural- and community-level interventions to improve health
- health communication and health education
- behavioral and social aspects of genetics and genetic counseling

Of most interest are public health challenges related to the top international and domestic causes of death, as well as diseases and injuries that disproportionately impact racial, ethnic and vulnerable communities. The Department feels a special responsibility to address public health challenges in its own locale—specifically, health issues that disproportionately impact urban communities.

DEGREE PROGRAMS

The Department of Health, Behavior and Society provides doctoral-level training leading to the Doctor of Philosophy (PhD), the Doctor of Science (ScD), and the Doctor of Public Health (DrPH) degrees and master's-level training leading to a Master of Science in Public Health (MSPH) in Health Education and Health Communication, a

Master of Health Science (MHS) in Social Factors in Health, a Master of Science (ScM) in Genetic Counseling, and a Master of Public Health (MPH) concentration in Social and Behavioral Sciences.

MASTER OF SCIENCE IN PUBLIC HEALTH IN HEALTH EDUCATION AND HEALTH COMMUNICATION

Program Directors:

Dr. Andrea Gielen,
Ms. Lee Bone and
Ms. Eileen McDonald

Program Contact:

Ms. Eileen McDonald,
731 Hampton House,
410-614-0225, emcdonal@jhsph.edu

General Program Information

The Master of Science in Public Health (MSPH) in Health Education and Health Communication provides students with specialized training in this specific topic area as well as general training in the field of public health. Students are prepared for careers as health education, health promotion, and health communication practitioners in professional firms, units of government at all levels, and private corporations dealing with health affairs. The curriculum emphasizes health promotion, education and communication strategies for working with individuals, organizations and communities. A solid foundation in behavioral sciences principles and theories is provided along with advanced skills in program planning, implementation and evaluation. While the curriculum consists of a number of required courses, students are also provided with adequate flexibility to select among numerous electives and/or to complete specialized certificate programs.

The program, which can be completed in a minimum of eighteen months, consists of one academic

year of coursework and a six-month field placement experience. The field placement is designed to provide students with an opportunity, under supervision, to apply the knowledge and skills from the classroom to real health education, promotion and communication practice. Many of the field placement sites offer paid placements and students receive a Master's Tuition Scholarship to help with tuition costs during the field placement. Students conclude the program by producing a final paper that critically evaluates an activity or activities performed during their placement.

Course Requirements

The first year curriculum consists of a minimum of 64 credits, which includes both required (45-47 units) and elective (17 units minimum) courses. The curriculum includes basic coursework in public health and solid academic preparation in behavioral science principles, theories and research that form the multidisciplinary basis of health education practice. The curriculum emphasizes: assessment of educational needs; development and implementation of health behavior change strategies targeting the individual, group, and community; and evaluation of program effects.

Students can pursue the Biostatistics requirement through one of two options. The first option emphasizes interpretation and concepts rather than data analysis. This sequence develops an understanding of statistical methods rather than developing a student's own data analysis skills. The second option is aimed at students who intend to analyze data themselves or contribute meaningfully to a group of practitioners or researchers doing so. Students may not switch between tracks after they have begun one. Both courses in the

track must be completed to fulfill the Biostatistics requirement.

Students may use electives to broaden their understanding of major public health issues by taking courses in any of the departments of the School. Electives may also be used to pursue specialized training such as that offered by the Certificate in Health Communication, Certificate in Injury Control, Certificate in Health Finance and Management, or Certificate in Health Policy.

Field Placement

Having successfully completed a minimum of 64 credits in the first academic year, including all required courses, students begin the field placement in year two. The primary purpose of the field placement, an integral component of the MSPH program, is skill building: helping the student learn how to apply theories and principles and develop skills essential for functioning as an effective health educator. The field placement provides the student with the opportunity to apply the knowledge gained through the academic coursework to “real world” problems and health education programs.

The field placement is an activity in which the student, the placement agency, and the faculty share responsibility. All three parties must be involved in developing work objectives at the beginning of the placement to guide the student’s field placement experience; providing monitoring, supervision, and feedback during the placement; and completing an evaluation towards the end of the placement.

An appropriate field placement is one that consists of a full-time work experience as a health education trainee in an agency or organization in which the student participates in some aspect of program/project planning, implementation, and/or

evaluation. The placement must last at least six months and provide the student with appropriate supervision and guidance from agency personnel. Students also participate in a seminar to learn about each other’s placements and to discuss current health education relevant issues. In addition, the seminar also addresses the final requirement of the program, the final report. Additional field placement information and requirements will be provided to the students by the program directors.

MASTER OF HEALTH SCIENCE IN SOCIAL FACTORS IN HEALTH

Program Directors:

Danielle German, PhD
Katherine Smith, PhD

Sr. Academic Program Coordinator:

Barbara Diehl
263 Hampton House
410-502-4415, bdiehl@jhsph.edu

General Program Information

The MHS in Social Factors in Health is an advanced research degree for students with undergraduate exposure to social and behavioral sciences and/or public health, who are interested in further training in the theory and methods in this area. The focus of the MHS in Social Factors program is on integrating and applying a broad range of knowledge and analytical skills in social aspects of public health, with an emphasis on contemporary health problems. Graduates of the program will be prepared to embark on doctoral training in public health or pursue careers in research and policy positions in local, State, national and international government and non-governmental agencies, organizations and institutions related to public health.

The curriculum provides broad foundational training in public health, as well as specific training to build substantive knowledge and analytic

skills as social scientists in public health, with the ability to understand problems and to design and implement solutions. The program focuses on understanding and influencing the societal structures and behaviors that create risk for disease and illness, as well as social factors that are protective and health enhancing. Rigorous training in applied research methods is also a key element of the curriculum.

Program Requirements

The program consists of one and one-half to two years of full-time study, combining classroom-based coursework, seminars and independent study, development of a research plan and completion of a mentored research project, and a master’s research paper presenting original research. The final program requirement is presentation of the research by the student in a department seminar. The research project, planned with the guidance of the student’s academic advisor, may begin after successful completion of 64 credits, typically at the end of the first year, and must include the equivalent of 600 hours of activity, in a paid or unpaid position. After the completion of 64 credits, students in good academic standing are eligible for a Master’s Tuition Scholarship (MTS) from the School. The MTS provides 75 percent tuition support during year two of the program.

In the first year, the four full-time terms of study will consist of academic coursework in classroom and seminar settings. A total of 64 academic units must be completed prior to beginning the research practicum, typically within the first four terms of study. It is anticipated that students will complete a significant portion of their research practicum activities during the summer between first and second year.

In the second year, students will

register full-time for a course of study that will include remaining courses, as well as independent study with their advisor as they develop their research plan, complete their research practicum, and write their research paper. They will also attend at least two terms of the MHS in Social Factors seminar in their second program year. Students may be eligible to complete all requirements for graduation by the end of second term of their second year, depending on the timing of their research practicum and final approval of their paper.

MASTER OF SCIENCE IN GENETIC COUNSELING

Program Director:
Barbara Biesecker, MS, CGC

Academic Director:
Debra Roter, DrPH

Program Coordinator:
Mary Ann Dunevant,
756 Hampton House,
410-955-2315,
mdunevan@jhsp.h.edu

General Program Information

The Genetic Counseling Graduate Program is a joint effort between the Department of Health, Behavior and Society and the National Human Genome Research Institute (NHGRI) at the National Institutes of Health (NIH). This collaboration draws on resources from the two research institutions to address needs in the genetic counseling profession. This program was initiated in 1996 and its goals are to prepare graduates to:

1. Provide genetic counseling, with an emphasis on clients' psychological and educational needs.
2. Conduct social and behavioral research related to genetic counseling; and educate health care providers, policymakers and

the public about genetics and related health and social issues.

Course Requirements

The program requires two and one-half years of full-time study. The curriculum consists of at least 80 credit hours of didactic coursework in the areas of human genetics, genetic counseling, public policy, research methodology, ethics, and health education. The coursework is taken on the NIH campus in Bethesda, Maryland, and at Johns Hopkins Medical Campus in Baltimore. Clinical rotations extend in location from northern Baltimore to Washington, D.C. Per School regulations, at least 12 credits of formal coursework must be completed outside the Department of Health, Behavior and Society, of which at least eight must be earned in another department of the Bloomberg School.

DOCTORAL PROGRAMS

PhD/ScD Program Director:
Margaret Ensminger, PhD

DrPH Program Director:
Debra Roter, DrPH

Sr. Academic Program Coordinator:
Barbara Diehl
263 Hampton House, 410-502-4415

Health, Behavior and Society offers doctoral training leading to the Doctor of Philosophy (PhD), Doctor of Science (ScD), and Doctor of Public Health (DrPH). The Department focuses its doctoral training into two areas: psychological and social factors influencing health, and health education and communication. Doctoral students take departmental core courses as well as courses recommended for their area of interest. The DrPH program has Schoolwide and departmental components. In the second year, students take courses in preparation

for beginning research in their area of interest. Seminar courses are offered to inform students of the state-of-the-art research and to assist them in preparing a research thesis proposal. Generally, by September of the third year, students present themselves and their dissertation proposal for the preliminary oral examinations, in which faculty examine students' readiness to begin research. Upon passing both a departmental and a Schoolwide oral exam, students pursue a research topic leading to a written dissertation. The doctoral program can be completed in four years of full-time study.

Students are also expected to take methods courses relevant to the field of their dissertation research. Students who wish to take advanced biostatistics courses (140.651-654 Methods in Biostatistics I-IV) in place of the basic requirements are encouraged to do so. To register for the advanced series, a working knowledge of calculus and linear algebra is required.

FACULTY

The HBS faculty members are dedicated to research and training that advances scientific understanding of behaviors related to health and how to influence them and improve health outcomes. We seek to understand how behaviors and environmental context interact to affect health, including factors that operate at the individual, organizational, community, and societal levels. We work to develop, implement, evaluate, and disseminate interventions that facilitate healthy behaviors and improve health outcomes. Many public health problems are integrally related to behavior, cultural norms, and societal factors such as inequities. Interventions to prevent and ameliorate diseases and injuries often depend on change at individual, organizational, community and

societal levels. Some of the greatest public health accomplishments—e.g., tobacco control, motor vehicle safety, vaccination—have involved such multi-level interventions to successfully change personal health and safety behaviors. Social and behavioral science theories and methods are essential to improve understanding of the determinants of health problems, the behavior change process and effective public health interventions.

The Department is also fortunate to have a distinguished part-time faculty including leaders in behavioral and social sciences and public health. These faculty have appointments as adjunct professors, senior associates and associates. They teach courses, serve as preceptors and are available to guide students seeking career counseling.

Health Policy and Management

The mission of Health Policy and Management is to advance the public's health through the development, implementation, and evaluation of effective health and social policies. The Department emphasizes the importance of sound management and creative leadership in finding effective and equitable solutions. The Department's commitment to this mission is realized through advancing research, education and practice in the following areas:

Health Services Research and Policy: addressing the organization, financing and delivery of both curative and preventive services, and their impact on access, quality, outcomes and cost, particularly for the most vulnerable; Health and Public Policy: addressing the development, implementation and evaluation of public policies to prevent disease and injury and to promote the health and quality of life of populations; Health Economics and Policy: addressing the concepts and methods of economic analysis to study how clinical and public health resources are and should be allocated; Bioethics and Health Policy: addressing research and policy related to the ethics of public health practice, health policies, and public health research; and Leadership and Management: addressing the challenges faced by health organizations in today's rapidly changing environment.

The Department is responsible for training public health professionals and researchers in diverse disciplines and fields relevant to the translation of public health sciences into practice and policy. The goal is to train researchers and public health leaders to become agents of change to promote the public's health through

effective, efficient and equitable policies, programs and services.

DEGREE PROGRAMS

Master's Programs

Master of Health Administration (MHA)

Director:

Mr. William Ward

Associate Director:

Dr. Ann-Michele Gundlach

Assistant Director:

Ms. Teresa Schwartz

The Master of Health Administration Program is a professional degree designed to prepare students for management and leadership positions in the health care sector. In this rapidly changing environment, health care managers have a unique opportunity to improve the health care of the public through designing and managing high-quality, cost-effective services. The program emphasizes the conceptual and analytical skills required to understand and manage today's health care organizations and to prepare for tomorrow's challenges. The curriculum provides opportunities to study economic, social, technical, and marketplace issues that directly influence organizations and determine management agendas.

The program requires one academic year of coursework and an 11-month field placement of full-time employment in a health care organization.

Required courses provide students with a foundation of public health through courses in epidemiology, biostatistics, and environmental health, as well as a thorough grounding in the U.S. health care system. Program courses cover theories and practice of management and leadership, financial accounting and budgeting, financial management, policy analysis, legal and ethical issues,

strategic planning, managed care, and health care financing. The curriculum also includes human resources, health economics, marketing, health management information systems, quantitative tools in decision making, and hospital operations. Because the program is located in a school of public health, students develop skills in working with physicians, nurses and other health professionals with whom they share classes. The faculty have broad national and international experience and include practitioners who bring the "real world" into the classroom.

Since it began in 1972, the program has graduated more than 500 students, many of whom hold leadership positions in both the public and private health sectors. The program is accredited by the Commission on Accreditation of Healthcare Management Education (CAHME).

Master of Science in Public Health (MSPH) in Health Policy

Director:

Ms. Beth Resnick

Assistant Director:

Ms. Christine King

The MSPH Program in Health Policy is a professionally-oriented degree program designed for individuals seeking specialized academic training in health policy to establish or expand their careers as health policy analysts. The interdisciplinary faculty associated with the program is recognized nationally and internationally for their excellence in policy analysis, health services research and teaching. Faculty members are actively involved in formulating and implementing health policy at federal, state and municipal levels.

The program requires one year of academic coursework, followed by a nine-month field placement of full-time employment in a profes-

sional health policy setting. Through their coursework, students acquire a solid foundation in fundamental policy analysis, along with substantive knowledge of the U.S. health care system and key health policy issues. The required curriculum and field placement experience provide students with a rich understanding of U.S. health policy; knowledge of the processes by which public policy decisions are made; training in basic quantitative and analytic methods; and the skills needed to critically assess and apply research findings to the development and analysis of health policy.

In addition to the core requirements, the curriculum offers adequate flexibility to allow students to pursue their individual interests in the health policy arena. Elective courses may be selected, with the adviser's consent, from those offered by the Department of Health Policy and Management or any other department in the Johns Hopkins Bloomberg School of Public Health.

MHS in Health Economics

Director:

Dr. John Bridges

The MHS in Health Economics is a one year, academic degree, offered jointly by the departments of Health Policy and Management and International Health.

The program provides students with a solid foundation in general health economics and evaluation methods necessary to promote the efficient and equitable allocation of health care resources in public health and to identify relevant regulatory policies, strategies and interventions. Such methods are important in designing and assessing preventative and curative services, and are relevant to health care systems around the globe. Graduates will be well positioned to pursue doctoral training in econom-

ics and health policy or careers as analysts in both the public and private sector.

Prospective students apply to one of the two departments based on academic and career interests. However, students from both departments participate in a common core of classes spanning health economics, economic evaluation, econometrics, statistics and epidemiology. Students have an opportunity to specialize, based on interests and experience, by choosing from elective courses that focus on U.S. or non-U.S. settings. Ideal applicants should have some experience in economics and a strong background in math with awareness of both calculus and linear algebra.

BA/MSPH in Health Policy

Undergraduate students currently enrolled in the Johns Hopkins University Krieger School of Arts and Sciences program in Public Health have a unique opportunity to receive both bachelor's and master's degrees. The Johns Hopkins Bloomberg School of Public Health and the Department of Health Policy and Management offers early graduate school admission to students enrolled in this undergraduate program. Standardized test scores are not required for admission review provided that a minimum GPA of 3.3 in the Public Health core is reached. The test scores may be required for master's matriculation if satisfactory academic progress is not maintained in JHSPH courses taken during the senior year. The application fee for BA/MSPH applicants is waived. The graduate credits taken at JHSPH while in the BA/MSPH apply toward the BA and up to 16 credits may be used to fulfill MSPH elective credits within the degree. Students in this program will receive co-advising from both schools to optimize their academic experience. Applications for the BA/MSPH degree are expected

by July 1 between the junior and senior years to insure completion of review process prior to the first day of the academic year. Students must be accepted before the start of their senior year. Please note that admitted students must complete the BA degree before formally enrolling in the Bloomberg School of Public Health and that all students must complete a year of coursework as an official MSPH student in addition to the field placement.

Doctoral Programs

Doctor of Public Health in Health Care Management and Leadership

The Doctor of Public Health (DrPH) program offered in Health Policy and Management is focused in Health Care Management and Leadership. The focus of the program is on measuring, monitoring and improving the clinical and financial performance of health services organizations, as well as training leaders for organizational change. The program curriculum is based on the Malcolm Baldrige Health Care Criteria for Performance Excellence framework and targets those students who have master's-level training related to health care management.

The DrPH in Health Care Management and Leadership is principally designed for part-time students working full-time during their enrollment in the program. It is expected that students will complete the required coursework over a three-year period while participating in program activities. These activities include seminars, research, journal clubs and other opportunities to promote interaction among program students and faculty. After the completion of most coursework, students will sit for the written comprehensive exam. Students then present themselves for the preliminary oral examinations, after which

they may begin substantive work on their dissertation. It is possible to complete the degree (including both departmental and Schoolwide requirements as well as dissertation work) within a five-year period. Students will, however, have up to nine years, if needed, to complete the program requirements.

Doctor of Philosophy Program

The Department offers a research-oriented, Doctor of Philosophy program in four areas: Bioethics and Health Policy; Health Economics and Policy; Health Services Research and Policy, and Health and Public Policy. Students enrolled in the PhD program are expected to take both required and elective courses during their first academic year in preparation for the written qualifying exams taken at the conclusion of that year. Seminar courses are offered to inform students of the state-of-the-art in research and to assist them in preparing a research thesis proposal. By the third year, students present themselves for the preliminary oral exams, in which a committee of faculty examine the student's readiness to begin research. Upon passing, students pursue a research topic leading to a written dissertation acceptable to their adviser and a committee of faculty. It is possible to complete the PhD program in four years of full-time study.

PhD in Bioethics and Health Policy

The PhD in Bioethics and Health Policy is designed for students who want bioethics to be the distinguishing characteristic of their careers in public health. This bioethics program differs from most other bioethics doctoral programs in two important ways: first, it focuses on bioethics as it relates to moral questions in public health and health policy (rather than, for example, in medical or bedside dilemmas); and second, it provides rigorous training in quantitative

and qualitative empirical research methods. Students examine ethical issues in population health practice, research, and policy such as ethics and emergency preparedness, domestic and international research ethics, genetic screening policy, HIV screening, social justice and resource allocation. By the end of their PhD training, students are prepared to provide not only normative recommendations regarding ethics and public health policy but are also equipped to function as independent researchers, conducting empirical research related to bioethics, public health, and health policy.

Students enrolled in this PhD program participate in a variety of educational opportunities in bioethics and health policy, including lectures and seminars sponsored by the Berman Institute of Bioethics, the Johns Hopkins Medical Institutions and collaborations with the Kennedy Institute of Ethics, Georgetown University. Students take courses within the Department of Health Policy and Management and the Bloomberg School, as well as at the Johns Hopkins School of Arts and Sciences and Georgetown University.

PhD in Health Economics and Policy

Health economics is a field of study that applies the theoretical concepts and empirical methods of economic analysis to various issues throughout the health sector, ranging from the managerial efficiency of healthcare providers to the implications of alternative arrangements of financing health services. The PhD in health economics in the Department of Health Policy and Management prepares doctoral students for conducting innovative research on the economics of health and healthcare.

The health economics curriculum stresses a solid grounding in applied modern microeconomic theory,

economic evaluation, quantitative methods, and econometrics applications. It offers a broad exposure to the health economics literature and public health disciplines, and stresses the policy implications of these fields of research. The PhD program offers two concentrations: applied economics and economic evaluation. The courses taken during the first year of the PhD program are the same for both concentrations, while the courses taken during the second year of the PhD program depend on the concentration chosen by the student.

The applied economics concentration focuses on conducting empirical analyses of hypotheses generated by economic theory. The coursework includes PhD level classes from the Department of Economics at the University's Homewood Campus. The economic evaluation concentration focuses on state-of-the-art methods for performing economic evaluation of various interventions and includes courses from the Department of Epidemiology.

PhD in Health Services Research and Policy

The health care system in the U.S. and other nations are under extreme pressure. Costs are rising, quality and outcomes are not optimal, many vulnerable groups have inadequate access, and programs and technologies are often poorly implemented. There is a great need for doctorally prepared researchers and senior policy analysts to address these issues within public and private organizations and to lead health care reform in the U.S. and globally. The health services research and policy (HSR&P) PhD training program provides a firm grounding in public health principles, research and evaluation methods, policy analysis and numerous content areas related to health and health services delivery. In this program, students acquire the

conceptual and methodological tools needed to conduct research, program evaluation and policy analysis and synthesis to advance the state of knowledge. The curriculum emphasizes the following areas: public and private sector health insurance and financing, organizations for the delivery of health care, methodologies for measuring and improving quality and safety of medical care, methods to measure personal and population health status, methods for assessing the impact of government health care policy on individuals and populations, and comparative effectiveness methods for assessing the impact of technology and treatments on patient outcomes. The program places emphasis on special need populations, such as children, older populations, minorities and persons with high burden diseases and disabilities. The program stresses the development of research and analysis methods, as well as content knowledge. In addition to careers in academia, this program prepares students for leadership careers as health services researchers and health care policy analysts working in public or private agencies or organizations. The program emphasizes issues of relevance to the U.S. and other highly developed nations. There are many research opportunities within research centers of the Department and elsewhere within the Johns Hopkins University and Health System. Also the Baltimore/Washington area is the home to the largest concentration of public and private health services research and health care policy analysis organizations in the world. Formal and informal relationship with these agencies, including research practicums, thesis collaborations and part time employment are encouraged and facilitated. All students in the HSR&P PhD training program will be exposed to a broad array of methods and content. In addition, it is expected that all stu-

dents will select at least one methods sub area (e.g., econometrics, epidemiology, measurement, policy analysis, informatics, or qualitative analysis). It is also expected that all students will develop expertise in one or more content areas. Students interested in gerontology and aging may develop a specialization in the program applied to this domain.

PhD in Health and Public Policy

Finding solutions to public health problems through the development, analysis, implementation, and evaluation of social and health policies is the focus of the PhD program in Health and Public Policy. Public policy is viewed in the broadest sense and includes social issues, law, politics, environmental matters and the role of scientific discovery. Students in this program examine some of the most challenging public health issues of the day and learn how to translate their understanding of the risk factors underlying those challenges into policy solutions. Students also engage in policy evaluations to assess the impact of public policies on disease and injury. Faculty employ an interdisciplinary approach to their teaching and research, which is reflected by their backgrounds in medicine, epidemiology, public health practice, social and political science, law environmental health, and the risk sciences.

Within this program, students may focus their studies in the areas of social policy and health, injury prevention and control, the practice of prevention, or environmental and occupational health policy. Through coursework and research students learn to apply general principles of health policy analysis to these specialized areas of concern. For students interested in social policy and health, the impact of social policies on the level of health and well-being of populations is emphasized, as is the

relationship between health care and social care. For those who focus on injury control, preventing injuries, reducing disability and providing emergency services and rehabilitation are all areas of emphasis. Students in the practice of prevention specialization examine specific public health problems such as AIDS, tobacco, obesity, or violence and develop strategies for addressing these problems through traditional and innovative policy interventions. Environmental and occupational health policy students examine those factors in the human environment that impact population health, the methods for assessing risks, and the development and evaluation of policies to improve environmental public health.

International Health

The Department of International Health at the Johns Hopkins Bloomberg School of Public Health was established in 1961, reflecting the long-standing interests of the School and in response to the needs of international agencies and national governments for teaching and research in international health. The Department prepares professionals from other countries to assume major positions of leadership and responsibility upon their return home. It also prepares health professionals from the U.S. and other developed countries for roles in international agencies and in collaborative overseas projects. Graduates typically pursue careers in international agencies such as UNICEF and the World Bank, national assistance organizations such as the Agency for International Development, private foundations, and volunteer organizations.

Doctoral-level training for research (PhD) is available in defined fields of specialization in international health. In addition, doctoral-level training in public health practice (DrPH) is offered with an emphasis on international health issues. Master's-level training programs (MSPH & MHS) are available in selected areas of professional practice. Departmental courses may be elected by MPH students with career interests in international health. In addition to formal courses, seminars, Institutes and special lectures are offered throughout the year on topics of current and specialized interest.

ORGANIZATION OF THE DEPARTMENT

The Department is organized into four program areas: Health Systems, Global Disease Epidemiology and Control, Human Nutrition, and Social and Behavioral Interventions.

Faculty and staff have a primary appointment in one of the four program areas, but collaborations on research, service, and teaching programs routinely cross these boundaries. The Department's academic programs coincide with the major program areas. All students, with the exception of DrPH students, must specify their desired program area when applying for admission to a degree program.

The Department offers two types of doctoral training: the Doctor of Philosophy (PhD) for students interested in research training, and the Doctor of Public Health (DrPH) for those interested in public health practice. The PhD is program area specific, whereas the DrPH is designed to develop mid to senior-level professionals in the broad area of international health. Unlike the PhD, which focuses on building skills in a specific program area (see program descriptions for more information), the DrPH program provides a comprehensive approach that draws on a variety of academic disciplines as applied to health problems. Students entering the DrPH program should already have at least three years of public health experience, and graduate-level training in the field (such as an MPH degree or equivalent).

Graduates of the Global Disease Epidemiology and Control program are expected to have acquired technical competence for entry-level positions coordinating global disease epidemiology and control programs or as coordinator of research projects in this area. The Health Systems program prepares graduates to participate in planning, management, and evaluation of developing countries' health programs or projects. The Human Nutrition program focuses on public health problems related to nutritional status and dietary intake and gain competence in the

design, implementation, and evaluation of nutrition interventions. The Social and Behavioral Interventions program provides students with an understanding of social and cultural issues in the provision of health care in developing countries.

The Department also offers master's-level training through the Master of Science in Public Health by program areas and the Master of Health Science in Health Economics degrees. The MSPH by program areas (professional, two-year degree) is composed of an academic and practical training. Students select one of the four program areas for their concentration when applying for admission to the MSPH program. The MHS in Health Economics (academic, one-year degree) is composed of academic training and a scholarly paper.

All degrees offered by the department are full-time degrees. Students enrolled in these degrees must be registered for a minimum of 16 credits per term throughout the duration of their studies.

Master of Science in Public Health by Program Area

Applicants for the MSPH degree in International Health are encouraged to have a prior degree in the biological or health sciences, or a degree in management or the social sciences. Some international health experience is highly desirable, but not required.

The MSPH training program consists of a minimum of four academic terms (64 units) of coursework and a two-term practicum (32 units). The practicum can be a full-time activity of four months' duration or a part-time effort extending over a period of up to 12 months (always maintaining full-time student status). A written comprehensive exam is taken after completion of coursework, and a master's essay is produced in con-

nection with the practicum. The practicum builds on knowledge gained during the academic portion of the training. This practical experience provides the student with the opportunity to concentrate in an area of interest, or to try out several different applications to determine more precisely the suitability of different career paths.

Practicum possibilities range from field projects conducted in developing countries to responsibilities with U.S.-based agencies concerned with international health. Additional academic work or investigations based at the School may be acceptable as an alternative to field work depending on the program. The student has the principal responsibility for securing the field placement, with help from the Department. These arrangements must be approved by the faculty adviser prior to starting the field work. In the course of the practicum, an essay representing a significant contribution to knowledge in the particular area of the student's interest is prepared and submitted.

With the approval of the Bloomberg School and the School of Advanced International Studies (SAIS), students may enroll in a dual MA/MSPH degree program. Both two-year degrees may be earned in a total of three years. For more information, see "Combined Degree Programs" in the Academic Information chapter.

For U.S. citizens, an alternative internship is provided through the Peace Corps Masters International program, coordinated by Dr. Moulton. After the first year of coursework, students enter Peace Corps, which consists of about 3 months of in-country training/orientation followed by 24 months of service. During this time, students complete their masters theses. Ideally, students will have applied to Peace Corps early in the summer

before matriculation in the MSPH program.

Master of Health Science in Health Economics

The MHS in Health Economics (HE) is a one-year academic degree that provides students with a solid foundation in general health economics and evaluation methods necessary to promote the efficient and equitable allocation of health care resources in public health and to identify relevant regulatory policies, strategies and interventions. Such methods are important in designing and assessing preventive and curative services, and are relevant to health care systems around the globe. Graduates will be well positioned to pursue doctoral training in economics and health policy or careers as analysts in both the public and private sector.

This MHS is offered jointly by the departments of International Health and Health Policy and Management.

For more information on the MHS HE go to www.jhsph.edu/dept/ih/globalhealthdegrees/healthconomics/index.html

Co-Directors:

John F.P. Bridges, PhD,
Health Policy and Management

Louis Niessen, MS, PhD,
International Health

Program in Global Disease Epidemiology and Control

Director:

Joanne Katz, ScD

Directors for Academic Programs:

PhD Program:

Lawrence Moulton, PhD

MSPH Program:

Karen Charron, BSN, MPH

The goals of the Program in Global Disease Epidemiology and Control

are to understand the epidemiology and etiology of diseases of public health importance in developing countries and vulnerable populations in the U.S.; develop new approaches to the detection, prevention, and control of morbidity and mortality in these settings; and to contribute to policy development related to disease control strategies at the national and international level. The diverse faculty includes physicians, epidemiologists, vaccinologists, and biostatisticians who participate in the full spectrum of research related to prevention and control of disease including laboratory studies in vaccine development and testing; phase I, II, and III clinical trials; community-based prevention trials; observational epidemiologic studies; and clinical outcomes research. Faculty have extensive field experience in developing country settings and have worked in collaboration with international agencies and developing country institutions and colleagues. Collaborative research is ongoing in Bangladesh, Brazil, Burkina Faso, China, Ethiopia, Ghana, Guatemala, India, Kenya, Mali, Nepal, Pakistan, Peru, South Africa, Tanzania, Thailand, Uganda, Vietnam, Zambia, Zimbabwe, Native American populations, and in disadvantaged populations in the U.S.. The program serves as the home for the Johns Hopkins Vaccine Initiative (JHVI) www.jhsph.edu/vaccineinitiative. JHVI affiliated centers in this program include the: Center for Immunization Research (CIR), Institute for Vaccine Safety (IVS), and International Vaccine Access Center (IVAC).

Academic Training in Global Disease Epidemiology and Control

For information, contact the Academic Program Office, 410-955-3734, IHinfo@jhsph.edu.

This program provides training for public health practitioners (MSPH)

and researchers (PhD) who will use epidemiologic, immunologic, and/or laboratory and statistical methods to design, implement, and/or evaluate disease control interventions for diseases of public health importance to under-served populations. Graduates will have a fundamental understanding of the pathogenesis, epidemiology, and control measures applicable to diseases of public health importance in disadvantaged populations. Interventions to be studied will be primarily biomedical (e.g., therapeutic or prophylactic drugs, vaccines, or environmental modifications), although there may be a behavioral component to effective implementation of such interventions.

Special strengths of the program are infectious disease epidemiology (including emerging infections) and vaccinology. Students can acquire a broad understanding of the methods needed to design studies and gain hands-on experience in the design, conduct, and analysis of community and clinical trials and/or laboratory-based investigations, including the immunologic and biologic basis of responses to immunizations and other prophylactic or therapeutic interventions. The program offers a Certificate in Vaccine Science and Policy, which can be taken by MPH, MSPH or doctoral students.

Master of Science in Public Health candidates should have an undergraduate background in biology and/or the quantitative sciences. Doctoral candidates should have a degree in biological sciences, medicine, veterinary medicine or dentistry; and are required to have a master's-level degree or equivalent graduate training in epidemiology, statistics, international health, tropical medicine, microbiology, parasitology, immunology, mycology, or virology. Prior work experience is preferable.

Advising faculty: Drs. Black, Chaisson, Charron, Coles, Durbin, Fielkin, Fischer-Walker, Gilman, Halsey, Johnson, Karron, Katz, Knoll, Labrique, Levine, Moulton, Mullany, Nelson, Nyunt, O'Brien, Ruff, B. Sack, D. Sack, Santosham, Talaat, and Tielsch

Program in Health Systems

Director:
David Peters, DrPH

Deputy Director for Academic Programs & PhD Coordinator:
Adnan Hyder, MD, MPH, PhD

MSPH Program:
Bill Weiss, DrPH

The Program in Health Systems is dedicated to providing excellence in graduate education, professional development, research, and partnerships between health professionals, institutions, governments, and the communities they serve to build and utilize capacity in (a) health policy; (b) health planning, management, and evaluation; (c) public health education; (d) institution building; (e) community development; and (f) research in organization, financing and management of health systems, to improve the performance of health systems around the world.

The program serves to bring together people and ideas to create and use knowledge, build leadership and management skills, and foster innovation in health systems. The Health Systems Program fulfills its particular mission through teaching, research and service at the Bloomberg School and with partners around the world, particularly in low- and middle-income countries and among vulnerable populations. Areas of concentration for the Health Systems Program include: (1) measurement of performance of health systems; (2) national health policy and planning; (3) health financing systems; (4)

management of health programs; (5) district health management; (6) quality assurance; (7) populations stressed by economic, social and political crisis, including conflict and natural disaster; (8) poverty and health relationships; (9) demand for health services; (10) public-private partnerships in health; (11) injury and trauma prevention and control; (12) neonatal and child health; and (13) international research ethics.

The program is organized around core goals that a health system should improve people's health status, reduce financial risks of illness, and satisfy people's expectations of their health services. Our vision is that health systems should achieve these goals by:

- Promoting equity in health services and health outcomes
- Protecting vulnerable and under-served populations
- Contributing to poverty reduction
- Enabling communities to help themselves
- Responding to needs of populations
- Respecting the rights of individuals and communities, and diversity in beliefs and practices
- Building partnerships between local institutions, governments, and international agencies
- Engaging with other sectors of civil society and government
- Being accountable to beneficiaries and other stakeholders
- Using cost-effective and sustainable health service strategies and institutions
- Creating and using new knowledge
- Continuously innovating and learning
- Promoting a strong ethical basis for research and programs

The program serves as the home for the Center for Refugee and Disaster Response, the International Center for Advancing Neonatal Health, the International Injury Research Unit and the Center for American Indian Health.

Academic Training in Health Systems: MSPH, MHS/HE, PhD

For information, contact the Academic Program Office, 410-955-3734, IHInfo@jhsphe.edu .

The Health Systems curriculum focuses on planning, implementation, monitoring disease burden, evaluation of projects, health facilities, and community and district approaches, as well as, policy analysis and oversight of national health systems, planning and managing national and international programs, as well as institution building and teaching, and research in these above areas. Research focuses on the performance of health systems, measuring the impact of diseases, financing, evaluation and management. Opportunities for thesis work include the study of health systems performance, health and poverty, demand for health, health financing alternatives, economic analysis of health programs, refugee health care, private sector analysis, injury prevention and control, and neonatal health programs.

Advising Faculty: Drs. Bachani, Baker, Baqui, Bartlett, Bennett, Bishai, Black, Brieger, Bryce, Burnham, Callaghan, Chandran, Doocy, Edwards, George, Hyder, Lefevre, Levine, Merritt, Morrow, Mullany, O'Brien, Peters, Rahman, Reinke, Robinson, Santosham, Sorkin, Trujillo, Weiss, and Winch

Program in Human Nutrition

Director:
Keith West, DrPH, MPH, RD

Deputy Director for Academic Programs: Parul Christian, DrPH

The goals of the Program in Human Nutrition are to advance understanding of nutritional influences on health, disease, quality of life and survival and the effects of disease processes on nutrition, with a focus on health promotion throughout the life cycle in underserved populations. This mandate requires developing and testing innovative means to assess diet and nutritional status, especially deficiencies and excesses, in high risk populations; delineating biochemical and metabolic processes of nutritional diseases to understand causal systems; exploring ways to optimize diet and effects of other environmental influences on nutritional health; and advocating and designing evidence-based programs and policies. Faculty within the Program, and Center for Human Nutrition, focus their research on the public health dimensions of undernutrition and its relation to infection, development, reproductive health, chronic disease and mortality in developing countries; and the nutritional and lifestyle factors giving rise to a global emergence of obesity and chronic diseases in countries in “transition” and poverty-stricken societies of industrialized countries. The interdisciplinary nature of nutrition in public health is reflected by a diverse faculty which includes physicians, biochemists, molecular biologists, epidemiologists, anthropologists, trialists, biostatisticians and policy specialists. Program faculty have extensive research and program experience in diverse settings around the globe, including current field sites and projects in East Asia (China) and Southern Asia (Bangladesh, Nepal) Africa (Zimbabwe, Zanzibar),

Europe (Italy), Latin America (Peru) and North America (Baltimore and American Indian reservations). Faculty are addressing in their research the short and long-term effects of undernutrition and micronutrient deficiencies (including iron, folate, iodine, zinc, and vitamins A, D and K), and their prevention during pregnancy and childhood, on morbidity, mortality, cognition, reproductive health and chronic disease risks; estimating the extent and modeling consequences of the global obesity epidemic; seeking ways to understand and improve sociocultural cues to healthy eating; discovering and testing roles of food constituents in preventing cancer; exploring “-omics” applications to nutritional assessment; testing feeding regimens to improve fetal and child growth and body composition; and carrying out operations research on how to best scale up nutrient supplement programs. The Program presently has resident faculty in Bangladesh, Nepal and Zimbabwe.

Academic Training in Human Nutrition

For information, contact the Academic Program Office, 410-955-3734, IHInfo@jhsphe.edu.

The program provides training leading to both the Master of Science in Public Health (MSPH) and doctoral (PhD) degrees in Human Nutrition. The aim of the program is to provide students with the theoretical knowledge and state-of-the-art scientific, programmatic, policy and leadership skills for addressing pressing global challenges in public health nutrition. Students undergo a rigorous program of required and elective coursework, data analysis projects, special studies with faculty advisors, and international or domestic field research or program internship opportunities. Graduating MSPH students are trained to assume technical and

management roles in government, non-governmental, UN and private sector nutrition agencies and programs. Doctoral graduates are highly trained researchers in specialized areas of public health nutrition, with advanced cross-disciplinary methodologic exposures and skills acquired through coursework, protocol development, study design and execution, data analysis, reporting, writing and publishing, and in public speaking and advocacy.

Two special programs exist. Selected MSPH students in Human Nutrition can meet their practicum requirements by participating in the Graduate Coordinated Program in Dietetics (MSPH/RD Program), which is a collaborative program with JHSPH and Johns Hopkins Bayview Medical Center (JHBMC). This program offers students interested in public health nutrition the opportunity both to obtain the MSPH degree and to complete the supervised practice requirements in public health nutrition in preparation for obtaining the RD credential. Prerequisites for this program are found at www.jhsph.edu/dept/ih/globalhealthdegrees/msph/Msph-rd.html. The second special opportunity is a Johns Hopkins/Cornell University educational collaboration in public health nutrition that offers students an opportunity to attend courses at both universities for up to one year.

Advising Faculty: Drs. Black, Caballero, Caulfield, Christian, Coles, Gittelsohn, Humphrey, Klemm, Murray-Kolb, Schulze, Talegawkar, Wang, and West

Center for Human Nutrition

Director:
Keith West, DrPH, MPH, RD

Administratively based in the Program in Human Nutrition in the Department of International Health, the Center for Human Nutrition,

launched in 1990, fosters a broad multidisciplinary approach to collaborative nutrition research through its faculty affiliates in other programs and departments in the Schools of Public Health and Medicine, and at the U.S. Department of Agriculture research facilities in Beltsville, MD. Center affiliated faculty lecture in Program courses and seminars, expand the diversity of academic expertise of the Program, and increase placement opportunities for either doctoral thesis research or MSPH degree internships. Collaborative research projects across Center faculty are, for example, currently addressing behavioral approaches to improving the nutritional values of diets in the inner city, exploring proteomics approaches to nutritional assessment, testing foods and their isolated phytochemicals in chronic disease prevention, exploring dietary influences across the life cycle on age-related diseases and evaluating interactions of diarrhea and malnutrition in diverse cultures.

Program in Social and Behavioral Interventions

*Director and
PhD Academic Program Director:*
Peter Winch, MD, MPH

Director for MSPH Program:
Elli Leontsini, MD, MPH

The Social and Behavioral Interventions Program conducts research, training, and service on the development, implementation and evaluation of social, behavioral and community-based public health interventions. Our primary goal is to assist in the formulation of programs which reflect the social, cultural, and policy context of health problems using a public health perspective, and a sound understanding of the epidemiology of health issues in developing countries. We strive to conduct our work through equitable

partnerships including partnerships with local affected communities, scientific experts, community and national leaders, and governmental and non-governmental groups conducting intervention work in affected communities.

Academic Training in Social and Behavioral Interventions

*For information, contact the
Academic Program Office,
410-955-3734, IHinfo@jhsph.edu.*

The Social and Behavioral Interventions Program offers both Master of Science in Public Health and PhD degrees. This program offers multidisciplinary training for researchers and public health practitioners who wish to use the social sciences in the design, implementation, and evaluation of public health programs, particularly community-based interventions. The program provides students with exposure to applied social theory and methods, as well as training in public health research methods and analytical techniques from both the qualitative and quantitative perspectives. Our primary focus is on the direct application of theory and data collection methods for the development of effective public health action. Students may choose to specialize in the development, implementation, and evaluation of disease prevention and control programs in areas such as HIV prevention, nutritional interventions, malaria control, and a host of other topic areas relevant to the enhancement of health in developing countries. The combined use of qualitative and quantitative methods is a defining characteristic of the program, and students are trained in survey research methods, as well as in-depth interviews, focus group discussions, and observation techniques. Applicants to the master's program should have a prior degree in the social sciences or a related field.

Doctoral candidates have generally already completed a prior master's degree in a related field of study and have some professional experience.

Advising faculty: Drs. Barlow, Brieger, Cwik, Fox, Gittelsohn, Harvey, Kennedy, Lake, Leontsini, B. Mullany, Strom, Surkan, Tingey, and Winch

DOCTOR OF PUBLIC HEALTH (DrPH)

Director:

Sara Bennett, PhD
410-614-5137, sbennett@jhspsh.edu

The Doctor of Public Health (DrPH) Program in International Health is designed to train mid- to senior-level professionals for leadership positions in public health practice, with a particular focus on low- and-middle income countries and disadvantaged populations. The program provides a comprehensive public health approach that draws on a variety of academic disciplines, including quantitative, biomedical, population, social and management sciences. The goal of the program is to provide students with an understanding of leadership skills and the ability to apply public health sciences to health problems in international settings. Graduates of the program are expected to be public health practitioners who can comprehend and integrate knowledge across traditional academic disciplines; provide sound recommendations and advice to national and international agencies in public health; and communicate effectively with governments, academia, nongovernmental organizations and the public. Components of the program include the acquisition of core knowledge through coursework, structured seminars, special studies, three practice-based projects, including the dissertation, in the following areas: organizational assessment, new program proposal, analysis of implementation, economic evaluation, and program or

policy evaluation. There is also a communication component for the projects.

Preventive Medicine Residency Program

Residents in the General Preventive Medicine Residency Program may gain expertise in international health by entering the international health track. Residents selected for this track will take a series of courses offered by the Department of International Health during the academic phase of their training, in addition to the courses they take for the Master of Public Health core and for the residency. During the academic year, the resident will be assigned an adviser, receive guidance and be mentored by the track director designated by the chair of the Department. Residents will also be encouraged to be involved in a research project in their area of interest. During the practicum year, residents in the International Health track may be considered for a six-month rotation with PAHO or another appropriately accredited field or research experience. Applicants to the residency program must complete at least one year of clinical training in a program approved by the Accreditation Council for Graduate Medical Education before matriculating in the residency. For more information, contact Christine Brown, 410-955-3362 or cjbrown@jhspsh.edu or visit www.jhspsh.edu/gpmrl.

Concurrent Schoolwide Doctoral/ Master of Science in Public Health Program in International Health

This program offered by the Department of International Health affords students who are doctoral candidates in other departments who have specific interests in international health the opportunity to obtain a Master of Science in Public Health degree during the course of doctoral

studies. A student currently enrolled in a doctoral program in departments other than International Health at the Bloomberg School may apply to one of the four programs in the Master of Science in Public Health degree program in International Health by submitting application materials to the departmental Admissions Committee. A separate application essay on why the MSPH program in International Health is relevant and appropriate to the doctoral candidate's future plans must be submitted. Approval of the primary department chair and the student's doctoral adviser must be documented in the application.

Program requirements, excluding the internships, are the same as those for MSPH students in International Health. Students are assigned an International Health adviser in addition to the adviser in the student's primary department. After completion of coursework, students are required to take the departmental comprehensive written examination.

The student's doctoral thesis must have some relevance to International Health and will be accepted in lieu of the MSPH internship and essay requirements. The MSPH degree will be awarded only after completion of all doctoral degree requirements.

Mental Health

The mission of the Department of Mental Health is to advance understanding of mental and behavioral disorders, to develop, implement, and evaluate methods to prevent and control these disorders, and to promote mental health in the population.

The target outcome of mental health and mental disorders is the distinguishing feature of the Department of Mental Health. Mental disorders are disturbances of thinking, feeling, and acting which have a proximate cause in the human brain. Disturbances of thinking include mental disorders like schizophrenia and dementia, as well as impairments like mental retardation. Disturbances of feeling include emotional problems like mood and anxiety disorders. Disturbances of behavior include misuse of alcohol, use of illicit drugs and violence.

The Department conducts research on the public health aspects of psychopathology, but does not provide clinical training.

Training Programs

The Department emphasizes ongoing research that enriches and stimulates the academic programs. Students and fellows are encouraged to participate in research work groups which are open to all. Research workgroups typically are oriented around the subject areas of the four training programs of the Department, described immediately below, with cross-cutting interests and collaborations from the major research programs of the Department, also described below.

Program in Aging and Dementia

The goal of this doctoral and postdoctoral program is to train young investigators in age-related cognitive

and neuropsychiatric disorders. It is an interdisciplinary program, funded by the National Institute on Aging, affiliated with the Department of Neurology at the School of Medicine and the Department of Psychology and Brain Sciences at the School of Arts and Sciences. Predoctoral and postdoctoral fellows are required to take 'Cognition, Aging and Neurodegenerative Disease' (330.802.01), for credit; to develop mastery in biostatistics, and to complete training in ethical conduct of research.

Postdoctoral fellows are expected to engage in original research under the supervision of a faculty member. Doctoral trainees must complete the required coursework for their degree program, complete qualifying examinations and a research dissertation.

Please contact Dr. George Rebok (grebok@jhspk.edu) for further information.

Program in Psychiatric Epidemiology

This interdisciplinary doctoral and postdoctoral program is affiliated with the Department of Epidemiology and the Department of Psychiatry and Behavioral Sciences at the School of Medicine. The goal of the program is to increase the epidemiologic expertise of psychiatrists and other mental health professionals, and to increase the number of epidemiologists with interest and the capacity to study psychiatric disorders. Graduates are expected to undertake careers in research on the etiology, classification, distributions, course, and outcome of specific mental disorders and maladaptive behaviors. Postdoctoral fellows take some courses, depending on background and experience, and engage in original research under the supervision of a faculty member. Doctoral and postdoctoral studies in the program are funded, in part, by

a training grant from the National Institute of Mental Health.

Program in Child and Adolescent Mental Health Services and Service System Research

The Department focuses on research related to the need for and the delivery, organization, and financing of mental health services, especially as these relate to children, adolescents and their families. This doctoral and postdoctoral training program prepares individuals for research, planning, or evaluation careers in both public and academic settings. Doctoral and postdoctoral studies in the program are funded, in part, by a grant from the National Institute of Mental Health.

Program in Prevention Research Training

This program is designed to increase the number of university faculty and research staff in mental health agencies who can develop, implement, and evaluate prevention programs. Training emphasizes opportunities for independent research and participation in the ongoing research in a prevention research center. Coursework is available which is specifically designed to develop knowledge and skills in preventive intervention strategies, methods of measuring psychopathology in populations, epidemiologic methods for identifying risk factors, prevention research design, and eliciting community and institutional cooperation in preventive intervention research. Postdoctoral studies in the program are funded, in part, by a grant from the National Institute of Mental Health.

Program in Drug Dependence Epidemiology

This interdisciplinary program provides preparation for leadership in the drug and alcohol dependence field as it relates to epidemiology and

prevention. The doctoral program prepares individuals for careers in academic and applied research in epidemiology, prevention, or treatment program evaluation. Students admitted to the program master the methods of epidemiology and biostatistics, and have substantive knowledge about drug- and alcohol-specific issues, epidemiology of drug use, and health consequences, including dependence and mental disorders. Students must successfully complete a doctoral research project contributing to knowledge about suspected causal influence of drug dependence, the effects of primary or secondary prevention programs, or some other important aspect of public health that pertains to psychoactive drugs. Doctoral and postdoctoral studies in the program are funded, in part, by a Training Grant from the National Institute on Drug Abuse.

Hubert H. Humphrey International Fellowship Program in Public Health and Substance Abuse Prevention, Treatment, and Policy

The Hubert H. Humphrey fellowship program is designed for mid-career leaders from developing countries. It focuses on national policy formulation and research on prevention and treatment activities in developing countries. Professional affiliation with national and state governmental research and policy agencies affords the opportunity for immediate involvement in ongoing activities leading to research and policy paper productivity. Applicants to the fellowship program must have completed training in a relevant public health field and have experience in the drug or alcohol field. Participants in this program develop an academic plan in consultation with an academic adviser. This fellowship program leads to a certificate but not a degree. The program is jointly funded by a grant by the U.S. Department of State in cooperation

with the Institute of International Education.

Areas of Research Interests and Programs

Department of Mental Health has active research programs in many areas related to public mental health.

The Johns Hopkins Center for the Prevention of Youth Violence

The center provides a formal infrastructure that facilitates academic community collaborations by integrating research findings with education and training, professional development, and practice efforts, translating research into improved professional practice.

The result is an increase in the capacity of local providers, policy makers, and academic researchers to choose among potential interventions, monitor fidelity to specified standards, and increase knowledge concerning effective and ineffective practices and policies. Core funding for the Center is provided by the Centers for Disease Control (CDC).

Baltimore Epidemiologic Catchment Area (ECA) Followup

The Baltimore ECA Followup continues study of the natural history of mental disorders with follow-up interviews on the original 3,481 respondents from the 1981 survey in 1993-1996, and in 2004-2005. Research includes epidemiology of mental disorders and health-related behaviors in the early, middle, and later adult stages, as well as research on use of services, and other aspects of public mental health.

Alcohol and Drug Dependence and Related Hazards

Use of psychoactive substances is a suspected causal determinant for many mental disorders and health problems. Cognitive characteristics, behavioral characteristics, and social

settings are studied as potential causal influences for drug use and dependence from a developmental perspective. Prevention trials are carried out to test approaches to reducing drug use and related health risks.

Child and Adolescent Mental Health Services and Service System Research

Department faculty conducts research on the delivery, organization, financing and effectiveness of children's mental health services. The Department also administers the Johns Hopkins Center for the Prevention of Youth Violence, Child Development Community Policing, Project Target-MSDE; and maintains several databases of use for research projects.

The Department is also collaborating with the Governor's Office and a number of state and city agencies in the design, implementation, and evaluation of more effective systems of care for children and their families.

Center for Prevention and Early Intervention

The Center for Prevention and Early Intervention is a collaborative effort between the Bloomberg School, our local community partners in prevention and early intervention, and researchers at universities around the country. The mission of the Center is to improve school-based preventive and early treatment interventions for children and adolescents by bridging epidemiologic, intervention, services, and dissemination and training research through the development of a range of research strategies. The Center builds on the foundation laid by the Johns Hopkins Prevention Intervention Research Center (1985-2001), which provided the basis for two generations of school-based, preventive intervention field trials in Baltimore and their ongoing follow-ups.

Cognitive Health and Aging

The Department offers advanced training in epidemiologic study of the determinants of cognitive health and cognitive disorders in the elderly. The doctoral requirements include courses offered in the departments of Mental Health, Health Policy and Management, Epidemiology, and Biostatistics. The doctoral program prepares individuals for research, planning, or evaluation careers related to the prevention or mitigation of cognitive disorders and their consequences in both public and academic settings.

The Center for Mental Health Initiatives

The Center for Mental Health Initiatives was created as the result of an anonymous donation to the Department of Mental Health. The goal of the Center is to create and support infrastructures for public mental health research which focus on high priority areas that are difficult to fund from other sources. The Center conducts clinical epidemiologic studies in collaboration with the units of Community Psychiatry at the Johns Hopkins Hospital and Bayview Medical Center. The research aims to improve medical outcomes in persons with severe mental illness in East Baltimore, to evaluate and improve processes of recovery, and to study genetic factors associated with good response to medication as well as harmful or unpleasant side effects of medications. The acronym for these three interrelated projects is BMORE (Better Medical Outcomes and Recovery Evaluation).

International Mental Health

A program focusing on international mental health was created to support the inclusion of mental health issues in international projects throughout the school of public health, with a particular focus on collaborating

with faculty in the Department of International Health. In addition, specific research initiatives are currently underway by faculty in the Department of Mental Health, including: a collaboration with international humanitarian agencies to evaluate their children in crisis programs, with particular focus on street children and girls who have been trafficked, and evaluations of mental health programs for adults affected by torture and trauma in Indonesia and the Kurdish parts of Iraq. Future projects include a study of perinatal depression among HIV infected mothers in Brazil as well as collaboration on a study of child sexual abuse in Zambia.

Other Resources

The Department faculty work in close association with city, state, and federal mental health agencies, and enjoy working relationships with the Maryland State Department of Health and Mental Health and the Baltimore City Health Department. Students have access to faculty and a wide range of courses in other departments at the School of Medicine and at the School of Arts and Sciences. Department faculty conduct collaborative research in many countries around the globe.

DEGREE PROGRAMS

Curriculum

There is only one academic unit focused on psychopathology and drug use disorders in a school of public health. This means that our curriculum is unique, and this unique aspect attracts students of the very highest caliber. Mental Health has been a focal area of the Bloomberg School since its origins, when William Henry Welch became acquainted with Clifford Beers, and attended early meetings of the National Committee on Mental Hygiene for several years. The special

approach to mental health and mental disorders taken by Adolph Meyer, chair of the Department of Psychiatry and Behavioral Sciences in the Johns Hopkins School of Medicine from 1910 to 1941, was carried into the public health arena most explicitly by his student Paul Lemkau, the founding chair of the Department. The curricular approach of the Department has its historical origins in the application of Meyer's eclectic life-course, and person-oriented philosophy into the field of Public Health. The Curriculum in Public Mental Health approaches psychopathology and problems of drug and alcohol use from a variety of overlapping but complementary perspectives, including:

The nature of the target outcome, with an emphasis on epistemologic approaches to classification and measurement, since mental health problems are so complex and vary from individual to individual;

Epidemiology, with an emphasis on the life course approach in the general population, since mental health problems develop slowly and are often not seen in treatment;

Etiology, with an eclectic approach spanning disciplines from cell biology and genetics to sociology, since the target outcomes have so many causes;

Biostatistics, since the public health approach requires the quantitative orientation;

Interventions, including both population and preventive programs and studies of the mental health service system. Studying the target outcomes with these diverse approaches yields in the student an increasingly focused and yet flexible understanding of the complexity of mental health and mental disorders. We expect graduates of the Department to enter the world stage of research and practice in public mental health.

We expect them to carry with them after graduation the perspective of the Department, as stated in our mission: an eclectic, biopsychosocial, life course approach embedded in populations, with the goal of prevention.

Our doctoral graduates are expected to be both generalists and specialists. As specialists, they should have produced new knowledge in the field of public mental health in a specific area, and be capable of generating further new knowledge in this field through innovative research with cutting edge methodologies. This aspect should make graduates attractive recruits for academic settings such as schools of public health and medicine, and government research units. As generalists, they should be familiar with the range of methods, theories, and technologies in the field of public mental health, and be able to critically evaluate new knowledge and claims to knowledge. They should be attractive recruits for government agencies, research contract firms, pharmaceutical companies, and non-profit mental health organizations.

Master's and doctoral degrees and postdoctoral certificates are offered. Financial support, including tuition, fees, and stipend, is available for well-qualified applicants. The Department is able to fund selected doctoral- and postdoctoral-level individuals through the NIMH Psychiatric Epidemiology Training Program, the NIMH Child Mental Health Services and Service System Research Training Program, the NIMH Prevention Research Training Program, the NIA Aging and Dementia Training Program, the Interdisciplinary Predoctoral Training Program in Education Research by the Institute of Education Sciences, the NIDA Drug Dependence Epidemiology Training Program, and the Sommer Scholars Program of the School. All

programs are subject to change and may be modified as appropriate to the applicant's career goals with the adviser's consent.

APPLICATION

Students applying to the Department should display evidence of interest in psychopathology and commitment to the public health approach. Applicants should submit recent results of the Graduate Record Examination. The Department is small and applications are accepted at any time, but the applications will be maximally competitive for funding and awards if received by January 1 for doctoral applications or March 1 for Master of Health Science applications.

Master of Public Health

The Master of Public Health degree is a Schoolwide rather than a departmental degree program. For general MPH candidates and specialists in fields other than mental health, introductory and advanced courses are available in the Department, with the goal of increasing the understanding and knowledge base of health personnel in other disciplines and providing a public health approach to the prevention and control of mental disorders and the promotion of mental health.

Students interested in Mental Health are encouraged to enroll as MPH candidates with special emphasis in Mental Health and are encouraged to obtain the Certificate in Public Mental Health Research. MPH candidates with a special emphasis in Mental Health must be qualified in one of the core mental health professions (i.e., psychiatry, psychology, social work, nursing, or other mental health fields). The student may select courses from multidisciplinary areas, with the assistance of his or her adviser. The purpose of the program

is to acquaint the student with the concept of total health systems, of which mental health is an integral part; to apply these concepts to the operation of mental health services in various settings; and to review preventive methods of mental health agencies and other professionals. This program may be combined with psychiatric residency training.

Master of Health Science

The Master of Health Science (MHS) program in mental health is intended for interested students who have demonstrated competency through prior work or volunteer experience, and who have had at least some undergraduate work in biology, psychology, and statistics or mathematics. All students must take introductory courses in biostatistics, epidemiology, and mental health, as described below and in the Student Handbook. Other courses, within and outside the Department, are required but are selected from several offerings based upon a student's individualized study plan. The MHS degree is organized around a core set of four terms of graduate courses, and a final research paper that demonstrates mastery of what has been learned in the coursework experience. All MHS students must complete a final research paper in their area of interest. The paper may either be a critical and comprehensive review of the literature pertaining to a specific area of interest or an original analysis of existing data. The final paper must be approved by two members of the Department's faculty in addition to the adviser. Special studies credits with a faculty member may be taken to allocate time and mentoring to working on this research.

Requirements for the Master of Health Science Degree in the Department of Mental Health

First Term

- 140.621 Statistical Methods in Public Health I or 140.611 Statistical Reasoning in Public Health I
- 330.617 The Public Health Approach to Psychopathy
- 340.601 Principles of Epidemiology or 340.751 Epidemiologic Methods 1
- 330.602 Epidemiology of Drug Dependence

Second Term

- 140.622 Statistical Methods in Public Health II or 140.612 Statistical Reasoning in Public Health II
- 330.603 Psychiatric Epidemiology
- 340.608 Observational Epidemiology or 340.752 Epidemiologic Methods 2
- 550.860.82 Research Ethics (or 306.665 Research Ethics and Integrity)
- 550.865-.81 Public Health Perspectives on Research

Third Term

- 330.612 Introduction to Behavioral and Psychiatric Genetics or
- 330.661 Social, Psychological, and Developmental Processes in the Etiology of Mental Disorders

Fourth Term

- 330.607 Prevention of Mental Disorders: Public Health Interventions

A minimum of 64 credits (16 credits per term) is required to complete the degree. Biostatistics 140.651-652 may be substituted for the 140.611-612. Students in the MHS program must choose six additional units of electives in the Department of Mental Health. Students are encouraged to combine the MHS in Mental Health with one of the certificate

programs offered in other departments of the school.

Doctor of Public Health

The Doctor of Public Health (DrPH) program in the Department of Mental Health focuses on the direct application of a broad range of knowledge and analytical skills in public mental health for individuals in leadership, policy analysis, finance, and management positions. It has Schoolwide and department components. The Schoolwide component emphasizes advanced knowledge and skills associated with leadership, integration and application of skills in public health as broadly defined. The department component emphasizes knowledge and skills, and their practical context for public mental health.

Requirements for the Doctoral Degree in the Department of Mental Health

First Term

- 140.621 Statistical Methods in Public Health I*
- 330.617 The Public Health Approach to Psychopathy
- 330.657 Statistics for Psychosocial Research: Measurement**
- 340.751 Epidemiologic Methods 1
- 330.602 Epidemiology of Drug Dependence

Second Term

- 140.622 Statistical Methods in Public Health II
- 330.603 Psychiatric Epidemiology***
- 330.611.01 Manuscript Writing for Mental Health Research†
- 330.840 Special Studies in Mental Health ***
- 340.752 Epidemiologic Methods 2
- 550.865-.81 Public Health Perspectives on Research

- 550.860.82 Research Ethics (or 306.665 Research Ethics and Integrity)

Third Term

- 140.623 Statistical Methods in Public Health III
- 330.612 Introduction to Behavioral and Psychiatric Genetics
- 330.661 Social, Psychological, and Developmental Processes in the Etiology of Mental Disorders***
- 340.753 Epidemiologic Methods 3
- 330.840 Special Studies Ground Rounds in Psychiatry**

Fourth Term

- 140.624 Statistical Methods in Public Health IV
- 330.602 Epidemiology of Drug and Alcohol Dependence***
- 330.607 Prevention of Mental Disorders: Public Health Interventions***
- 330.623 Brain and Behavior in Mental Disorders
- 340.754 Methodologic Challenges in Epidemiologic Research
- 330.840 Special Studies Ground Rounds in Psychiatry**

* *Biostatistics 140.651-654 may be substituted for the 140.621-624.*

† for second year and beyond doctoral students

** *Typically taken in the second year of study.*

*** *Doctoral students in the Department of Mental Health will take a one credit of special studies during Psychiatric Epidemiology (330.603), and Epidemiology of Drug and Alcohol Dependence (330.602), and Social, Psychological, and Developmental Processes in the Etiology of Mental Disorders (330.661), during which they will have an extra assignment from the instructor. Doctoral students must take at least one more course in epidemiology, one more course in quantitative methods, and one more course in the Department of Mental Health. During the course of their doctoral studies, after the comprehensive examination, doctoral students are required to assist in teaching one or more courses and serve*

as a research assistant during the third and fourth year of study. The assistance will include preparing and delivering one lecture to students in the course. Doctoral students are required to give at least one public presentation of research, over and above the requirements of the doctoral examinations. Doctoral students are required to prepare one or more research papers in publishable form, in addition to, and with a separate topic from, their dissertation.

The W. Harry Feinstone Department of Molecular Microbiology and Immunology

The commitment of the Department of Molecular Microbiology and Immunology is to provide students of the Johns Hopkins Bloomberg School of Public Health with educational opportunities, graduate training, and research experience in the study of infectious diseases and host response to disease. The Department's main goal is to advance the understanding of the basic biological mechanisms involved in disease processes and to apply this knowledge to the solution of public health problems. This goal is accomplished by using a broad, multidisciplinary approach made possible by the varied interests of its faculty. The approach involves studies that range from the populational to the molecular level and encompasses the disciplines of ecology, vector biology, immunology, parasitology, virology, bacteriology, structural biology, cell biology, molecular biology, and bioinformatics. The major focus of the Department is on laboratory-based research, but coordinated research may be carried out in the clinic or in the field.

The Department offers three programs leading to either doctoral or master's degrees. The doctoral program (PhD) is intended to prepare students to become independent investigators in the biomedical sciences. The PhD program includes coursework and written and oral exams, but the primary focus of this degree is completion of original research and preparation of a research thesis. The Master of Science degree (ScM) is a two-year program offered to students wishing to gain experience in laboratory or field research. The Master of Health Science degree

(MHS) is a one-year program offered to students wishing to gain an understanding of microbial diseases. The master's degree programs are designed for students seeking to improve their applications to medical or other professional schools and for students considering career options in the field of infectious diseases, including research positions in academia, government or industry. For detailed information on the three degree programs and other Department information, please see the Department's webpage: www.jhsph.edu/dept/mmi.

Applicants for each degree program should meet the general requirements of the Bloomberg School and have taken college-level courses in mathematics, biology, chemistry, and physics. Prospective students are also required to submit the results of the Graduate Record Examination (verbal, quantitative, and analytical) or MCAT depending on degree program, taken within two years of their application. Applications for admission to the doctoral program should be submitted by January 2. The Department will invite selected PhD applicants to one of two visiting weekends in February and March. Applications to the MHS and ScM programs should be submitted by April 1. For domestic applicants, MHS applications will be considered as late as June 1 if positions are still available.

For successful completion of the graduate program, students are required to meet Schoolwide requirements as described in the Academic Information chapter. In addition, all candidates for the doctoral and Master of Science degrees take basic courses in virology, parasitology, immunology, ecology, and bacteriology and to become acquainted with the research interests of the Department by means of short-term laboratory rotations. After acquiring a core of common knowledge

relevant to the study of infectious disease and host responses, students specialize in their selected area. Students may take additional courses within the Bloomberg School and the University to prepare themselves for their area of specialization and their thesis research.

The interests of the departmental faculty are broad and overlapping, offering an excellent opportunity for multidisciplinary interaction and for a multifaceted approach to research and training. There are opportunities for research in the U.S. and abroad.

AREAS OF ACTIVE RESEARCH

Immunology—autoimmune diseases, genetics and immunogenetics of susceptibility to infectious disease, immunological basis of acquired immunodeficiency syndrome (AIDS), virus-induced immunosuppression, vaccine development, immune-mediated protection and recovery from infection.

Viral and Bacterial Infections—molecular and cellular biology of host-pathogen interactions, mechanisms of host susceptibility, virulence, cell death in the nervous system and the immune system, HIV, encephalitis viruses, measles virus, adenovirus, hemorrhagic fever viruses, human papillomavirus, influenza, epidemiology, mycobacterial drug resistance, enterobacterial virulence mechanisms, and opportunistic infections.

Parasitic Diseases—malaria, toxoplasmosis, schistosomiasis, filariasis, characterization of parasite enzymes and surface membranes; cell biology of parasitic infection; immune response to parasites and its avoidance; immunopathogenesis and genetics of disease susceptibility; and population dynamics in parasitic infections.

Vector-borne Diseases—insect vector competence; population genetics;

innate immunity; vector control and insecticide resistance; dynamics of transmission of vector-borne diseases, particularly malaria, Lyme disease and arbovirus encephalitis; ecology of zoonotic diseases and their vertebrate reservoirs; and development of genetically altered vectors.

The Department also participates in special programs for individuals with appropriate backgrounds and career goals. For graduate veterinarians, a curricular option has been developed in collaboration with the Department of Molecular Comparative Pathobiology. This program will enable selected individuals in residency training in that department to concurrently enroll in the PhD graduate program of the Department of Molecular Microbiology and Immunology. There are doctoral-level interdepartmental programs in collaboration with the departments of Environmental Health Sciences, Biostatistics and Epidemiology. For further information, see the Academic Information chapter. The educational experience is enhanced by interdepartmental, collaborative, and cooperative arrangements and programs within the university. Such opportunities exist through the Johns Hopkins Immunology Council and with the Department of Pathology Division of Laboratory Medicine, which offers training in diagnostic microbiology.

Graduate Interdepartmental Program in Molecular Epidemiology (IPME)

The Interdepartmental Program in Molecular Epidemiology (IPME) offers specialized cross-training in epidemiology (Department of Epidemiology) and the laboratory sciences (departments of Biochemistry and Molecular Biology, Environmental Health Sciences, and Molecular Microbiology and Immunology). As a result of the

complete sequencing of the human genome and rapid advances in high through-put molecular techniques, epidemiology is poised to move beyond measuring associations of exposures with disease occurrence to assessing the underlying biological mechanisms of pathogenesis. The objective of the Interdepartmental Program in Molecular Epidemiology is to provide candidates with solid training in the complementary disciplines of epidemiology and laboratory molecular biology/genetics to encourage interdisciplinary approaches to solving public health problems. Candidates will select an academic training program based on the requirements for the individual departmental PhD and ScM requirements (see department-specific ScM requirements for the IPME) structured around a Core Curriculum in Molecular Epidemiology. The Core Curriculum will ensure a broad theoretical basis in the following subject areas: epidemiology, biostatistics, molecular biology, cellular biology, genetics, physiology/immunology, molecular epidemiology, and laboratory rotations.

The integrative aspects of the interdisciplinary model include a system of co-advising (advisers from doctoral and master's departments) and integration of PhD and ScM research into a single dissertation. The IPME dissertation will include results of both master's and doctoral research (which must be thematically related) and a chapter integrating the laboratory and epidemiologic approaches to the research topic. Successful candidates of the IPME will be concurrently awarded a PhD in the core department and a Master of Science degree in the joint department.

Admission to the IPME will follow standard admission procedures for the PhD and ScM departments, with final approval by the Molecular Epidemiology Advisory Council.

Prior laboratory experience/training is required for admission to the IPME.

Population, Family and Reproductive Health

MISSION STATEMENT

The Population, Family and Reproductive Health (PFRH) Department at the Johns Hopkins Bloomberg School of Public Health is an interdisciplinary department whose mission is to advance public health science and practice globally and domestically in order to improve the health of children, adolescents, men, women, and the elderly at both the family and the population levels. Research, evaluation, practice, and advocacy are integral to the Department's academic programs and faculty efforts. The faculty apply and develop a broad range of methods (drawn from demography, developmental psychology, epidemiology, sociology, health services research, economics, policy analysis, behavioral sciences and related disciplines) to research and professional practice.

DEPARTMENT VISION AND FOCUS

The Department's vision is to promote population and family health through research and education and to bring science to policy and practice. The Department's focus is on those who are underserved and disadvantaged at home and abroad. Likewise, the Department focuses on women's health, sexual and reproductive health, maternal and child health, adolescent health and intergenerational family health issues. Our conception of health encompasses a positive sense of wellbeing and the capacity of each individual to attain his or her maximum potential. Graduates are trained as scientists, academics, administrators, and health professionals for careers related to a broad range of population, family, and reproductive health problems. Teaching and research activities focus

on human development across the lifespan, the basic reproductive processes, and on biological and social determinants of population change and its social and economic consequences. The Department serves as the primary academic base within the University for the core discipline of demography. Faculty and students apply scientific and technical expertise toward addressing issues of family planning and population policy and solving population problems nationally and internationally. In addition, teaching and research activities of the Department advance the understanding of factors that influence the growth and development of children toward optimum functioning as adults. The health of children is further grounded in the context of families and communities. Major attention is given to the assessment of health status and the planning, organization, and administration of community health programs at the local, state, and national level that promote the health of populations across the lifespan. Finally, the Department applies the theory and skills of health advocacy to promote health programs and practices on a global basis with emphasis on reproductive health.

The faculty of the Department are multidisciplinary, drawn from demography and related social sciences, sociology, epidemiology, public health, economics, family planning administration, medicine, nursing, social work, nutrition, policy analysis, developmental psychology, and related behavioral sciences. The scope of the research and training of the Department is global. The research programs address population issues in dozens of countries in Africa, Asia and Latin America. There is also a large portfolio of research on infant, child, adolescent, and adult health focused on populations in the United States, including the population of children with special health care

needs and their families, and families living in underserved urban settings.

Community health initiatives and urban health are increasingly departmental focal areas. The Department is home to important centers for research, teaching, and practice. These include the Hopkins Population Center, Center for Sexually Transmitted Infections, Center for Adolescent Health Promotion and Disease Prevention, The Women's and Children's Health Policy Center, the Bill and Melinda Gates Institute for Population and Reproductive Health, and the Urban Health Institute.

DEPARTMENT'S ACADEMIC MISSION

The Department educates a diverse group of students at both the master's and doctoral levels, some of whom enter academia while others join organizations (both governmental and non-governmental) as researchers and still others enter the public and private health sectors as program specialists, interventionists, policy makers, and administrators. Our educational mission, focusing on public health leadership training, is to educate students who are theoretically grounded, methodologically rigorous and professionally skilled to assume positions of leadership in academia, government or the non-governmental (NGO) research or health delivery sector. To meet the divergent professional aspirations of students, the Department has broad offerings and an equally broad set of expectations. About 40 percent of recent Population, Family and Reproductive Health graduates, MHS, MSPH, PhD and DrPH alike, are currently employed in academic institutions, while the remaining are working in descending order of frequency in positions at NGOs, government, consulting, and health care organizations.

DEPARTMENTAL STRENGTHS

The central strength of the Department is the faculty who have diverse interests and skills, both methodologically and with a population focus.

A second strength of the Department is the commitment to both domestic and international research and education/training. The work of many faculty crosses domestic and international boundaries; for others the opportunity exists to apply their international expertise domestically and vice versa. The Department is committed to both a strong domestic and international agenda of research and training.

A third strength of the Department is its six centers that are either administratively located within or linked with the Department. Five of these are physically co-located within the Department on the fourth floor of the Wolfe Street building and one is off-site. Those administratively under the Department include: the Bill and Melinda Gates Institute for Population and Reproductive Health; Center for Adolescent Health Promotion and Disease Prevention; the Women's and Children's Health Policy Center, and Sexually Transmitted Diseases Center. University centers linked to the Department include the Hopkins Population Center, and the Urban Health Institute. Separately and together, these centers greatly enrich the Department's capacity for research, training, technical assistance, internships, program development and evaluation, and translation of research for policy.

Fourth, the diversity of backgrounds, knowledge, skills, and prior experiences of our master's and doctoral students across each of the three current tracks represent a major strength of the Department.

Fifth, the Department brings both methodologic and content strength to the School. Strengths include: demographic methods; program evaluation; developmental psychology; translation of research for policy and programs; and social and reproductive epidemiology. These skills crosscut the three tracks of the Department: Child and Adolescent Health and Development; Population and Health; and Reproductive, Perinatal and Women's Health.

ACADEMIC PROGRAMS

Master of Public Health (MPH)

Students enrolled in the Schoolwide Master of Public Health (MPH) program may concentrate their elective time in courses offered by the Department of Population, Family and Reproductive Health (PFRH). The Department is integrally involved in two of the MPH concentrations:

- Child and Adolescent Health
- Women's and Reproductive Health

MPH students should see the MPH program for specific required and elective courses. The courses cover a broad range of population, family health, and public health topics offering a global perspective on the health of populations in both developing countries and the U.S.

Opportunities are also available for elective experiences working with Maternal and Child Health (MCH) as well as other agencies serving children and youth at the local, state, and federal levels. In addition, MPH students can focus the Capstone Project in PFRH through established course sequences and/or special studies work with individual faculty.

Master of Science in Public Health (MSPH)

The MSPH degree is offered as a one-year or two-year program, depending on the student's background and career goals. It is intended for individuals with baccalaureate preparation who wish to focus their public health training in the area of population, family or reproductive health. The MSPH degree is a professional practice degree but can also be a stepping stone toward doctoral studies.

Graduates of the program are prepared for career positions with such organizations as government ministries, non-governmental health organizations in developing countries, state and local MCH agencies in the U.S., research institutes, health care delivery organizations, advocacy groups, academic institutions and others. Through coursework and experiences with faculty, students acquire a sound orientation to general public health principles and to specific areas of population, family and reproductive health. Program requirements allow flexibility so that students may tailor their academic program to concentrate in one of three tracks:

- Child and Adolescent Health and Development
- Population and Health
- Reproductive, Perinatal, and Women's Health

The professional one-year MSPH program is designed for students who are currently working in their intended field of concentration, have a minimum of two years' full-time health-related or public health-related work experience, and wish to strengthen their skills and knowledge base while improving their potential for advancement. A part-time option is available for those students who meet the qualifications for the one year master's program in PFRH.

Applicants with doctoral degrees in related fields who do not meet the minimum experience requirement will be considered for admission on a case-by-case basis.

The professional two-year program is recommended for individuals without prior health-related or public health-related experience or whose practice experience is less than two years. Applicants should indicate in their statement of goals and objectives how the MSPH degree would benefit their professional goals and objectives. During the first year, the two-year program is similar to the one-year program in course requirements, but the second year includes a four- to six-month supervised internship. The internship provides the opportunity to integrate formal classroom teaching with practical experience in the student's chosen field. Students are required to successfully complete a culminating MSPH essay and departmental presentation in both the one- and two-year programs.

Internship—The Department assists students for placement in a setting of their interest where training and competence will be enhanced. Internships are coordinated between the program director, student and faculty adviser. Because the School is uniquely positioned in the Baltimore/Washington area, there are numerous domestic and international agencies and organizations from which students can choose to conduct their internship. Internships can be found in other geographic areas, including internationally. In addition, Centers affiliated with PFRH such as the Bill and Melinda Gates Institute for Population and Reproductive Health offer internship opportunities.

The Department also participates in the Peace Corps Master's International Program, which is designed for students who wish to

combine rigorous academic coursework with a rewarding volunteer experience through the Peace Corps. Students begin their program by completing nine months of coursework at the Bloomberg School, including completion of the MSPH essay and presentation, followed by a two to three month Peace Corps project orientation, and finally 24 months of volunteer service. Students receive the MSPH degree after the successful completion of a minimum of 680 hours of Peace Corps Volunteer Service (this does not include the two to three month training period), for a total of 96 academic units.

Master of Health Science in Demography

The one-year academic MHS in Demography program is designed for specialized training in applied demography. The educational objectives of this program are to give non-specialists the opportunity to acquire specific substantive and methodological skills applicable to a wide range of public health problems in a wide range of work settings. The program includes a minimum of 32 units in demography courses of the 64 units required to complete the program. A research paper is also required.

Doctoral Studies

The Department offers both a Doctor of Philosophy (PhD) and Doctor of Public Health (DrPH) degree. While each enables qualified students to obtain advanced training in one of the disciplines that underlie Public Health, each also is designed with a specific set of criteria for the student seeking entrance into the program. The DrPH is designed for individuals with a minimum of three years full-time work experience in the health and/or human services field and an MPH or equivalent master's degree. It is intended for individuals who

plan to assume a leadership position in the practice of public health, and the program can be done either full-time or part-time. The PhD degree is intended for students who are more oriented toward a research career, and is a full-time program only. The Department's doctoral programs are organized by the three academic program areas: Child and Adolescent Health and Development; Population and Health; Reproductive, Perinatal, and Women's Health. Doctoral candidates must select one of these areas for academic concentration.

The overall structure of the Department doctoral programs

All entering students begin the first year with a set of core departmental courses intended to provide common theoretical foundations for their studies including biological/developmental, demographic/social science, and statistical/epidemiological foundations. Doctoral students are then required to complete a core set of courses established by the focal area of study. All academic program areas require doctoral students to do a PhD research practicum or a DrPH public health practice practicum. The updated specific doctoral requirements are detailed in the Student Handbook, published each year in August, and on the website www.jhsph.edu/dept/pfrh/degree_programs/phd/index.html and www.jhsph.edu/dept/pfrh/degree_programs/drph/index.html.

Academic Tracks

The Department's academic programs at the doctoral level are organized into three major tracks:

Child and Adolescent Health and Development

The Child and Adolescent Health and Development track provides multidisciplinary training in the growth, development, health, and well-being of the infant, child, and

adolescent. Developmental considerations are emphasized from conception through early adulthood. The social, environmental, nutritional, physiologic, and economic factors that may enhance or impede well-being are considered. The determinants of child and adolescent health and wellbeing are examined within an ecological framework that consists of family, systems of care, policy, school, and community contexts. Given that this program is housed in the Department of Population, Family and Reproductive Health, faculty are committed to understanding the family as a significant developmental context for children and adolescents with implications for individual child and adolescent development.

The program emphasizes the mastery of core knowledge of child and adolescent health, acquisition of methodological and analytical skills, and experience in applying these skills to significant health issues such as adolescent pregnancy, the impact of HIV on children and youth, school readiness, childhood injury and violence, TV viewing and obesity, childhood handicaps and disability, risks and protective factors for successful transitions to adult health, etc. in both domestic and international settings. The curriculum is sufficiently flexible to allow students to structure a program that will permit both breadth and depth in their area of special emphasis. Classroom study is enhanced and extended by student participation in a range of faculty-mentored research, practice, and community projects. A commitment to scholarship, creativity, and independence prepares graduates of the program to assume leadership positions in academic, government, and public health practice settings.

The multidisciplinary faculty have backgrounds in developmental psychology, pediatrics, behavioral sci-

ences, demography, economics, nutrition, nursing, public administration, and social work. Research activities of faculty and students focus on advancing the understanding of factors that influence the health and development of infants, children, and adolescents, including children with special health care needs. The research program is enriched by faculty and student involvement in and collaboration with federal, state, and local health agencies, as well as international organizations whose efforts are directed at improving child health and development.

Principal Faculty Coordinator:

Dr. Cynthia Minkovitz,
cminkovi@jhsph.edu

Population and Health

The Population and Health track focuses on the study of interrelations between population and health. Components of this study include factors affecting population size, structure and change, the implications of population change for public health policy and programs, and the application of demographic methods to public health problems. Our curriculum provides training on the nature, determinants, and consequences of:

- Population birth, death and growth rates
- Population composition, including such characteristics as sex, age, and marital/union status
- Population distribution, including migration patterns and urbanization
- Mathematical and statistical patterns underlying population change
- The measurement of population parameters in developing countries
- Measures of population health

Student and faculty research interests include measuring and explaining levels and trends in fertility, mortality, migration, and population growth; the causes and consequences of population aging; gender and population; adolescent sexuality and fertility; economic development and population growth; quantifying the health and demographic impacts of family planning and child survival programs; the demography of marriage, the family, and child health and well-being; impact of and intervention in the HIV epidemic, measurement and interpretation of disease burdens; and techniques of demographic analysis—and in each case, the programmatic and policy implications of their findings. Faculty research and dissertation projects are active in both developed and developing countries.

Both pre- and postdoctoral programs incorporate perspectives from social science, epidemiology, and statistics, with training in demography, the primary discipline underlying population studies. The objective of the doctoral-level degree is to train researchers for careers in academic, government, and non-governmental settings. Such careers include directing the collection, maintenance, and analysis of population data and vital statistics; directing or participating in research divisions of government agencies or non-governmental organizations; developing, implementing, and evaluating intervention programs in the health or population sectors; and research and teaching positions in schools of public health or other academic institutions.

Principal Faculty Coordinator:

Dr. Vladimir Canudas-Romo

vcanudas@jhsph.edu

Dr. Amy Tsui

atsui@jhsph.edu

Reproductive, Perinatal and Women's Health

The Reproductive, Perinatal and Women's Health track provides integrated training at the doctoral and master's level in research, practice, and policy relevant to human reproduction and its control; maternal and newborn health problems and care of the newborn; and health problems and services for women. This training focuses on both domestic and international public health problems and their solutions. The program prepares candidates for careers in research, academics, or health services programs and evaluation.

The objectives of doctoral studies are to educate students who plan a research career in reproductive, perinatal, or women's health or who plan programmatic or practice careers in evaluation, administration, or policy.

Students wishing to pursue a research career may choose to work in the areas of epidemiology, health services research, the social sciences, or demography, as applied to public health. Faculty in this track have diverse backgrounds ranging from medical, social and behavioral sciences, economics, epidemiology, and demography.

Faculty research and service interests encompass national and international studies of health problems and primary or secondary prevention of reproductive, perinatal, and women's health problems. Research approaches incorporate basic biological sciences or diagnostics, collection of data from field research, programmatic studies, and secondary data analyses. The substantive areas of interest are (1) reproductive health, including sexually transmitted infections, HIV/AIDS, determinants and prevention of unwanted pregnancy, abortion or reproductive health related problems, provision of family planning, and contraceptive evalua-

tion; (2) perinatal problems, including determinants and prevention of adverse maternal and pregnancy outcomes, provision and evaluation of perinatal care; and (3) health of women, including health problems related to social needs and support, and service provision and assessment.

Principal Faculty Coordinator:

Dr. Donna Strobino

dstrobin@jhspk.edu

SPECIALIZED PROGRAMS

Postdoctoral Fellowships

This program is designed to meet the special needs of physicians and others holding a doctoral degree who desire a concentrated period of study in the field of population, family, and reproductive health but who do not wish to pursue another academic degree. Programs of study are tailored to the special interests of the individual student and may involve one or more years of study. Post Doctoral Fellows generally begin their program the first term of the academic year and must complete an application that can be found by visiting www.jhspk.edu/admissions.

School-Affiliated Centers and Institutes

Since the Johns Hopkins Bloomberg School of Public Health was founded, its graduate programs have been based on a cardinal principle of the inseparability of research, practice, service and education. Faculty are engaged in investigations that cover a wide variety of disciplines and interests. In addition, there are many education, practice and research centers that operate as departmental and interdepartmental bases for a wide range of activities related to public health.

A list of these centers and institutes with links to detailed information about each may be found in the Research and Centers area of the Bloomberg School's website at www.jhsph.edu/researchcenters.

Trustees and Administration of the Johns Hopkins University

TRUSTEES OF THE UNIVERSITY

(As of May 1, 2011)

Chair

Pamela P. Flaherty

Vice Chairs

C. Michael Armstrong

Richard S. Frary

Mark E. Rubenstein

Robert J. Abernethy*

Leonard Abramson*

Christopher C. Angell

Peter G. Angelos*

Jeffrey H. Aronson

Norman R. Augustine*

Janie E. Bailey

Lenox D. Baker Jr.

H. Furlong Baldwin*

Jeremiah A. Barondess*

Ernest A. Bates*

Alfred R. Berkeley III

David H. Bernstein*

Abhiram R. Bhashyam

Paula E. Boggs

Aurelia G. Bolton*

Randolph W. Bromery*

Michael A. Brown

George L. Bunting Jr.

Francis B. Burch Jr.

Constance R. Caplan*

William P. Carey*

A. James Clark*

Charles I. Clarvit

N. Anthony Coles

Ronald J. Daniels

Sarah R. David

Victor J. Dankis*

Anthony W. Deering

Ina R. Drew

Edward K. Dunn Jr.*

Manuel Dupkin II*

Harvey P. Eisen

Maria T. Fazio

Marjorie M. Fisher

James A. Flick Jr.*

Louis J. Forster

Sanford D. Greenberg

Benjamin H. Griswold IV

Taylor J. Hanex

Robert D. H. Harvey*

Lee Meyerhoff Hendler

Rafael Hernandez-Colon*

David C. Hodgson

R. Christopher Hoehn-Saric

Frank L. Hurley

Stuart S. Janney III

Jeong H. Kim

David H. Koch*

Donald A. Kurz

Christopher H. Lee

Joanne Leedom-Ackerman

Alexander H. Levi

Kwok-Leung Li

F. Pierce Linaweaver*

Roger C. Lipitz

Diana C. Liu

Christopher E. Louie

Howard C. Mandel

Raymond A. Mason*

Christina L. Mattin

Terri L. McBride

Gail J. McGovern

Harvey M. Meyerhoff*

Charles D. Miller*

Westley W. O. Moore

Naneen H. Neubohn*

David P. Nolan

Ronald M. Nordmann

Ralph S. O'Connor*

Morris W. Offit*

Walter D. Pinkard Jr.

George G. Radcliffe*

Joseph R. Reynolds Jr.

Brian C. Rogers

David M. Rubenstein

John F. Ruffle*

Marshal L. Salant

Arthur Sarnoff*

Frank Savage*

Charles W. Scharf

Wayne N. Schelle*

Herschel L. Seder*

Robert A. Seder

Huntington Sheldon*

Donald J. Shepard

R. Champlin Sheridan Jr.*

Rajendra Singh

Wendell A. Smith*

Raymond W. Snow

Helmut Sonnenfeldt*

Shale D. Stiller*

Morris Tanenbaum*

Adena W. Testa

Selwya M. Vickers

William F. Ward Jr.

James L. Winter

Shirley S. L. Yang

Calman J. Zamoiski Jr.*

*Trustee emeritus

PRINCIPAL ADMINISTRATIVE OFFICERS AND DEANS*President of the University*

Ronald J. Daniels

*Provost and Senior Vice President
for Academic Affairs*

Lloyd B. Minor

Senior Vice President for Finance and Administration

Daniel G. Ennis

*Senior Vice President for
External Affairs and Development*

Michael C. Eicher

Vice President and General Counsel

Stephen S. Dunham

Vice President for Finance and Treasurer

Michael Strine

Vice President for Development and Alumni Relations

Fritz W. Schroeder

Vice President for Government and Community Affairs

Thomas S. Lewis

*Chief Executive Officer of Johns Hopkins Medicine,
Vice President for Medicine,
and Dean of the Faculty of Medicine*

Edward D. Miller Jr.

Vice President for Human Resources

Charlene Moore Hayes

Vice Provost for Academic Services

Edgar E. Roulhac

*Chief Information Officer and Vice Provost
for Information Technology*

Stephanie L. Reel

Vice Provost for International Programs

Pamela Cranston

Vice Provost for Academic Affairs

Michela Gallagher

Vice Provost for Research

Scott Zeger

*Vice Provost for Graduate and
Postdoctoral Programs and Special Projects*

Jonathan A. Bagger

Vice Provost for Student Affairs

Sarah S. Steinberg

Vice Provost for Institutional Equity

Caroline Laguerre-Brown

Secretary of the Board of Trustees

Jerome D. Schnydman

Controller

Gregory S. Oler

Dean of the Krieger School of Arts and Sciences

Katherine Newman

*Dean of the Whiting School of
Engineering*

Nicholas P. Jones

Dean of the Bloomberg School of Public Health

Michael J. Klag

Dean of the School of Nursing

Martha N. Hill

*Dean of the Nitze School of Advanced
International Studies*

Jessica P. Einhorn

Dean of the School of Education

David Andrews

Dean of the Carey Business School

Yash P. Gupta

Director of the Peabody Institute

Jeffrey Sharkey

Director of the Applied Physics Laboratory

Ralph Semmel

*Dean of University Libraries and**Vice Provost for the Arts*

Winston Tabb

Administration and Standing Committees of the Bloomberg School

ADVISORY BOARD OF THE FACULTY

(As of June 2010)

Ronald J. Daniels, President
 Lloyd B. Minor, Provost
 Karen Bandeen-Roche
 Robert Black
 Robert Blum
 Patrick Breyse
 Terry R. Brown
 David Celentano
 Pierre Coulombe
 Marie Diener-West
 William Eaton
 Andrea Gielen
 Diane Griffin
 John Groopman
 Martha Hill
 David Holtgrave
 Michael J. Klag
 Ellen MacKenzie
 Edward Miller
 Elizabeth Platz
 Stephen P. Teret
 James D. Yager

ADMINISTRATION

Dean

Michael J. Klag

Senior Associate Dean, Academic Affairs

James D. Yager

Senior Associate Dean, Finance and Administration

Jane Schlegel

Associate Dean, Faculty and Education

Stephen P. Teret

Interim Associate Dean, Development and External Affairs

Debra Lannon

Associate Dean, Public Health Practice and Training

Thomas Burke

Associate Dean, Research

Janet DiPietro

Associate Dean, Research Administration

Alexandra McKeown

Associate Dean, Student Affairs

Michael L. Ward

Director of Admissions Processing and Systems

Reneé Seitz

Director of Admissions Recruitment, Communications and Events

Leslie Vink

Director of Alumni Relations

Philippa Moore

Director of Governmental Relations

Ricky Fine

Director of Architectural Services

Michael J. Linehan

Director of Facilities Management

Michael Schoeffield

Director of Financial Aid

Gregory Winkler

Director of Graduate Education

Catherine Klein

Director of Human Resources

Cherita Hobbs

Director of Information Systems

Ross McKenzie

Director of Institutional Review Board Office

Joan Pettit

Senior Director of Marketing and Communication

Stacey DiLorenzo

Editorial Director

Brian Simpson

Director of Records and Registration

Leslie Nicotera

Senior Director of Student Life

Betty H. Addison

Director of Support Services

Scott McVicker

Chair of MPH Program

Marie Diener-West

STANDING COMMITTEES OF THE FACULTY

(As of June 2010)

The composition of all Committees is subject to change for the 2010-2011 academic year.

Committee on Academic Standards

Terry R. Brown, *Chair*
 Beverly Hammond, *Staff*

Committee on Equity, Diversity and Civility

Cherita Hobbs, *Co-Chair*
 Michael Trush, *Co-Chair*
 Susan Williams, *Staff*

Committee on Appointments and Promotions

Patrick Breyse, *Chair*
 Diane Glover, *Staff*

Committee on Conflict of Interest

Alan Scott, *Chair*

Committee on Finance

David Holtgrave, *Chair*

DrPH Executive Committee

Laura Morlock, *Chair*
 Gail Miller, *Staff*

Graduate Medical Education Committee

Thomas Burke, *Chair*

IRB-Full Committee

Ann Skinner, *Chair*

IRB-Expedited

Jonathan Links, *Chair*

Committee on Honors and Awards

Moses Szklo, *Chair*
Catherine Klein, *Staff*

Committee on Information Technology

John Groopman, *Chair*
Ross McKenzie, *Staff*

MPH Admissions Committee

Marie Diener-West, *Chair*
Tara Glickman, *Staff*

Committee on Professional Conduct

James D. Yager, *Chair*

Committee on Technology Transfer

Richard Markham, *Chair*

Executive Committee of the Faculty Senate

Andrea Gielen, *President*
Terry R. Brown, *Past-President*
Elizabeth A. Platz, *President-Elect*

MPH Executive Board

Marie Diener-West, *Chair*
Rebecca Newcomer, *Staff*

AMERICAN JOURNAL OF EPIDEMIOLOGY**Policy Board**

Michael J. Klag, *Chairman*
David D. Celentano
David Crotty
Mary Haam.
Polly Marchbanks
Noel R. Rose

Board of Editors

Moses Szklo, *Editor-in-Chief*
Donna Arnett, *Editor*
Terri H. Beaty, *Editor*
Harvey Checkoway, *Editor*
Aaron R. Folsom, *Editor*
Gary D. Friedman, *Editor*
Robert J. Glynn, *Editor*
Ichiro Kawachi, *Editor*
Mun J. Khoury, *Editor*
Mark Klebanoff, *Editor*
Martha S. Linet, *Editor*
Polly Marchbanks, *Editor*
Polly Newcomb, *Editor*
Jonathan M. Samet, *Editor*
David Vlahov, *Editor*
Clarice Weinberg, *Editor*
George W. Comstock, *Editor-in-Chief Emeritus, In Memoriam*

Associate Editor in Residence

Shruti H. Mehta

Editorial Project Managers

Deborah J. Anderson
Lori E. Biddle
Sandra L. Bryant
Amy W. Redmon-Norwood

Administrator

Harriett Telljohann

Administrative Secretary

Cynthia A. Barbre

Review Coordinator

Gayle Fini

2010 JHSPH HEALTH ADVISORY BOARD

Roger C. Lipitz, *Chair*
Robert J. Abernethy
Ashok Agarwal
Lenox D. Baker Jr.
Kenneth R. Banks
Ernest A. Bates
Joseph Boystak
Michael G. Bronfein
C. Sylvia Brown
George L. Bunting Jr.
Constance Caplan
Paul J. Diaz
Catharine C. Dorrier
Manual Dupkin II
Manfred Eggersdorfer
William Flumenbaum
Howard E. Friedman
Douglass B. Given
Dean Goodermote
D.A. Henderson
Margaret Conn Himelfarb
Frank L. Hurley
Christopher I.M. Jones
James A. Joseph
Michael J. Klag
Harry M. Jansen Kramer Jr.
Carolyn P. Langfitt
Edward J. Ludwig
Morris W. Offit
Karl P. Ronn
Ira M. Rutkow
Beth Schneiders
Huntington Sheldon
Michael J. Silver
Alfred Sommer
Shale D. Stiller
Dwight S. Taylor
Adena W. Testa
Alice D. White