

**JOHNS HOPKINS**  
U N I V E R S I T Y

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**Bloomberg School of Public Health**

**CATALOG**  
**2006-2007**



**Protecting Health, Saving Lives—*Millions at a Time***

# The Johns Hopkins Bloomberg School of Public Health

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## *Contact Information*

The Johns Hopkins University  
Bloomberg School of Public Health  
Admissions Office  
615 N. Wolfe Street, Suite E1002  
Baltimore, MD 21205-2179

The Johns Hopkins Bloomberg School of Public Health website is available by visiting [www.jhsph.edu](http://www.jhsph.edu). A Faculty Directory and Course Search database are also available via the School's main website.

The Admissions Office website is available at [www.jhsph.edu/admissions](http://www.jhsph.edu/admissions). The office can be reached via email at [admiss@jhsph.edu](mailto:admiss@jhsph.edu).

Johns Hopkins University is accredited by Middle States Commission on Higher Education, 3624 Market St., Philadelphia, Pa. 19104-2680, 215-662-5606

The Johns Hopkins Bloomberg School of Public Health is accredited by the Council on Education for Public Health.

*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.*

# The Johns Hopkins Bloomberg School of Public Health

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## *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.

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## 2006-2007 Academic Calendar

<b>SUMMER TERM</b>	
SUMMER INSTITUTES .....	Begin week of June 5, 2006
Internet-Based/Part-Time MPH New Student Orientation.....	Sat June 3 – Sun June 4, 2006
REGULAR SUMMER TERM .....	F July 7 - F Aug 25, 2006 (36 class days)

NEW STUDENT ORIENTATION/REGISTRATION .....	W July 5 & Th July 6, 2006
Instruction Begins for Summer Term .....	F July 7, 2006
Add/Drop Period .....	Varies per course schedule
1 <sup>st</sup> Term Registration Ends for Continuing Students.....	W Aug 23, 2006
Last Class Day of Summer Term .....	F Aug 25, 2006

<b>1ST TERM</b>	<b>Th Aug 31 - W Oct 25, 2006 (39 class days, M-F)</b>
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NEW STUDENT ORIENTATION/ REGISTRATION .....	M Aug 28 - W Aug 30, 2006
Instruction Begins for 1 <sup>st</sup> Term.....	Th Aug 31, 2006
Add/Drop Period .....	Th Aug 31 - W Sept 13, 2006
LABOR DAY RECESS .....	M Sept 4, 2006
2 <sup>nd</sup> Term Registration Ends .....	M Oct 16, 2006
Last Class Day of 1 <sup>st</sup> Term .....	W Oct 25, 2006

<b>2ND TERM</b>	<b>Th Oct 26 - Th Dec 21, 2006 (39 class days, M-F)</b>
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Instruction Begins for 2 <sup>nd</sup> Term .....	Th Oct 26, 2006
Add/Drop Period .....	Th Oct 26 – W Nov 8, 2006
THANKSGIVING RECESS .....	Th Nov 23 – Su Nov 26, 2006
Registration Begins for 3 <sup>rd</sup> & 4 <sup>th</sup> Terms.....	T Nov 28, 2006
Last Class Day of 2 <sup>nd</sup> Term .....	Th Dec 21, 2006

Internet-Based/Part-Time MPH New Student Orientation .....	T Jan 2, 2007
WINTER INTERSESSION .....	W Jan 3 – Sat Jan 13, 2007 (classes to be held on Sat Jan 6 & 13, 2007)

MARTIN LUTHER KING, JR. HOLIDAY RECESS .....	M Jan 15, 2007
3 <sup>rd</sup> Term Registration Ends .....	M Jan 8, 2007

<b>3RD TERM</b>	<b>T Jan 16 - F Mar 9, 2007 (39 class days, M-F)</b>
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Instruction Begins for 3rd Term .....	T Jan 16, 2007
Add/Drop Period .....	T Jan 16 - F Jan 26, 2007
Last Class Day of 3 <sup>rd</sup> Term.....	F Mar 9, 2007
SPRING RECESS .....	M Mar 12 - F Mar 16, 2007
4 <sup>th</sup> Term Registration Ends.....	Th Mar 8, 2007

<b>4TH TERM</b>	<b>M Mar 19– F May 11, 2007 (40 class days, M-F)</b>
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Instruction Begins for 4 <sup>th</sup> Term .....	M Mar 19, 2007
Add/Drop Period .....	M Mar 19 – F Mar 30, 2007
Last Class Day of 4 <sup>th</sup> Term.....	F May 11, 2007
PUBLIC HEALTH CONVOCATION.....	W May 16, 2007
UNIVERSITY COMMENCEMENT.....	Th May 17, 2007
RESIDENCY PROGRAM ENDS.....	F June 29, 2007

# 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 a hospital. Instruction in the University began in 1876, three years after his death.

The historic role of the University was clearly defined by the first president, Daniel Coit Gilman, in his inaugural address: “The university is a place for the advanced special education of youth who have been prepared for its freedom by the discipline of a lower school. Its form varies in different countries. But 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.”

The Johns Hopkins University was to be different from the traditional American college. In his inaugural address, President Gilman laid down certain points about which he felt there was general agreement.

He branded as “useless” the dispute between the old or literary education and the new scientific education. 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 it was established in 1916, the School’s founders originally 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-science connotations over the intervening 85 years, becoming a mere synonym of sanitation. In spite of these changes in the institution's name, however, the School of Public Health 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.

Moreover, the School's close proximity to Washington, D.C., and to the national executive and legislative branches of government, give students the opportunity to gain first-hand understanding of how public health policy is made. Opportunities also exist for observing and interacting with state and local health agencies.

## **PRESENT PERSPECTIVES**

### **University Divisions**

Within the University and Hospital there is increasing emphasis on interdivisional and inter-institutional cooperation in education and research programs. The School of Public Health 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 Johns Hopkins Medicine, the School of Nursing, and the William H. Welch Medical Library, all located in East Baltimore; the Zanvyl Krieger School of Arts and Sciences, the School of Professional Studies in Business and Education, and the Whiting School of Engineering, all on the nearby Homewood campus; the Paul S. Nitze School of Advanced International Studies in Washington, D.C.; the Applied Physics Laboratory in Laurel, Maryland; and the Peabody Institute in Baltimore.

### **The Bloomberg School of Public Health**

The School 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 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 and Family Health Sciences.

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 School offers courses at the University's Montgomery County Campus. More information is provided in the Continuing Professional Education chapter of this catalog.

The School also 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 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; Medicine; Neurology; Neurosurgery; Obstetrics and Gynecology; Oncology; Ophthalmology; Orthopedic Surgery; Otolaryngology–Head and Neck Surgery; Pathology; Pediatrics; Physical Medicine and Rehabilitation; Psychiatry; Radiology; 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

The School of Nursing has been an academic division of the University since 1984, offering degreed programs including upper-division baccalaureate, master's and PhD. Hopkins Nursing has a historic legacy that dates back to 1889 when it was founded as a diploma

school of the Johns Hopkins Hospital. The School established the foundation for a national model in nursing education in the 1890s with Hopkins leaders later founding the National League for Nursing and the American Nurses’ Association.

Today, the School of Nursing is a global leader in nursing research, education and scholarship and is ranked among the top 10 nursing higher education institutions in the country. The School’s community health program is second in the nation and the nursing research program holds a position among the top 10 nursing schools for securing federal research grants. The School continues to maintain its reputation for excellence and educates nurses who set the highest standards for patient care, exemplify scholarship, and become innovative national and international leaders in the evolution of the nursing profession and the health care system.

The School of Nursing offers an MSN/MPH in collaboration with the Bloomberg School of Public Health. For additional information please contact the Office of Admissions & Student Services at 410-955-7548 or [jhuson@son.jhmi.edu](mailto:jhuson@son.jhmi.edu) or [www.son.jhmi.edu](http://www.son.jhmi.edu).

## The Homewood Campus

The Homewood campus facilities of the University, where the undergraduate and other graduate programs are located, are available to School of Public Health students. These facilities include the Zanvyl Krieger School of Arts and Sciences, the Whiting School of Engineering, and the School of Professional Studies in Business and Education. 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 Krieger School of Arts and Sciences

Offering comprehensive undergraduate education as well as graduate training, the Krieger School of Arts and Sciences is the direct descendant of the original Johns Hopkins University. Today it is the core institution of the Johns Hopkins complex of schools, centers and

institutes. A century and a quarter after the University was established, the Krieger School still follows the guiding principles of Hopkins's visionary first president, Daniel Coit Gilman. Our adherence to founding ideals does not reflect cautiousness or entrenchment, however. Rather, Gilman's educational precepts, by definition, keep the Krieger School not just up to date but actually at the forefront of knowledge.

### **The Johns Hopkins University Whiting School of Engineering**

#### *"Leadership Through Innovation"*

Since 1914, engineers at Johns Hopkins have expanded the body of knowledge to its limits, creating new technologies to address the ever-changing demands of modern society. The Johns Hopkins University Whiting School of Engineering was founded in 1914 and re-established as the G.W.C. Whiting School of Engineering in 1979. The School offers undergraduate and graduate studies through full-time programs and Engineering Programs for Professionals (EPP) via part-time programs.

### **School of Professional Studies in Business and Education**

Students at Johns Hopkins University School of Professional Studies in Business and Education are part of an innovative educational experience that is preparing a generation of new leaders — in the fields of business, education, and public safety leadership. Through programs that combine in-depth theory with best practices, students have the opportunity to learn from nationally recognized researchers and leaders in the fields of study.

### **The Paul S. Nitze School of Advanced International Studies**

The Paul H. Nitze School of Advanced International Studies (SAIS) located in Washington, D.C., is a leading graduate school of international affairs, educating students for professional careers in government, business, journalism, international law and non-profit organizations. Founded in 1943 by Paul Nitze and Christian Herter, SAIS has been a division of The Johns Hopkins University since 1950.

### **The Applied Physics Laboratory**

The Applied Physics Laboratory (APL), a division of The Johns Hopkins University, is a not-for-profit research and development organization 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, APL achieves affordable, effective solutions. APL's outstanding, creative staff and world-class facilities have made the Laboratory a major asset to the nation for more than six decades.

### **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.

## Academic Resources

### LIBRARY RESOURCES

#### The William H. Welch Medical Library

The William H. Welch Medical Library [www.welch.jhu.edu](http://www.welch.jhu.edu) provides the Johns Hopkins Medical Institutions (School of Medicine, the Johns Hopkins Bloomberg School of Public Health, Johns Hopkins School of Nursing, Johns Hopkins Hospital, Kennedy-Krieger Institute) and its affiliates with information services that advance research, teaching, and patient care. Welch services are available online and at a number of campus locations. Two Welch service points are located in the School of Public Health: the Lilienfeld Library and the Population Digital Library.

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 Web [www.welch.jhu.edu](http://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](http://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.

The library offers a liaison service staffed by professional librarians with subject expertise to faculty, staff, and students; complete details at [www.welch.jhu.edu/liaison](http://www.welch.jhu.edu/liaison). Welch Liaisons also provide information services through collaborative virtual and physical service points called "touchdown" suites available at [www.welch.jhu.edu/services/touchdown\\_suites.html](http://www.welch.jhu.edu/services/touchdown_suites.html).

The Population Digital Library <http://poplibrary.jhmi.edu/> is one example.

The library's education program is designed around tools and technologies for biomedical communication. Classes are offered on basic computing applications, computer networking, electronic mail communication, searching online databases, and scientific writing; details at [www.welch.jhu.edu/classes/](http://www.welch.jhu.edu/classes/). In addition, discipline focused lecture series are offered for "touchdown" communities. Welch co-sponsors touchdown associated lecture series in Nursing, Oncology, and Basic Sciences [www.welch.jhu.edu/classes/wls.html](http://www.welch.jhu.edu/classes/wls.html).

Other campus service sites in the Welch system are the Adolf Meyer Library, with a focus on neuroscience and psychiatry, 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 Abraham M. Lilienfeld Library

The Lilienfeld Library is the primary resource within the School for information in the fields of public health, management science, and the social sciences. Located on the ninth floor of the Hampton House building, the library provides Access to online and print information in all areas of interest to the School's students and faculty. In fall 2004, the Population Center print collection became the online Population Digital Collection. A new service center called a touchdown suite on the fourth floor replaced the second floor satellite facility in the Wolfe Street building. The total library print collection is approximately 30,000 volumes of books, pamphlets, and government reports. The library currently receives approximately 254 print periodicals many of which are also available online through WelchWeb.

In addition to the Lilienfeld Library, the departments of Biochemistry, Biostatistics, and Molecular Microbiology and Immunology maintain reading rooms that house specialized collections.

### **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, and the George Peabody Library. Located on the Homewood Campus, the Eisenhower Library is Hopkins' main research library and a University-wide resource supplementing the 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 the Johns Hopkins Bloomberg School of Public Health students are the collections in the social, physical, and life sciences. In addition to traditional collections distinguished by their breadth and depth, the Eisenhower Library offers an expansive collection of electronic information resources including full-text and image files, extensive abstracting and indexing sources, and statistical, cartographic, and full text publications from the U.S. government.

A highly qualified, service-oriented staff is available to assist users in making full use of the library's resources. For more information about the library's resources and services, consult the libraries' website at [www.library.jhu.edu/](http://www.library.jhu.edu/).

The Eisenhower Library's collection includes over 2.8 million printed volumes, over 36,000 print and electronic journals, 4.2 million microforms, over 215,000 maps, and numerous audio-visual, manuscript, and archival resources. Rare books, archives, and sheet music are located in Eisenhower's Special Collections Department. Other special collections locations include the Garrett Library at Evergreen House (4545 N. Charles St.) and the George Peabody Library (17 East Mt. Vernon Place).

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

The library's regular hours are from 8 a.m. to midnight Monday through Thursday; 8 a.m. to 10 p.m. Friday and Saturday and 10 a.m. to midnight on Sunday. For extended hours during the academic year, and summer and holiday hours, consult the libraries' website at [www.library.jhu.edu/](http://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 strongly encouraged 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. In addition, IS has an agreement with Dell Computer Corp. that offers students an educational discount on select laptops, as well as on certain software. Information about services provided by IS will be offered during new student orientation and can be found at [www.jhsph.edu/IS](http://www.jhsph.edu/IS). The School offers a wireless network [www.jhsph.edu/IS/Wireless](http://www.jhsph.edu/IS/Wireless) for use with laptop computers. This wireless network is one of the largest implementations of wireless networking in a U.S. higher education facility. IS will program your wireless-enabled laptop to connect you to the wireless network, thus allowing you to connect to the Internet or print from anywhere within the School's Wolfe Street and Hampton House buildings.

The network provides access to the Internet and email from every classroom and many open areas, such as the libraries, student lounges and cafeterias. Laser printers that allow you to print through the wireless network are also located throughout the buildings. IS does not offer computer courses because the Welch Medical Library offers a variety of such courses. Courses

usually last one day and cost approximately \$325 per course. Subjects range from network software, word processing, spreadsheets and database management software to Web software and programming.

### **JOHNS HOPKINS ENTERPRISE DIRECTORY (JHED)**

JHED is the University's web directory <http://jhed.jhu.edu>. 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 WEB Services available at <https://registration.jhu.edu>. All JHU 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 WEB Services.

Questions regarding access to JHED should be directed to JHED Support at 410-516-HELP.

## Academic Information

### REQUIREMENTS FOR ADMISSIONS AND DEGREE CANDIDACY

The Johns Hopkins Bloomberg School of Public Health offers opportunities for graduate and postgraduate 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 School welcomes applications from qualified individuals regardless of race, color, sex, religion, sexual orientation, national or ethnic origin, age, disability, 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](http://www.jhsph.edu/admissions). The Admissions Office 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 to: Johns Hopkins Bloomberg School of Public Health, Attention: Admissions Office, 615 N. Wolfe Street, Suite E1002, Baltimore, MD 21205, or by phone at 410-955-3543.

#### Application Deadlines

Applications are processed in the Admissions Office on a rolling basis; however, 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.

The following application deadlines refer to a fully completed application, including all required supporting items such as the application fee, transcripts, letters of recommendations, test scores, a current résumé, and a personal statement. Note: (1) The application deadline for the Full-time MPH program differs from those for the Part-time/Internet-based MPH programs, and (2) applications for postdoctoral fellow may be submitted at any time.

#### October 31

- Occupational Medicine Residency Program (for physicians only)

#### December 1

- Department of Epidemiology—doctoral programs
- Department of Health, Behavior and Society—doctoral programs
- Department of Health Policy and Management—doctoral programs
- Department of Mental Health—doctoral programs
- MPH Full-time (July start)
- General Preventive Medicine Residency Program (for physicians only)

#### December 15

- Department of Environmental Health Sciences—doctoral programs (applications accepted throughout the year. However, those received by priority deadline are given first consideration for Recruitment Weekend and funding opportunities.)

#### December 22

- Department of Biochemistry and Molecular Biology—doctoral programs

#### January 2

- Department of International Health—all Programs
- Department of Molecular Microbiology and Immunology—doctoral programs
- Department of Population and Family Health Sciences—all programs

#### January 15

- Department of Biostatistics—doctoral programs
- Department of Health, Behavior and Society—ScM in Genetic Counseling

### February 1

- Department of Biostatistics—master’s programs
- Department of Health, Behavior and Society—MHS in Behavioral Science and Health Ed.
- Department of Health Policy and Management—master’s programs
- Department of Mental Health—master’s programs
- MPH Part-time/Internet-based (June)

### March 1

- Department of Epidemiology—master’s programs

### April 1

- Department of Environmental Health Sciences—master’s programs (priority deadline)
- Graduate Training Program in Clinical Investigation—all programs
- Department of Molecular Microbiology and Immunology—MHS programs (international applicants)
- Department of Molecular Microbiology and Immunology—ScM program

### June 1

- Department of Biochemistry and Molecular Biology—master’s programs
- Department of Molecular Microbiology and Immunology—MHS programs (domestic applicants)

### September 1

- MPH Part-time/Internet-based (January start)

## APPLICATION REQUIREMENTS

In addition to the completed online application, the following documentation must be submitted in order for an application to be complete:

1. A statement of objectives summarizing past education, training, and experience, as well as present interests and future aims.
2. A résumé or curriculum vitae, and a list of publications, if any.
3. A complete set of official transcripts (including marks sheets and diplomas for international study, where applicable) from each academic institution attended beyond the secondary level.

4. Letters of recommendations. Forms are available via the online application or through the admissions website at [www.jhsph.edu/admissions](http://www.jhsph.edu/admissions). Applicants should submit three letters of recommendations from individuals who are acquainted with their professional and/or academic performance.
5. 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 (preferred method) is \$45.00. Applicants who complete a paper application must pay a fee of \$150.00. Students in financial need who are currently enrolled at a U.S. school may have the application fee waived only at the written request of the financial aid officer from their academic institution.
6. 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 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.

## STUDENT RIGHTS AND RESPONSIBILITIES FOR THE ADMISSIONS PROCESS

An offer of admission will be contingent upon the Admissions Office 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 Johns Hopkins Bloomberg School of Public Health 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 Johns Hopkins Bloomberg School of Public Health.

**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 United States. Proficiency in the English language is a requirement for admission to the 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). Applicants should arrange to take the TOEFL well in advance of applying and should indicate the Johns Hopkins Bloomberg School of Public Health (code number 5352) as a score recipient.

## 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. During the term, students can utilize the anonymous mid-course feedback mechanism via the CoursePlus website. 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, through the course evaluation website at

[www.jhsph.edu/Crsevals](http://www.jhsph.edu/Crsevals), or by course, through the course database at <http://commprojects.jhsph.edu/courses/>.

The Associate Dean for Graduate Education and Research meets quarterly with the Student Committee for Course Evaluations. This committee is comprised of student representatives from each academic department and the MPH program. Students interested in serving on this committee should contact the Associate Dean for Graduate Education and Research in W1033.

## DEGREE PROGRAMS

### MASTER OF PUBLIC HEALTH

Ron Brookmeyer, PhD  
*Chair of the MPH Program*

#### Associate Chairs

Jacqueline Agnew, MPH, PhD  
Marie Diener-West, PhD  
Andrea Gielen, ScD  
Holly Grason, MA  
Sukon Kanchanaraksa, PhD  
Gary Ketner, PhD  
Laura Morlock, PhD, MA  
George Rebok, PhD  
Andrea Ruff, MD  
John Scocca, PhD  
Edyth Schoenrich, MD, MPH  
Susan Tonascia, ScM  
James Yager, PhD

The 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, 1-888-548-6741, or email, [mphprog@jhsph.edu](mailto:mphprog@jhsph.edu), with any questions about the programs. Or visit

the MPH website at [www.jhsph.edu/Academics/MPH](http://www.jhsph.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 July.

#### ***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 Montgomery County, Maryland and internet-based courses. Students can earn up to 80% of their academic credits online. Matriculation is in January or June. Part-time MPH students should also refer to the list of on-line courses to fulfill the MPH curriculum available at [http://distance.jhsph.edu/offerings/full\\_web.cfm](http://distance.jhsph.edu/offerings/full_web.cfm).

For more information on the MPH Academic program, visit: [www.jhsph.edu/academics/degreeprograms/mph/current\\_students/current\\_courses.html](http://www.jhsph.edu/academics/degreeprograms/mph/current_students/current_courses.html).

### **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
- 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 completed within two terms of matriculation and 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 public 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/prospective\\_students/curriculum2006\\_07.html](http://www.jhsph.edu/academics/degreeprograms/mph/prospective_students/curriculum2006_07.html).

### **Admission Requirements**

The minimum requirements for admission to the MPH program are:

1. A baccalaureate-level degree
2. Additional health-related experience beyond the baccalaureate level. This requirement can be satisfied in several ways:
  - a. A minimum of two years full-time post-baccalaureate work experience in a health field or other fields related to public health
  - b. A doctoral degree in a field underlying public health
  - c. Completion of two years of medical school curriculum.

- d. This requirement may be waived for applicants to the MPH/JD, MPH/MSN, and MPH/MSW degree programs.
3. College-level courses in:
  - a. Quantitative sciences (calculus, algebra, and statistics)
  - b. Biology
  - c. A health-related science course or another biology course.
4. Scores from a standardized test of aptitude (GRE, MCAT, GMAT, LSAT).
  - a. MPH applicants who have a graduate degree beyond the baccalaureate, or have a medical degree may request their application be reviewed without submission of standardized tests.  
**However, the absence of scores may place the application at a disadvantage in the admission selection process.**
5. English proficiency, measured by the TOEFL exam, for students from non-English speaking countries (minimum 600 on the paper-based and 250 on the computerized exam). For a listing of countries that require the TOEFL please visit the MPH website at [www.jhsph.edu/academics/degreeprograms/mph/prospective\\_students/toefl.html](http://www.jhsph.edu/academics/degreeprograms/mph/prospective_students/toefl.html).
6. Official transcripts from each college and university attended.
7. Curriculum Vitae or résumé.
8. Personal statement of experience and career goals and objectives in pursuing the MPH degree, including how the program will help in attaining those goals.
9. Three letters of recommendation 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/admissions\\_mph.html](http://www.jhsph.edu/academics/degreeprograms/mph/prospective_students/admissions_mph.html).

### 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/student\\_manuals.html](http://www.jhsph.edu/academics/degreeprograms/mph/current_students/student_manuals.html).

1. Total of 80 units required for graduation
2. At least 60 units in formal School of Public Health coursework that is not special studies
3. 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
4. Complete the MPH Goals Analysis
5. Complete the Practicum Requirement.
6. Complete the MPH Capstone project
7. Internet-based/part-time students must complete at least 16 units of coursework in a face-to-face format; not special studies
8. Maintain minimum academic standards as described in the MPH Student Program Manual. Failure to maintain minimum standards is grounds for dismissal from the program.
9. 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 advisors.

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 curriculum for specialization in a particular area of public health.

## MPH Concentrations

For a complete listing and description of the MPH concentrations, please visit [www.jhsph.edu/academics/degreeprograms/ MPH/prospective\\_students/concentrations.html](http://www.jhsph.edu/academics/degreeprograms/ MPH/prospective_students/concentrations.html).

### *Child Health*

The MPH concentration in Child Health focuses on understanding the health problems and health status of children across the globe, the nature and scope of the multiple determinants of children's 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. The goals of the concentration are to provide students with an understanding in several critical areas including:

1. The underlying determinants of children's health status in developing and developed countries, including socio-economic, demographic, developmental, behavioral, cultural, political, environmental, and other determinants
2. The content of specific health problems of children, including nutritional issues, injury, infectious diseases and HIV, chronic and disabling conditions, adolescent health concerns, and others
3. 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, and injury prevention

*Faculty Concentration Directors: Andrea Ruff, MD, Associate Research Professor, International Health; Bernard Guyer, MD, MPH, Professor, Population and Family Health Sciences*

### *Environmental and Occupational Health*

The MPH concentration in Environmental and Occupational Health provides a comprehensive introduction to environmental and occupational health. These two highly related fields represent a multidisciplinary approach to the assessment and control of factors in our personal and professional environments that adversely affect

human health. The concentration is designed to provide students with basic knowledge related to the following:

1. Chemical, biological, and physical agents and the media in which they distribute in our local, regional, and global environments, as well as psychosocial factors
2. The basic biological mechanisms by which environmental and occupational agents are transferred to and distributed within, and how they adversely affect our bodies
3. Factors associated with susceptibility to exposure
4. Environmental risk assessment
5. Identification of intervention strategies to reduce exposures and adverse effects
6. Global environmental changes that may ultimately produce significant indirect effects

*Faculty Concentration Directors: Jonathan Links, PhD, Professor, Environmental Health Sciences; Jackie Agnew, PhD, Professor, Environmental Health Sciences*

### *Epidemiological and Biostatistical Methods For Public Health and Clinical Research*

The MPH concentration in Epidemiological and Biostatistical Methods for Public Health and Clinical Research is designed for students with quantitative backgrounds who are seeking to gain additional skills in epidemiologic study design and statistical data analysis. The goal of this concentration is to prepare students to 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:

1. Articulating an appropriate question/hypothesis
2. Identifying an appropriate study design and data set for answering the question
3. Obtaining IRB approval
4. Gaining familiarity with aspects of data management
5. Identifying and applying appropriate

Statistical methods and correctly interpreting results

6. Gaining familiarity with tracking and recording steps in the analysis of a data set
7. Writing up the results of a data analysis for a professional publication
8. Oral presentation of the results

*Faculty Concentration Directors: Rosa Crum, MD, Associate Professor, Epidemiology; Marie Diener-West, PhD, Professor, Biostatistics*

### **Health Leadership and Management**

The MPH concentration in Health Leadership and Management provides students with an understanding of the issues and challenges of leading and managing health service organizations. The concentration is aimed at practitioners whose responsibilities require them to have leadership skills and an understanding of management, but who neither require nor want a full management degree. Students gain a fundamental understanding of the management of health service organizations in a range of settings in both the United States and other countries (especially low- and middle income countries). Topics covered include the following:

1. The healthcare environment
2. Leadership development, including building a shared mission and vision
3. Organizational design
4. Strategic positioning and planning
5. Organizational stakeholders and governance
6. Human resources
7. Managing conflict
8. Quantitative tools for management
9. Budgeting and financial management
10. Approaches to process improvement, including continuous quality improvement
11. Measuring and monitoring organizational performance
12. Change management and transformational leadership

Through a variety of teaching methods (lectures, laboratories, group work, seminars, case methods, individual assignments) and application of the Hopkins leadership and management paradigm, students will be able

to demonstrate the skills and competencies to function effectively in a healthcare organization.

*Faculty Concentration Directors: David Peters, MD, MPH, DrPH, Assistant Professor, International Health; William Ward, Jr, MBA, Associate Public Health Professor, Health Policy and Management*

### **Health Policy and Financing**

The MPH concentration in Health Policy and Financing develops skills and knowledge related to analysis and decision-making for health systems' organization, financing and service delivery in the United States and internationally. The curriculum focuses on health policy analysis and formulation; financing, organization and oversight of health systems; and policies and programs for disease prevention, injury control and other public health priorities. This concentration area is aimed at developing skills, knowledge and attributes for policymakers, policy analysts and senior managers of health systems. The concentration emphasizes planning and managing national and international programs, institution building, and related analysis.

Through their coursework, students acquire a solid foundation in policy analysis, an understanding of key health policy issues from a comparative perspective - and substantive knowledge of health care systems and public policies and programs in the U.S. and in selected low-, middle- and high-income countries. 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 policy. The curriculum provides an overview of changes occurring in the U.S. and internationally in health-sector policy and financing, comparing countries at different levels of income and with varying health system infrastructures.

Topics include the role of government in the health sector, sources of revenue for the health sector, health insurance systems, provider

organization and payment methods, access to health care and the policy-making process for the health sector and for specific public health areas – for example, road traffic injuries and occupational health.

*Faculty Concentration Directors: Laura Morlock, PhD, Professor, Health Policy and Management; Hugh Waters, PhD, Assistant Professor, International Health*

### ***Humanitarian Assistance: Health and Human Rights***

The MPH concentration in Humanitarian Assistance: Health and Human Rights focuses on protection, assistance and advocacy for vulnerable populations worldwide. These include refugees, internally displaced persons, trafficked women and children and other populations marginalized by age, ethnicity, gender, sexual orientation, class, or religious belief. The coursework will help students understand why populations become vulnerable and how to address the health needs of these populations. Advocacy and protection of rights for populations and individuals will be stressed. Students will have the opportunity to select a focus in one of two tracks: Humanitarian Assistance (HA) or Health and Human Rights (HHR).

In the HA track, emphasis will be 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 the following:

1. Identifying, protecting and advocating for vulnerable groups
2. Public health care for refugees and displaced persons
3. Measuring health and demographic indicators in humanitarian emergencies
4. Natural disaster preparedness, management and mitigation
5. Planning food, water, and sanitation programs for displaced populations
6. Implementing and monitoring assistance programs

In the HHR track, emphasis will be on learning the history of the human rights movement post WWII, becoming familiar with the major human rights documents and international treaties. Seminars and course discussion will be used to teach students basic skills including:

1. Basic human rights principles
2. Documenting human rights violations and abuses
3. Human rights law, conventions, declarations and agreements
4. Human rights impact assessment of public health policies and interventions
5. Understanding the right to health in addressing the needs of vulnerable groups

*Faculty Concentration Directors: Robert Lawrence, Director, Center for a Livable Future, Edyth Schoenrich Professor of Preventive Medicine, Professor of Health Policy and Management, and Professor of Environmental Health Sciences; W. Courtland Robinson, PhD, Assistant Professor, International Health*

### ***Infectious Diseases***

The MPH concentration in Infectious Diseases 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 conducting research, and the pharmaceutical industry. Students are exposed to the fundamental concepts underlying the epidemiology and control of a number of infectious diseases affecting global health.

*Faculty Concentration Directors: Clive Shiff, PhD, Associate Professor, Molecular Microbiology and Immunology; Ken Nelson, MD, Professor, Epidemiology; Neal Halsey, MD, Professor, International Health*

### ***Public Health Nutrition***

The MPH concentration in Public Health Nutrition provides students with an opportunity to focus their study on nutrition, and integrate this information with other coursework in order

to develop the skills to address nutrition problems in the United States and around the world. Students choosing this concentration will gain an understanding of the following:

1. The major nutritional problems of public health importance
2. The methods for assessing nutritional status, and the use and interpretation of nutritional indicators
3. The methods for establishing the causal role of nutritional factors on health and disease status
4. The design and implementation of nutrition programs to improve the nutrition and health of diverse populations

*Faculty Concentration Directors: Laura E. Caulfield, PhD, Associate Professor, Center for Human Nutrition, Department of International Health; Eliseo Guallar, MD, DrPH, Assistant Professor, Department of Epidemiology*

### **Public Health Preparedness in Practice**

The MPH concentration in Public Health Preparedness in Practice develops the knowledge and skills that are required for the practice of public health (including environmental health) and leading national and international public health preparedness efforts. A competency-based sequence of courses will be offered. These courses will actively involve leaders in the practice community, will use case study approaches to learning the core competencies, and will present the students with contemporary practice and preparedness challenges.

Students will be required to go outside the walls of the institution to observe and participate in public health in action. The course sequence will include courses in assessment of public health risks, public health practice, public health preparedness (including emergency management) and communicating to the public and the media. Critical issues including bioterrorism, disease surveillance and protecting our food and water will be explored.

The competencies that will be developed, which are based on the Council on Public Health

Linkages framework for the core competencies of public health practice include:

- Monitor health status to identify community health problems
- Diagnose and investigate health problems and health hazards in a community
- Inform, educate and empower people about health issues
- Mobilize community partnerships to identify and solve health problems
- Develop policies and plans that support individual and community health efforts
- Enforce laws and regulations that protect health and ensure safety
- Link people to needed personal health services and assure the provision of health care when otherwise unavailable
- Assure a competent public health and personal health care workforce
- Evaluate the effectiveness, accessibility and quality of personal and population-based health services
- Research for new insights and innovative solutions to health problems

*Faculty Concentration Directors: Alison Geyh, Ph.D, Assistant Professor, Environmental Health Sciences; Lynn Goldman, MD, Professor, Environmental Health Sciences; Kellogg Schwab, PhD, Associate Professor, Environmental Health Sciences*

### **Social and Behavioral Sciences in Public Health**

The MPH concentration in Social and Behavioral Sciences in Public Health provides students with competencies in the following areas:

1. Theoretical basis of social and behavioral sciences approach to health and illness. These have implications for both behavioral interventions and understanding psychosocial influences on health and social policies that affect health.
  2. Behavior change intervention design and implementation
  3. Behavior change program evaluation
- Students completing this concentration can focus on 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. Students completing this concentration may be eligible to take the national certifying exam to become a Certified Health Education Specialist.

*Faculty Concentration Directors: Andrea Gielen, ScD, Professor, Health Policy and Management; Michael Sweat, PhD, Associate Professor, International Health*

### ***Women's and Reproductive Health***

The MPH concentration in Women's and Reproductive Health focuses on understanding the health status of women with regard to their general and reproductive health and the health of their newborn, the determinants of their health status, preventive strategies and programs to address their health, and the well being of their newborn. Students may opt to focus on women's health in general, reproductive health, or their health during pregnancy and of their newborn, domestically or in a developing country setting. The goals of the concentration, applicable to both domestic and international issues, include providing students with competencies and understanding in several critical areas including:

1. 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, including infectious, chronic, and disabling conditions
2. The determinants of women's and reproductive health, including socio-economic, cultural, behavioral, environmental, political, and other determinants
3. Analytic skills in the core MPH courses, as they are applied to women's and reproductive health, as well as other possible skills, including demographic, evaluative, and epidemiologic methods
4. Design, 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, and health during the reproductive years

*Faculty Concentration Directors: Donna Strobino, PhD, Professor, Population and Family Health Sciences; Michele Dreyfuss, PhD, MPH, Assistant Research Professor, Population and Family Health Sciences*

## **DOCTOR OF PUBLIC HEALTH**

The Doctor of Public Health Degree (DrPH) is a schoolwide advanced professional degree program designed for the student who has a Masters of Public Health (MPH) or equivalent degree and who intends to pursue a leadership career in the professional practice of public health. 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 nonacademic settings as well as in either public agency or private sector settings that emphasize improving the health of the public.

The DrPH degree differs from the PhD in that its primary objective is to prepare graduates to address real-world public health problems through the application of analytical skills, knowledge and leadership. DrPH graduates undertake leadership positions in health agencies in both the public sector- at the federal, state and local levels- and in the private sector at health care institutions, managed care organizations and systems. PhD graduates, in contrast, are prepared to become independent investigators in academic and non-academic research institutions. Both DrPH and PhD graduates may take on roles as teachers of public health.

### Full-time and Part-time

The DrPH degree may be completed on either a full-time or part-time basis. 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 time and part time program requirements are found in the departmental 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:

1. A minimum of three years full-time work experience in health or human services.
2. 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.
3. Applicants whose native language is not English will be required to submit the results of the Test of English as Foreign Language (TOEFL).

Questions about specific admissions requirements for the DrPH should be addressed to both the DrPH program office and the department of interest.

### Curriculum

The DrPH Program is made up of 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 programs. The departmental component

emphasizes the disciplinary knowledge and competence in a specific public health field. The departments offering the DrPH include: Epidemiology, Environmental Health Sciences, Health Policy & Management, International Health, and Population & Family Health Sciences (including maternal and child health).

A year-long DrPH seminar emphasizes the history of public health, the development of the nation's health objectives and goals of the public health field, professional communication, multi-disciplinary team building, leadership and translating research to policy and practice.

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 handbook/student manual.

### MASTER OF SCIENCE

This 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 Master of Science degree include Biochemistry and Molecular Biology, Biostatistics, Environmental Health Sciences (environmental health engineering, physiology, and toxicology), Epidemiology (cancer, cardiovascular, clinical, aging, general, human genetics/genetic, infectious disease, occupational, and environmental epidemiology), Health Behavior and Society (genetic counseling), and Molecular Microbiology and Immunology.

### Graduation

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

1. 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.
2. At least 12 credit units of formal course work are required in courses outside of the student's primary department. At least six of these credits must be taken in the Johns Hopkins Bloomberg School of Public Health. The remaining outside credit units may be earned in any department or division of the University.
3. A written examination in the principal subject administered by the student's department.
4. 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.

5. 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.)
6. Completion of the Academic Ethics module.

### 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 (academic MHS programs) or prepares individuals to begin or advance their careers as public health professionals (professional MHS programs). They offer an alternative to the Master of Public Health (MPH) degree for students desiring more focused skills and for less experienced students.

Academic 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. Academic MHS programs are offered by the departments of Biochemistry and Molecular Biology (reproductive biology), Biostatistics (biostatistics and bioinformatics), Environmental Health Sciences (environmental health), Epidemiology (cancer, cardiovascular, clinical, aging, general, human genetics/genetic, infectious disease, occupational, and

environmental epidemiology), Molecular Microbiology and Immunology, Graduate Training Program in Clinical Investigation, Mental Health, and Population and Family Health Sciences (demography). Further information about all degree programs can be found in the appropriate departmental sections.

Professional MHS programs offer 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. Professional MHS 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, professional MHS programs provide specialized in-depth training to advance these skills followed by internships for more advanced practice experience. At a minimum, they require 4 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 professional MHS degrees programs are: Environmental Health Sciences (occupational and environmental hygiene), Health, Behavior and Society (behavioral sciences and health education); Health Policy and Management (health policy; health finance and management), International Health (social and behavioral interventions; disease control; health systems and human nutrition) and Population and Family Health Sciences (child health and development, health communication, health and population, 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 ability to master the quantitative and analytical content of

the program. 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 in programs for advanced study and research 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. MHS 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 Master of Health Science 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 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 Doctor of Science Degree are: Environmental Health Sciences (environmental health

engineering, molecular imaging, occupational and environmental health, physiology, and toxicology), Epidemiology (cancer, cardiovascular, clinical, aging, general, human genetics/genetic, infectious disease, occupational, and environmental epidemiology), Health, Behavior and Society (behavioral sciences and health education), and Health Policy and Management (health and public policy, health services research).

### **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 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 advisor 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 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.

## **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 School offers the PhD degree. The Doctor of Philosophy 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 advisor 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. All PhD Programs are under the academic jurisdiction of the University-wide Graduate Board.

### **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 University and include fulfillment of the following requirements before being presented for the degree:

1. Satisfactory completion of a departmental comprehensive written examination in the principal subject given by the major department.
2. A minimum of four consecutive terms of registration as a full-time student is required. If a student completes a master's program at this 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.
3. Satisfactory completion of a preliminary oral examination administered by a committee of the faculty. This examination also serves as the University Graduate Board's oral examination and is under the jurisdiction of that board. 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.
4. Course work 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 (9) credit units must be satisfactorily completed in the Johns Hopkins Bloomberg School of Public Health. 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 this School may apply 12 credits from this program toward the above requirement.
5. Satisfactory completion of a two-term course, 550.865 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 a Master of Public Health degree within the last 10 years may request a waiver for 550.865.
6. Completion of the Academic Ethics module.
7. Completion of a satisfactory investigation in the principal 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 this School or as part of the educational program at the School.
8. Oral defense of the thesis by the candidate before a committee of the faculty.
9. Written acceptance of the thesis from Committee chair and student advisor.
10. Submission of the thesis for binding.

## COMBINED DEGREE PROGRAMS

Graduate students working towards degrees in medicine, social work, international relations or law may integrate their degree programs with a public health degree from the School. These combined degrees 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 School of Public Health may pursue an additional master's or doctoral program, and undergraduates majoring in Public Health Studies at the Johns Hopkins University may earn a combined BA/MHS degree. The School's Committee on Academic Standards approves these combined degree programs.

### Combined Degree Programs Offered with Other Schools

#### *MA/MHS*

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 Health Science in International Health at the Johns Hopkins Bloomberg School of Public Health. Each two-year program may be completed in a total of three years, mainly through the replacement of a period of MHS field practice with course work at SAIS.

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 Johns Hopkins Bloomberg School of Public Health during the first two years of the program. The Johns Hopkins Bloomberg School of Public Health 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 a SAIS catalog and application visit [www.sais-jhu.edu/admissions](http://www.sais-jhu.edu/admissions) or call 202-663-5700.

### **BA/MHS**

The Johns Hopkins School of Arts and Sciences, in conjunction with the Johns Hopkins Bloomberg School of Public Health, 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 Johns Hopkins Bloomberg School of Public Health Departments of Environmental Health Sciences 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 from the Admissions Office of the School of Public Health, Suite E1002; 410-955-3543, from [www.jhsph.edu/admissions](http://www.jhsph.edu/admissions), or from the Undergraduate Public Health Studies advisor on the Homewood campus. Admitted students must complete the BA degree before formally enrolling in the School, but up to one-half of the public health credits earned interdivisionally toward the BA may also apply toward the MHS degree.

Johns Hopkins undergraduate Public Health Studies majors are welcome to apply to any MHS program offered by the School during their senior year; however, the credit requirements will be the same as for other students entering MHS the program.

For further information, contact Dr. James D. Goodyear, Public Health Studies advisor, at 3505 N. Charles Street, Homewood campus; 410-516-7812; [goodyear@jhu.edu](mailto:goodyear@jhu.edu).

### **MPH/MBA**

The Bloomberg School of Public Health, in conjunction with the Johns Hopkins School of Professional Studies in Business and Education (SPSBE), offers the Master of Public Health (MPH) and Master of Business Administration (MBA) combined degree. 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.

Application forms for the combined MPH/MBA degree program must be obtained from and submitted to the School of Public Health; however, 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 Johns Hopkins Bloomberg School of Public Health, and the academic policies for the MBA program will be applied to courses taken at the Johns Hopkins School of Professional Studies in Business and Education.** For more information and an application, contact the Admissions Office, Johns Hopkins Bloomberg School of Public Health, 615 N. Wolfe Street, Suite E1002, Baltimore, MD 21205; or call 410-955-3543.

#### ***MPH/MSW***

In collaboration with the University of Maryland School of Social Work (UMSSW), the School of Public Health offers the combined Master of Public Health (MPH) and Master of Social Work (MSW) degree. 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 course work within a specific area of concentration. In a combined public health and social work practicum, the University of Maryland grants six to nine academic credits for public health coursework, and the School of Public Health 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 July) 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 School's application form the appropriate beginning year for the MPH program. For students who successfully complete the combined 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 410-706-8044 or visiting [www.ssw.umaryland.edu](http://www.ssw.umaryland.edu).

#### ***MPH/MSN***

The Johns Hopkins University's School of Nursing and the Bloomberg School of Public Health offer a combined 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 combined MPH/MSN 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 School of Public Health. The steering committee for the combined 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 [www.son.jhmi.edu/academics/admissions](http://www.son.jhmi.edu/academics/admissions).

### ***MPH/JD***

The Johns Hopkins Bloomberg School of Public Health, in cooperation with the Georgetown University Law Center, offers a combined degree program in law and public health. The program trains students in the overlapping fields of law, public health and ethics. Students must apply to and be accepted to both the full-time Juris Doctor (JD) degree program at the Georgetown University Law Center and the full-time Master of Public Health (MPH) degree program at the School of Public Health. The combined degree program, wherein students will earn a JD degree from Georgetown and an MPH degree from Johns Hopkins, takes a total of four years, including one summer. Students will normally complete the first year of the JD degree program at Georgetown, then spend 11 months (starting in July) completing the MPH program requirements, and then return to Georgetown to complete the last two years of the JD program. The MPH degree is awarded upon completion of the JD degree.

For further information on the program, contact Professor Stephen Teret or Mr. Jon Vernick, 624 N. Broadway, Baltimore, MD 21205; 410-955-3995; or visit the website at [www.law.georgetown.edu/prospective.html](http://www.law.georgetown.edu/prospective.html)

### ***MD/PhD Degree***

The School of Public Health, 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 School of Public Health. 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, contact the MD/PhD Program Administrator, Ms. Sharon Welling, at [swelling@jhmi.edu](mailto:swelling@jhmi.edu) or call 410-955-8543. [www.hopkinsmedicine.org/mdphd](http://www.hopkinsmedicine.org/mdphd).

### **Combined Degree Programs Offered within the School of Public Health**

*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 or Bioinformatics***

The Department of Biostatistics provides students who are candidates for doctoral-level degrees in one department of the School with the opportunity to earn a Master of Health Science (MHS) degree in either Bioinformatics (offered jointly with the Department of Molecular Microbiology and Immunology) or 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 doctoral program. For information about the MHS programs in the Department of Biostatistics, contact Mary Joy Argo at 410-614-4454 or [margo@jhsph.edu](mailto:margo@jhsph.edu).

#### ***Doctoral/MHS in International Health***

The Department of International Health provides students who are candidates for doctoral-level degrees in one department of the School with the opportunity to earn a Master of Health Science (MHS) 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 MHS degree. The MHS must be relevant to the candidate's field of doctoral study and must not impede progress in the doctoral program. For information about the MHS programs in the Department of International Health, call 410-955-3734.

***Doctoral/ScM***

The School of Public Health 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; 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.

Candidates must apply and be admitted to the department of doctoral study and then to the department of master's study. Accepted students must have the permission of their doctoral department to enroll and to complete all requirements for the ScM degree. A number of shared course requirements and value-added activities will provide candidates with solid training in the complementary sciences to encourage interdisciplinary approaches to solving public health problems. For information about the Molecular Epidemiology Program, contact Patti Gravitt, PhD, at 443-287-6179.

**INTERDEPARTMENTAL AND INTERDIVISIONAL PROGRAMS**

Listed in this section are academic programs and courses of study that involve two or more departments, divisions of the University, or other universities. Some may require formal admission leading to a degree. Others are listed to bring to students' attention opportunities for study in an interdisciplinary field.

Students should also consult individual departments' listings where other opportunities for joint study are described.

**Graduate Training Program in Clinical Investigation**

The Doctor of Philosophy, Master of Science, and Master of Health Science degrees in Clinical Investigation are a joint enterprise of the Johns Hopkins University's School of Medicine and the Johns Hopkins Bloomberg School of Public Health. The Graduate Training Program in Clinical Investigation (GTPCI) is 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 the GTPCI office by phone, 410-502-9734, or email, [gtpci@jhsph.edu](mailto:gtpci@jhsph.edu), with any questions about the program.

N. Franklin Adkinson, MD  
*Co- Director*  
 Charles W. Flexner, MD  
*Co- Director*

**Advisory Council and Standing Committee Members**

Richard Ambinder, MD  
 Fredrick L. Brancati, MD  
 Susan Furth, MD, PhD  
 Allan Gelber, MD, MPH, PhD  
 Steven Goodman, MD, PhD  
 Diane E. Griffin, MD, PhD  
 Craig W. Hendrix, MD  
 Michael J. Klag, MD  
 Sharon S. Krag, PhD  
 Robert S. Lawrence, MD  
 Paul S. Lietman, MD, PhD  
 Steven Piantadosi, MD, PhD  
 Neil R. Powe, MD, MPH, MBA  
 Peter J. Pronovost, MD, PhD  
 Naresh Punjabi, MD, PhD  
 Andrea Ruff, MD  
 Jonathan Samet, MD  
 Christopher D. Saudek, MD  
 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 fulltime 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 degree of Doctor of Philosophy or Master of Science is awarded by the Johns Hopkins Bloomberg School of Public Health. Candidates are not admitted directly to the Master of Science program; all candidates for a thesis-requiring degree must qualify under the PhD program. There is also a track leading to a Master of Health Science degree in Clinical Investigation. Health professionals with an advanced degree may apply. The MHS is a one-year, full-time program, although there is an option to pursue the degree part-time for an interval not to exceed two years.

### **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 tracks differ in total credit hours, electives, and some courses. Detailed curriculum information for each can be found at [www.jhsph.edu/gtpci/Curriculum.pdf](http://www.jhsph.edu/gtpci/Curriculum.pdf)

### **Admissions Requirements**

The GTPCI programs seek students from a variety of academic and professional backgrounds. Application instructions specific to each GTPCI degree program, related forms, deadlines, and transcript and standardized test requirements can be found at <http://www.jhsph.edu/gtpci/application.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
- Letters of support that meet the criteria outlined on the GTPCI website
- TOEFL (for applicants for whom English is a second language)

Note: Minimum requirements may differ slightly for each degree program. Please contact the program office with any questions regarding the admission criteria.

**PhD**—*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 JHMI 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**—*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 JHMI
- JHMI faculty or postdoctoral clinical fellows who must limit training to part-time study over not more than two years
- Postdoctoral clinical investigators interested in coursework without a thesis research requirement
- Medical students desiring intensive clinical research training at the pre-doctoral 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 an MHS degree.

### **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 (advisors from doctoral and masters departments) and integration of PhD and ScM research into a single dissertation. The IPME dissertation will include results of both masters 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 Masters 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. Patti Gravitt, Assistant Professor of Epidemiology and Chair of Molecular Epidemiology Committee, 443-287-617 or [pgravitt@jhsph.edu](mailto:pgravitt@jhsph.edu).

### **Program in Law and Public Health**

The Program in Law and Public Health is an interdisciplinary unit in the Johns Hopkins Bloomberg School of Public Health sponsoring research and teaching in the legal dimensions of health policy.

There are several components of the program. The Center for Law and the Public's Health, a collaborative effort of the Johns Hopkins Bloomberg School of Public Health and the Georgetown University Law Center, is devoted to research, training, and practice in public health law. In addition, a joint MPH/JD degree, also co-sponsored by the School of Public Health and Georgetown University, is affiliated with the program. Postdoctoral fellowships are also available. Students may include masters and doctoral candidates who have already completed some or all of their legal training. Other students wishing a focus in this area are directed to courses, seminars, and independent studies offered by faculty affiliated with the program.

The program is co-directed by Jon S. Vernick, JD, MPH, and Stephen P. Teret, JD, MPH, and includes several other public health lawyers as faculty members. For additional information about the joint MPH/JD degree, contact the co-director of the program, Jon S. Vernick, JD, MPH, The Johns Hopkins Bloomberg School of Public Health, 624 N. Broadway, Baltimore, MD 21205; [jvernick@jhsph.edu](mailto:jvernick@jhsph.edu).

For information about the Center for Law and the Public's Health, contact the executive director for the center, James Hodge, JD, LLM, at The Johns Hopkins Bloomberg School of

Public Health, Hampton House, Room 527A,  
624 N. Broadway, Baltimore, MD 21205.  
Email [jhodge@jhsph.edu](mailto:jhodge@jhsph.edu) or visit the website at  
[www.publichealthlaw.net](http://www.publichealthlaw.net).

### **Tropical Medicine Curriculum**

The importance of tropical diseases to physicians and other public health workers interested in working in developing nations has prompted the School to offer two alternatives for prospective students. One is a series of short intensive courses entitled The Summer Institute in Tropical Medicine and Public Health (four two-week courses given over eight weeks in the summer; see the Continuing Professional Education chapter). The other is through formal degree programs offered by various academic departments within the School.

Tropical medicine and public health are important fields in developing countries and in the United States, with its large population of immigrants, travelers to tropical countries, and numerous agencies operating health and development activities abroad. The 2006 summer institute is organized by the Department of Environmental Health Sciences and the Department of International Health.

During the regular academic year, the School offers many courses relevant to the health of people in developing countries. Students interested in the biological basis of infectious diseases and immunology should consult course listings in the Department of Molecular Microbiology and Immunology. Students interested in comprehensive health planning and administration, operations research, community medicine and travel medicine, the epidemiology and control of infectious diseases, or the special area of nutrition should consult courses listed under the Department of International Health; for tropical environmental health problems, the Department of Environmental Health Sciences; for demography, family planning, and administration, the Department of Population and Family Health Sciences; and reproductive biology, the departments of Biochemistry and International Health. Other courses of interest appear under the Department of Epidemiology.

Relevant courses and seminars are also sponsored by the University-wide Immunology Council.

A variety of degree programs are available through the various departments of the School. For further information, contact Dr. Thaddeus Graczyk, Department of Environmental Health Sciences, 410-614-4984; or Dr. Robert Gilman, Department of International Health, 410-614-3639 or email [tropmed@jhsph.edu](mailto:tropmed@jhsph.edu).

### **CERTIFICATE PROGRAMS**

Certificate programs represent courses of study in specific areas of public health. The Johns Hopkins Bloomberg School of Public Health offers various certificates to degree students only, degree and non-degree students, and non-degree 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. A certificate of program completion is issued by the sponsor upon satisfactory completion of course work.

#### **Certificate Programs Open to Johns Hopkins University or School of Public Health Students ONLY:**

##### **GERONTOLOGY**

###### ***Sponsoring Departments***

Epidemiology and Health Policy and Management

###### ***Educational Objectives***

To provide training in core competencies in gerontology designed to supplement the basic training students receive in their home discipline. Based on a public health approach to gerontology, the objectives of this certificate program are to add depth and breadth to interdisciplinary training in gerontology for

students who seek a research- or policy-focused career in the field of gerontology.

***Intended Audience***

Doctoral students and postdoctoral fellows who are pursuing a masters degree (either ScM or MHS) involving a research-oriented thesis. The certificate is intended for students 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 their particular area of specialization.

***Admissions Criteria***

Doctoral students in good standing (or masters students with a previous doctoral degree or equivalent) who are enrolled as full-time students (PhD, DrPH, ScM, or some MHS) in the School of Public Health. Applicants must submit a letter of application that explains the nature of the research that they will do as part of the culminating project required by their home department, and how the Certificate Program in Gerontology fits into their research and career goals. Applicants must be in a degree program and be writing a research-oriented thesis or essay. Potential applicants are strongly encouraged to submit their application materials by December 31 of the academic year in which graduation is expected. Applications submitted just prior to graduation will be rejected. For more information on this certificate program at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=1>.

**HEALTH AND HUMAN RIGHTS**

***Sponsoring Department***

International Health

***Educational Objectives***

To increase understanding and foster attitudes among health professionals regarding the importance of linkages between guarantees of human rights and protection of public health professionals and the vital role of health professionals in promoting human rights. To develop familiarity with international human rights standards, instruments, and codes related to human rights, especially those that bear fiercely upon the health of populations and

individuals and the roles of health professionals in enforcing and protecting those standards. To develop skills for investigating, analyzing, and documenting 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 any enrolled degree candidate within the Johns Hopkins University System.

***Admissions Criteria***

Prior admission to a Johns Hopkins University degree program; letter to faculty sponsor requesting admission, outlining courses to be taken, and providing estimated timetable for completion; and approval of student's faculty advisor. For more information on this certificate program at the School of Public Health visit <http://commprojects.jhsph.edu/academics/prop.cfm?id=2>.

**HEALTH COMMUNICATION**

***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 uses 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 in the School of Public Health 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 in the Johns Hopkins Bloomberg School of Public Health. Students from any department are welcome to pursue this certificate. For more information and an application for this certificate program at the School of Public Health, visit <http://commprojects.jhsph.edu/academics/prop.cfm?id=20>.

## **HEALTH DISPARITIES AND HEALTH INEQUALITY**

### ***Sponsoring Department***

Health Policy and Management

### ***Educational Objectives***

To train future leaders in research on health disparities and health inequality; 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 (masters and 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 School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=21>.

## **HUMANITARIAN ASSISTANCE**

### ***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, 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 masters, or doctoral degrees in the School of Public Health who may be responsible for health care to displaced populations. Note: This certificate parallels the MPH Concentration Area in Humanitarian Assistance: Health and Human Rights of Vulnerable Populations. The MPH concentration area has more depth, and involves a seminar and additional course requirements. MPH students who have a major career interest in humanitarian emergencies and human rights are encouraged to pursue the concentration area.

### ***Admissions Criteria***

This certificate is open for health professionals pursuing masters or doctoral degrees in the School of Public Health, and is offered in conjunction with course work in these programs. The certificate will be awarded on satisfactory completion of the required courses. For more information on this certificate program at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=9>.

## INJURY CONTROL

### *Sponsoring Department*

Health Policy and Management

### *Educational Objectives*

On completion of the Certificate in Injury Control, the student will be able to describe the importance of injury as a public health problem; the epidemiology of major injury problems; be familiar with important sources of data for injury research; be able to use problem-solving methodology to 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 School of Public Health who are interested in receiving concentrated training in the practice of injury control and/or in research applied to injury control. The program should be particularly relevant to students in the MPH program and to those in the Departments of Health Policy and Management, Population and Family Health Sciences, and Epidemiology.

### *Admissions Criteria*

To be eligible to receive a certificate in Injury Control, students must be admitted to a graduate degree program in the Johns Hopkins Bloomberg School of Public Health. For more information on this certificate program at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=3>

## INTERNATIONAL HEALTH POLICY AND FINANCING

### *Sponsoring Department*

International Health

### *Educational Objectives*

To develop skills and knowledge related to analysis and decision-making for health

systems' organizations, financing, and service delivery, particularly in low and middle-income countries and for health policy issues related to disadvantaged populations. The curriculum focuses on policy analysis, economics, financing and oversight of national health systems.

### *Intended Audience*

Policy-makers, policy analysts, and senior managers of health systems in low and middle-income countries, as well as program officers, analysts, and policy makers in international organizations. The intended audience includes MHS and PhD students in the Departments of International Health and Health Policy and Management, and MPH students.

### *Admissions Criteria*

The certificate is coursework-based. Students intending to complete the certificate must be enrolled in a degree program in the School of Public Health, and must advise the faculty sponsors of intent to complete the certificate prior to completion of coursework. For more information on this certificate program at the School of Public Health please go to:

<http://commprojects.jhsph.edu/academics/prop.cfm?id=6>

## MATERNAL AND CHILD HEALTH

### *Sponsoring Department*

Population and Family Health Sciences

### *Educational Objectives*

Upon completion of the core courses of the Maternal and Child Health 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 of 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 School of Public Health with an interest in the health of women and children.

***Admissions Criteria***

Students must be admitted to a degree program in the School of Public Health. The application for this program can be found at: [www.jhsph.edu/Dept/PFHS/Degree\\_Programs](http://www.jhsph.edu/Dept/PFHS/Degree_Programs).

For more information on this certificate program at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=7>.

**VACCINE SCIENCE AND POLICY**

***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 Johns Hopkins Bloomberg School of Public Health.

***Admissions Criteria***

Prior admission to a JHSPH degree program and written approval of student's faculty advisor. For more information on this certificate program at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=4>.

**Certificate Programs Open to Johns Hopkins University or School of Public Health Students and Non-Degree Students:**

**ENVIRONMENTAL HEALTH**

***Sponsoring Department***

Environmental Health Sciences

***Educational Objectives***

The objectives of this certificate program are to educate and train students to: identify the major environmental health issues facing public health professionals today; describe the sources of environmental agents, their distribution in the environment, transfer routes to the human, and possible health effects; describe the basic biological mechanisms underlying the association between prior exposure and subsequent development of adverse effects; and discuss control strategies, including primary, secondary, and tertiary interventions.

***Intended Audience***

Public health professionals currently practicing environmental health without adequate formal training, current degree candidates in the School, and non-degree candidates wishing to begin their formal training in environmental health.

***Admissions Criteria***

The program is open to any student qualified to register as a special student limited or special student regular, and Bloomberg School of Public Health degree candidates. Information on registration in a special student category be found at:

[www.jhsph.edu/student\\_affairs/registrar/](http://www.jhsph.edu/student_affairs/registrar/)

For more information on this certificate program at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=14>

**HEALTH EDUCATION**

***Sponsoring Department***

Health, Behavior and Society

***Educational Objectives***

Upon completion of this certificate program, students will possess the knowledge and skills necessary to understand and modify the personal and environmental factors that influence health-

related behaviors, and by doing so, impact the overall health of individuals and communities. Upon completion of the core courses of the certificate, students will gain a broad understanding of health education principles, theories, and strategies, and will achieve the competencies considered central to effective health education.

***Intended Audience***

This certificate is open to any student in a degree program within the School of Public Health and to any student qualified to register as a special student limited or special student regular. However, when these participants obtain 16 credits, they will be required to apply to the School, either for a degree program or as a special student regular. Special student regular status will allow these individuals to complete the remaining credits for the certificate. Application as a special student regular to the School will also provide a check of appropriate academic credentials prior to the completion of the certificate. Please visit the Records and registration website for more information [www.jhsph.edu/student\\_affairs/registrar/](http://www.jhsph.edu/student_affairs/registrar/)

***Admissions Criteria***

Students interested in pursuing this certificate should complete an application available at Hampton House, room 492 before the last day of the add/drop period in the term in which they are completing the final course for the certificate. For more information on this certificate program at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=12>.

**HEALTH FINANCE AND MANAGEMENT**

***Sponsoring Department***

Health Policy and Management

***Educational Objectives***

Educational objectives of this Certificate Program are to provide an overview of current issues in the management and finance of health services delivery organizations to facilitate the development of knowledge and skills in one or more of the following areas: understanding the healthcare organizational environment; understanding organizations and building

leadership skills; process management and measurement; human resource development and management; financial management; strategic planning; and the measurement and analysis of performance indicators.

***Intended Audience***

The intended audience includes current students in the Department of Health Policy and Management who are majoring in health policy or behavioral sciences, but who are also interested in a health management concentration; MPH students interested in health management and finance issues; and non-degree students interested in current topics in health services management. Non-degree students must have completed at least an undergraduate degree in an accredited college or university.

***Admissions Criteria***

Non-degree students must have completed at least an undergraduate degree from an accredited college or university, and will enroll as special students limited. For more information on this certificate program at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=5>

**HEALTH POLICY**

***Sponsoring Department***

Health Policy and Management

***Educational Objectives***

The goal of the Certificate in Health Policy is to provide graduate training in the area of public policy as it applies to health. Participants will develop the knowledge and skills necessary to understand and influence policies that affect the health of individuals and communities.

***Intended Audience***

Students in master's and doctoral programs at the School of Public Health as well as students in the Master of Arts in Public Policy program at the Johns Hopkins Institute for Policy Studies.

***Admissions Criteria***

The certificate program is open to students who are enrolled in either a graduate program at the Johns Hopkins Bloomberg School of Public Health or in the Master of Arts in Public Policy

program in the Institute for Policy Studies. The program is also open to non-degree students interested in current topics in health policy who hold a minimum of a baccalaureate degree from an approved institution. Non-degree-seeking participants in the program will be designated as Special Students Limited for the first 16 credits of their certificate work. They will then be required to apply for Special Student Regular status or be admitted to a degree program at the School of Public Health in order to complete the remaining 4 credits for the certificate.

Note: This certificate is only open to students available for on-site coursework in East Baltimore.

For more information on this certificate program at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=8>

#### **OCCUPATIONAL HEALTH CERTIFICATE**

##### ***Sponsoring Department***

Environmental Health Sciences

##### ***Educational Objectives***

The objectives of this certificate program are to enable students to: identify the major occupational health issues (i.e., work-related adverse health effects) facing public health professionals today; describe the application of environmental, biological, medical and public health principles to the recognition, reduction, and prevention of occupationally-related adverse health effects; develop and evaluate control strategies for occupational problems, including primary, secondary, and tertiary interventions; and discuss current topical areas of concern such as employee assistance programs, employee health promotion, drug testing, and impairment and disability policies.

##### ***Intended Audience***

Public health professionals currently practicing occupational health without adequate formal training and current degree candidates in the School who wish to focus on occupational health issues.

##### ***Admissions Criteria***

The program is open to any student qualified to register as a Special Student Limited, Special

Student Regular or degree candidate. For more information on the certificate programs at the School of Public Health please go to: <http://commprojects.jhsph.edu/academics/prop.cfm?id=10>.

#### **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 terrorism threats to public health and to identify public health issues in disasters. 1. Describe the integration of risk sciences, communication, and public health law as it relates to public health preparedness and terrorism response. 2. Describe the key elements of public health practice and public health surveillance. 3. Develop and evaluate control strategies for emerging infections and ionizing radiation.

##### ***Intended Audience***

School of Public Health degree candidates interested in public health preparedness and non-degree special students who meet the admissions criteria.

##### ***Admissions Criteria***

For non-degree students: completion of the JHSPH application to the department as a special student regular, a bachelor's degree from an accredited college or university, two letters of recommendation, and official transcript. For current degree candidates: completion of the certificate application 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 School of Public Health, visit <http://commprojects.jhsph.edu/academics/prop.cfm?id=23>

#### **PUBLIC MENTAL HEALTH RESEARCH**

##### ***Sponsoring Department***

Mental Health

**Educational Objectives**

Offered through the Department of Mental Health, this program 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 epidemiologic 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 degree program in the Johns Hopkins Bloomberg School of Public Health interested in mental health; psychiatrists in residency training; postdoctoral fellows; and non-degree seeking students who have at least an undergraduate degree from an accredited college or university.

**Admissions Criteria**

Current School of Public Health students; non-degree 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 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 School of Public Health, visit <http://commprojects.jhsph.edu/academics/prop.cfm?id=17>.

**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 non-credit.

**Admissions Criteria**

**Admission Criteria for Credit Certificate Program**

Any student enrolled in a graduate program at the School or a non-degree 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 Non-Credit Certificate Program**

Students applying for the non-credit certificate program must have completed a minimum of 60 credit hours of baccalaureate level courses (or equivalent) AND 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 <http://commprojects.jhsph.edu/academics/prop.cfm?id=30>

**RISK SCIENCES AND PUBLIC POLICY CERTIFICATE**

**Sponsoring Department**

Epidemiology; Health Policy and Management; Environmental Health Sciences

**Educational Objectives**

This certificate provides instruction in risk assessment methods, policy, and risks communication. Courses are designed to provide the scientific basis of environmental health risk

and the ability to evaluate the policy implication of these scientific relationships for reducing risk.

***Intended Audience***

1. Research scientists interested in bridging science and policy
2. Public and private sector professionals who evaluate scientific data in the context of risk assessment and management
3. Decision makers and risk managers, such as regulators, corporate executives, elected officials, economists, engineers, and lawyers
4. Those responsible for communicating risk, such as lobbyists, journalists, and non-governmental organizations

***Admissions Criteria***

For admissions criteria and the application, visit <http://www.jhsph.edu/RiskSciences/Academics/Admissions.html>

For more information on the certificate programs at the School of Public Health, visit <http://commprojects.jhsph.edu/academics/prop.cfm?id=15>.

**TROPICAL MEDICINE**

***Sponsoring Departments***

Department of Environmental Health Sciences; International Health

***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 problems.

***Intended Audience***

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

***Admissions Criteria***

Graduate degree in a health related science; or bachelors degree with significant experience in a health profession. For more information on this certificate program at the School of Public Health please visit the website at <http://commprojects.jhsph.edu/academics/prop.cfm?id=13>.

**Certificates Open to Non-Degree Students ONLY:**

**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***

1. 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.
2. 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.

3. 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 School of Public Health please go to:  
<http://commprojects.jhsph.edu/academics/prop.cfm?id=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

1. evaluate the methods used to measure health effects in populations,
2. interpret basic, quantitative public health measures,
3. judge policy implications of public health data and research, and
4. be familiar with the difficulties of collecting, interpreting and analyzing data and their implications.

#### ***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 Montgomery County Campus and/or via the Internet. The Data Analysis Workshops are offered during the winter and summer institutes at the East Baltimore Campus.

#### ***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 School of Public Health please visit

<http://commprojects.jhsph.edu/academics/prop.cfm?id=29>.

## **OTHER PROGRAMS**

### **Community-based Public Health (CBPR)**

To reinforce the importance and strengthen competencies in CBPR at the Johns Hopkins Bloomberg School of Public Health and University-wide, the School offers multiple education/training opportunities in community-based participatory research. These include a year-long seminar series, an annual CBPR workshop, CBPR Summer Institute courses 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](mailto:lbone@jhsph.edu).

### **Johns Hopkins University Bloomberg School of Public Health and University of Pennsylvania Annenberg School for Communication Collaborative Education in Public Health Communication**

The last ten years have brought increasing recognition of the role and the expanding potential of communication in public health programs. 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. As a result, the demand for systematic persuasive

communication both nationally and internationally has been far ahead of the supply of well trained professionals with the expertise to develop, manage, implement, and evaluate communication activities. A coherent interdisciplinary course of study for both public health practitioners and researchers is now urgently needed, integrating communication theory, with contributions from the social, psychological, educational, and behavioral sciences, and communication practice, now an integral part of most public health programs.

Schools of public health offer a strong training in many of these fields, but are unable to provide the background in the field of communication theory. Conversely, schools for communication can provide a strong curriculum in communication and behavior change theory, but do not have an opportunity to provide students with epidemiologic skills, biostatistical methodology, health services research background, or direct access to populations or patients.

One way to bridge the gaps found within these different academic settings is to promote opportunities for students to pursue additional training outside their own academic community. The Johns Hopkins University Bloomberg School of Public Health (JHSPH) provides opportunities for education in the diverse fields of public health, including epidemiology, biostatistics, behavioral science, health communications, maternal and child health, risk sciences, management and delivery of health services, and environmental health sciences. The Annenberg School for Communication at the University of Pennsylvania offers students a firm grounding in various approaches to the study of communication and its methods drawn from both the humanities and the social sciences. The graduate program in communication at Annenberg provides training in three core areas: communication influence, communication and culture and communication institutions. Recognizing the need for a stronger theoretical base for the field of public health communication, for a better understanding of the role of modern technology, especially mass media, in diffusion of health innovations and in

health behavior change, as well as public health methods, and for well trained health communication researchers with field experience in different countries and with different media, we propose the establishment of a collaborative exchange program in public health communication.

### ***Purpose***

In order to enhance the training available in public health communication, The Johns Hopkins Bloomberg School of Public Health (JHSPH), and The University of Pennsylvania, Annenberg School for Communication, propose to collaborate on educational activities by offering an opportunity for students to attend courses given at both universities as a supplement to the normal course of study. This program will be most suitable for doctoral, and in some cases, Masters of Science or Masters of Health Science degree students, from BSPH and doctoral or masters students from Annenberg.

### ***Terms and Conditions***

The following are to be regarded as minimal terms and conditions of the program. The individual institutions may choose to establish more rigorous criteria, e.g., for eligibility or duration of study. Definition (for example, of “term,” “academic year,” and “hospitalization coverage,”) may vary accordingly to the policy and practice of each institution.

1. Eligibility - Students within the Bloomberg School of Public Health (Johns Hopkins University), or within the Annenberg School for Communication (University of Pennsylvania) will be eligible to be exchange scholars after they have completed an academic year of study in a graduate degree program in their home institution. Acceptance into the exchange program by the home institution will be based on procedures determined by each institution. All applications will then be submitted to the exchange institution for their review.
2. Duration - A minimum of one term of study (eight weeks at JHSPH and fifteen weeks at Annenberg) and a maximum of one

academic year will be permitted in the program.

3. Registration Status - Exchange scholars will be registered on a full-time basis at their home institution. They will be registered as special students in the exchange institution.
4. Tuition and Financial Aid - Tuition will be charged at the home institution rate and collected by the home institution, and any financial aid will be provided by the home institution. Such tuition will be retained by the home institution.
5. Health and Hospitalization Coverage - The Bloomberg School of Public Health at Johns Hopkins University requires full time students to participate in the health insurance plan provided by the school or certify that they have equivalent or better health insurance coverage from another provider. The University of Pennsylvania requires all full-time students to participate in the University—sponsored health insurance program or to demonstrate adequate health insurance coverage from another source.
6. Benefits - At each of the institutions, exchange scholars will be accorded all the benefits of that institution's resident students. They will receive a student I.D. card which permits access to the exchange institution's libraries, labs, health facilities, athletic facilities, and the like. Where these services entail fees in addition to tuition, the exchange institution will charge exchange scholars the same fees it charges its own graduate students. The Bloomberg School of Public Health may require fees such as, but not limited to, a late registration fee or a returned check fee as appropriate.
7. Records – At the start of each term/semester (for Hopkins, the end of the add/drop period), the registrar of the exchange institution will be responsible for providing information on the course registration (title, number instructor, credit or class hours) to

the home institution. Upon completion of each term, the registrar of the institution visited will collect the information concerning the exchange scholar's final grades and forward it (with appropriate stamps/seals and signatures) to the graduate school Dean of the student's home institution. The information will then be posted on the student's academic record or made part of the record as appropriate to the home institution.

8. Notification - The home institution will be responsible for notifying third parties of the exchange scholar status and activities.
9. Limitations - For the first year of the program, up to five (5) exchange scholars will be admitted to each of the participating institutions. For later years the number of students admitted will be by agreement of the two schools.

#### ***Application Procedures and Approval***

Any eligible student currently enrolled in either The Johns Hopkins University Bloomberg School of Public Health or at The University of Pennsylvania Annenberg School for Communication who is interested in the Collaborative Education Program should complete and submit the appropriate application and any supplementary material required by the respective institution. Permission to participate in the program requires the approval of the professor(s) offering the course(s) and the respective departmental officials listed on the form.

#### ***Modifications***

The Collaborative Education Program in Public Health Communication may be modified or terminated as of the end of any academic year with the mutual agreement of the parties.

#### ***Advisors***

Students will be assigned an advisor from the exchange institution who will help the student select appropriate courses. At BSPH, the advisor will be in a department that is closest to the student's area of interest (for example, Health, Behavior and Society, International Health or

Health Policy and Management) . At Annenberg, the advisor will be a faculty person who has expertise in the student's field of interest (such as visual communication, development communication, or mass media policy, content and effects).

### ***Withdrawals***

The exchange institution retains the right to require withdrawal of the visiting student for any violation of their Academic Ethics Policy.

### ***Credits***

Credits earned in courses taken at the exchange institution will be counted towards requirements for graduation. Each institution will determine course credits to be transferred from the exchange institution on a case by case basis.

### ***Courses***

While the Bloomberg School is on an eight week term system, with a limited number of summer courses available, Annenberg is on a semester system with no specific courses given during the summer. It is assumed that students at both universities will take advantage of those courses at the exchange institution that are not offered at the home institution.

### ***Johns Hopkins University Bloomberg School of Public Health***

In order to obtain a broad understanding of public health, students may wish to enroll in some courses that are required for the MPH degree and some courses offered by departments. Please refer to the on-line course search for a complete list of courses [www.jhsph.edu/academics](http://www.jhsph.edu/academics). Individual courses of study will vary depending on the student's particular field of interest.

Compressed courses offered as part of the Winter, Summer and other Institutes provide an opportunity for intensive study in basic and advanced areas. These programs require separate admission and tuition outside of this Agreement.

In addition to regular coursework, there are opportunities for special studies with faculty

members which can be designed to meet the needs of an individual student.

### ***University of Pennsylvania Annenberg School for Communication***

Courses are offered in three core areas: communication and culture, encompassing the analysis of meaning, content, symbols and message systems, the social and cultural contexts of communication and the social construction of realities; communication influence, which includes the study of communication behavior, belief and attitude formation and change, consequences of exposure to messages, mass communication and socialization; and communication institutions, which 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.

Appendix B gives some of the suggested courses. Students are referred to the full list of courses available in the Annenberg School for Communication Graduate Studies Catalog.

In addition to regular coursework, there are opportunities for special studies with faculty members which can be designed to meet the needs of an individual student.

### **APPENDIX B**

#### **ANNENBERG SCHOOL FOR COMMUNICATION Courses of Interest for Public Health Communication Students**

- 514, 515 Film Laboratory
- 516, 517 Video Laboratory
- 526 Political Communication
- 533 Social History of Communications  
Technology
- 534 Political Economy of Communication  
and Information
- 538 Communication and Development
- 544 Aesthetic Communications
- 550 Mass Media Industries
- 560 Semantics of Communications

- 562 Fundamentals of Visual Communication
- 568 Social Aspects of Mass Communication
- 575 Social Psychology of Communication
- 624 Survey Research Design
- 628 Sociology of Mass Communication
- 634 Audience Analysis
- 635 Political Economy of International Communication
- 640 Analysis of Data in Large-Sample Communication Research
- 660 Content Analysis
- 662 Research in Visual Communication
- 670 Information in Qualitative Data
- 676 Social Psychology of Communication
- 680 Models of Communication
- 720 Seminar in the Sociology of Communication
- 740 Mass Media Research Design
- 768 Studies in Mass Communication

### **Pre- and Postdoctoral Training Programs**

A doctoral education and conducting research are inseparably linked. Based on this philosophy, monies from sources such as the National Institutes of Health and Fogarty International Center are given to the University to support groups of faculty that have developed training programs in specific research areas. This money is used for tuition and stipend support for pre-doctoral students and postdoctoral fellows.

For specific opportunities, please visit <http://commprojects.jhsph.edu/academics/> or contact the Department of interest directly.

Postdoctoral applicants must submit the Application for Postdoctoral Fellowships form, available online at [www.jhsph.edu](http://www.jhsph.edu), to the Admissions Office. In addition, an official academic transcript showing completion and award of a doctoral degree must be submitted, along with other posted requirements.

### **Residency Training**

#### **General Preventive Medicine Residency**

*Director: Miriam H. Alexander, MD, MPH*

The General Preventive Medicine Residency (GPMR) is a two-year program with the goal of preparing physicians 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 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 United States or Canada prior to entering the program.* This year may either be a transitional internship or part of a residency. Graduating medical students in the United States 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, New York, 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. 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 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 the Admissions Office 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 School's website, [www.jhsph.edu](http://www.jhsph.edu). For further information about the General Preventive Medicine Residency or the elective, visit [www.jhsph.edu/gpmr](http://www.jhsph.edu/gpmr), or contact the administrator, Linda Myers, 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: [gpmr@jhsph.edu](mailto:gpmr@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 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 United States or Canada 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, dermatology). Depending on the prior training of the individual applicant, specialized fellowships involving only the first or second year of the residency program are possible.

The first (academic) year, involves course work 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 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 the Admissions Office by October 31. Interviews are required; applicants selected for interviews are invited to come to campus in November and early December. For application information please visit the School's website, [www.jhsph.edu](http://www.jhsph.edu).

For further information about the Occupational Medicine Residency, visit [www.jhsph.edu/omr](http://www.jhsph.edu/omr), or contact the administrator, Linda Myers, 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 [occmmed@jhsph.edu](mailto:occmmed@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, condensed courses taken during summer and winter institutes and courses taken at the University's Montgomery County campus.

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. Some of the courses are available for continuing medical education and continuing education credit.

### **INTERNET-BASED COURSES**

Many of the School's courses are now available via the Internet. In addition, the Master of Public Health Program is available via the Internet. For details, please see the Master of Public Health Program section or visit [www.jhsph.edu/Academics/MPH/index.html](http://www.jhsph.edu/Academics/MPH/index.html).

The flexibility provided by this format allows students to fit courses into their own schedules. Courses can be accessed anytime, anywhere—as long as students have reliable Internet service and have access to a computer sufficiently equipped to handle the learning materials provided in the courses. Please note that Internet courses may not be taken on an audit basis.

For more information and a full listing of online courses, please visit <http://distance.jhsph.edu>, or call 1-888-548-6741.

Because the School's Internet courses use unique online learning tools, successful completion of the Introduction to Online Learning course (offered via the Internet only) is required prior to participating in any of the School's Internet courses. For registration details and additional course information, please visit <http://distance.jhsph.edu/oll>.

### **MONTGOMERY COUNTY CAMPUS COURSES**

The School of Public Health offers core courses at the University's Montgomery County Campus (MCC). These courses form a foundation on which working professionals in the Washington area can build a plan of study that, upon admission, can be applied to various degree or certificate programs.

For the most current and detailed information about the School's opportunities for programs and professional development, please visit the School's website at <http://www.jhsph.edu>, or call 301-294-7060.

### **CERTIFICATES**

Certificate programs represent courses of study in specific areas of public health. The School offers various certificates designed for degree students only, for degree and non-degree students together, and for non-degree 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. A certificate of program completion is issued by the sponsor upon satisfactory completion of course work.

For details, please see the section on Certificates, in the Academic Information chapter, or visit <http://commprojects.jhsph.edu/academics/Certificate.cfm>.

### **CONTINUING LIFELONG EDUCATIONAL OPPORTUNITIES FOR ALUMNI**

Alumni may now participate in "on-cycle" online courses on a non-credit basis. On-cycle, non-credit 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 course work. For information, please visit [www.jhsph.edu/alumni](http://www.jhsph.edu/alumni).

### **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 section on Special Students in the Administrative Regulations chapter.

### **INSTITUTES**

The School offers a winter institute and various departments within the School sponsor summer institutes which 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. All the listed institute courses may be taken for academic credit.

### **Graduate Summer Institute of Epidemiology and Biostatistics**

The Departments of Epidemiology and Biostatistics at the Johns Hopkins Bloomberg School of Public Health 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 both the U.S. and numerous other countries from all continents.

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 24th Annual Graduate Summer Institute of Epidemiology and Biostatistics will be held June 19–July 7, 2006. The program will offer courses with varying durations, with some of the courses offered over a three-week period, some two weeks 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; Intermediate Epidemiology; Design and Conduct of Clinical Trials; Applications of Cohort Studies; Applications of the Case-Control Method; Conducting Epidemiologic Research; Infectious Disease Epidemiology; 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 [akh@jhsph.edu](mailto:akh@jhsph.edu), or visit [www.jhsph.edu/summerepi](http://www.jhsph.edu/summerepi).

### **Health Emergencies in Large Populations (H.E.L.P.) Summer Institute**

Each July, the Department of International Health, Center for International Emergency, Disaster and Refugee Studies, holds a summer institute course at the East Baltimore campus. The course is designed to develop or improve the skills of persons and organizations providing emergency health services in humanitarian emergencies. During the three-week session, the following topics are covered: Definition and Response, 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 a general or a specific assistance Health program for a displaced population
- 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 a crisis
- apply the principles of International Humanitarian Law when providing services in conflict situations

For more information, please contact Linda Jennings 410-955-3928, email

[lijennin@jhsph.edu](mailto:lijennin@jhsph.edu) or visit the website [www.jhsph.edu/Refugee/HELP](http://www.jhsph.edu/Refugee/HELP).

### **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. 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 Toni Harris at 410-955-3908, email [asharris@jhsph.edu](mailto:asharris@jhsph.edu) or visit the website at [www.jhsph.edu/Dept/MH/Summer\\_Institute/index.html](http://www.jhsph.edu/Dept/MH/Summer_Institute/index.html)

### **Summer Institute in Health Policy and Management**

The Health Policy and Management Summer Institute at the Johns Hopkins Bloomberg School of Public Health provides short-term, intensive educational opportunities for public health practitioners. 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, health management and health education issues. Participants learn about policies and management/leadership approaches that work and study current innovations. The program also teaches strategies for effective policy implementation and management. Some of the course offered by the Institute are equivalent to regular academic year courses and may be taken

for academic credit. Institute courses also carry continuing medical education, continuing health education or continuing education credits. The Annual Health Policy and Management Summer Institute is held each June in Baltimore, Maryland. For information on the institute offerings, contact Ms. Pamela Davis at [pdavis@jhsph.edu](mailto:pdavis@jhsph.edu) or 410-614-1580. Or visit the institute website at [www.jhsph.edu/dept/hpm/continuing\\_ed/summer\\_institute/](http://www.jhsph.edu/dept/hpm/continuing_ed/summer_institute/)

### **Fall Institute in Health Policy and Management - Barcelona, Spain**

The Department of Health Policy and Management and the Public Health Agency of Barcelona, in collaboration with the Pompeu Fabra University, have established the Fall Institute in Health Policy and Management, to be offered in Barcelona, Spain. The Fall Institute serves as a venue for health professionals to begin or enhance their education in a variety of public health disciplines, with coursework focusing on policy and management of environmental protection, disaster prevention and response, advanced techniques of health care management and evaluation, and reduction of health inequalities. Senior faculty from the U.S. and European institutions will provide courses in one to four day's duration that are available for Johns Hopkins academic credit or for continuing education. Courses to be offered will also meet certain certificate requirements. The next Fall Institute will take place from October 30 to November 18, 2006. For information on the institute offerings, contact Ms. Pamela Davis at [pdavis@jhsph.edu](mailto:pdavis@jhsph.edu) or 410-614-1580 or visit the institute website, [www.jhsph.edu/dept/hpm/continuing\\_ed/fall\\_institute](http://www.jhsph.edu/dept/hpm/continuing_ed/fall_institute).

### **Summer Institute in Population and Family Health /Maternal and Child Health**

The Summer Institute in Population and Family Health/Maternal and Child Health is designed to provide training in the importance of contemporary issues in population health and maternal and child health. This is an intensive two-week program that includes evening and weekend work. Instruction takes place through a mixture of seminars, short lectures, group work, and individual presentations. After completion,

participants will be able to describe the importance of contemporary issues in population health and maternal and child health; be familiar with (basic) research of major population/maternal and child health problems; translate research into policy and programmatic implications; and be aware of sources of information that they may use to develop further research and programmatic skills.

For more information, contact Linda Kelly at 410-955-3804 or [lkelly@jhsph.edu](mailto:lkelly@jhsph.edu) or visit [www.jhsph.edu/Dept/PFHS/MCH\\_SummerInst/index.html](http://www.jhsph.edu/Dept/PFHS/MCH_SummerInst/index.html).

### **Summer Institute: Principles and Practice of Injury Prevention**

This one-week intensive summer course is sponsored by the Department of Health Policy and Management through the Center for Injury Research and Policy. It is targeted to those new to the field of injury prevention and those who seek to broaden or advance their basic skills and knowledge. Students come from around the world to participate in this unique learning experience promoting valuable interaction and shared learning between participants. Leading experts in injury control from Johns Hopkins, and from other institutions around the nation, conduct the lectures and discussions on behavioral, biomechanical, environmental, epidemiological, legislative, policy, and community partnership approaches to injury prevention and control. Small group exercises are held daily, which enable participants to apply what they've learned in lecture and integrate this with previous experience. The week culminates with group reviews of grant proposals using the strategies, skills, and tools learned throughout the week.

This course may be taken for 3 academic units, or for a non-credit certificate of attendance. CHECH credits are also offered. If taken for academic credit, the student will be evaluated on participation in group exercises and a final paper. Credit in this course may be applied toward the JH Certificate in Injury Prevention. For more information, contact Mary Beth Jackson at 410-955-7980 or

[mjackson@jhsph.edu](mailto:mjackson@jhsph.edu) or visit the website at [www.jhsph.edu/InjuryCenter/index.html](http://www.jhsph.edu/InjuryCenter/index.html).

### **Summer Institute in Tropical Medicine and Public Health**

The Department of Environmental Health Sciences and the Department of International Health sponsor 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, social sciences relevant to operating 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 Cristina Salazar, at 410-614-3639, email [csalazar@jhsph.edu](mailto:csalazar@jhsph.edu), or [tropmed@jhsph.edu](mailto:tropmed@jhsph.edu), or visit <http://www.jhsph.edu/Tropic>

### **Johns Hopkins Center for American Indian Health Summer Institute**

The Johns Hopkins Center for American Indian Health conducts a one-week Summer Institute in introductory biostatistics and epidemiology. The institute is designed to introduce tribal health leaders and related healthcare professionals and paraprofessionals who have had no formal training in epidemiology, but may be working to determine tribe's priorities for health care, determining tribe's approaches to addressing priorities, or working/interested in clinical research or public health within tribal communities.

For more information, contact Felicia Frizzell or Allison Barlow, Johns Hopkins Center for American Indian Health, the Johns Hopkins Bloomberg School of Public Health, 621 North Washington Street, Baltimore, MD 21205. Phone: 410-955-6931, or email: [ffrizzell@jhsph.edu](mailto:ffrizzell@jhsph.edu) or [abarlow@jhsph.edu](mailto:abarlow@jhsph.edu).

### **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 non-degree seeking students. The institute offers courses in areas including biostatistics, epidemiology, international health, environmental health sciences, molecular microbiology and immunology, population and family health sciences, and health policy and management.

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](mailto:mphprog@jhsph.edu).

For information on courses for audit, contact Helen Walters at 410-614-5985, email [hwalters@jhsph.edu](mailto:hwalters@jhsph.edu) or visit the School's website at [www.jhsph.edu/winter](http://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***—Now part of the Preventive Medicine/Public Health Grand Rounds series, these lectures provide an opportunity to introduce faculty members and students to outstanding accomplishments and issues presented by distinguished lecturers who are on the faculty, or, in special cases, from outside 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 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 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 Memoria 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.

# Administrative Regulations

## CATEGORIES OF STUDENTS

### Degree Students

Doctoral, MHS and ScM candidates must remain continuously enrolled at the Johns Hopkins Bloomberg School of Public Health in an officially recognized student category until the program is terminated by either award of degree or official withdrawal. Doctoral students must register for a minimum of three (3) credit units per term; MHS and ScM candidates for a minimum of two (2) credit units per term. 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 Johns Hopkins Bloomberg School of Public Health 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. Students who have been in nonresident status are required to return to resident status during the academic term during which degree requirements are completed. See 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 fulltime dissertation research, field placement, or the equivalent, under the direction and supervision of the faculty of the School, must maintain quarterly registration in a recognized student status.

#### *Nonresident*

This category is designed to accommodate students who wish to maintain their degree status during periods when they are not involved in formal work at the Johns Hopkins Bloomberg School of Public Health. Such status is reserved for a candidate for the doctorate who has completed all requirements for the degree except the dissertation and who has permission to continue work on the dissertation away from the School. The nonresident student does not use the School's resources and maintains regular but minimal contact with his/her advisor. It is expected that nonresident students will be working on their dissertation on a full-time basis in geographic areas that do not permit frequent contact with School faculty or use of School resources.

With the approval of the individual's advisor, department chair, and the Committee on Academic Standards, a graduate student may request to be placed in nonresident status on an annual basis, for a period not to exceed a total of five years. In order to remain in nonresident status, it is the responsibility of the sponsoring academic department to determine whether the student's dissertation pursuits are equivalent to full-time study and to confirm that the student is continuing to make the equivalent of full-time progress on the dissertation. A student who is physically present at the School, or who is employed by the University, may not be in

nonresident status. To be considered for this category, prior approval must be obtained from the chair of the student's department, from the student's advisor, and from the Committee on Academic Standards. Once approved for this status, students must register quarterly to maintain degree candidacy. Students in nonresident status during academic year 2006-2007 will be required to pay a fee equal to fifteen percent of fulltime tuition. In order to conform with U.S. government regulations, a foreign student requesting nonresident status must have a clearance from the Office of International Student and Faculty Services. Students who have been nonresident will be required to return to resident status during the academic term in which degree requirements are completed.

### **Leave of Absence**

Leave of absence refers and is limited to students 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. 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 advisor, 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 or nonresident 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 graduation.

### **TIME LIMITATIONS**

To maintain degree candidacy:

1. Students enrolled in master's degree programs must fulfill all requirements within the time limits prescribed for the program.
2. Doctoral students must fulfill all requirements within seven calendar years after matriculation. The above time limitations are applicable regardless of student status, "in residence" or "nonresident," during the indicated period. 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 Johns Hopkins Bloomberg School of Public Health are classified as special students. This may be because they have not yet attained degree status or are not seeking a School of Public Health 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 course work 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 the Admissions Office 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 course work may be accumulated by a special student limited.

Course work 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 their MPH programs 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 their MPH programs must register full-time each term until they complete their residency requirements. These credits are usually in special studies and research, but selected course work 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 on a per-term basis 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 Registrants***

Students in other schools of the University are admitted to courses at the Johns Hopkins Bloomberg School of Public Health on a space-available basis without the formalities of application. Registration for courses at the School must be authorized by the director of the Office of Records and Registration of the sponsoring division. An interdivisional registration form must be submitted for the corresponding academic terms.

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. This is not the case in the summer or the winter intersession. Students should not plan to enroll in courses from multiple Johns Hopkins University divisions during the summer.

Because not all divisions of the University share the same grading policies, interdivisional registrants should consult their home division Office of Records and Registration to learn the appropriate grade conversion among divisions.

**ACADEMIC YEAR**

The 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 Institutes .....May–July
- Summer- Regular Term ...July–August
- First Term.....September–October
- Second Term .....November–December
- Winter Intersession .....January
- 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 Johns Hopkins Bloomberg School of Public Health 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 registration periods. Included among those who must register are those students and trainees who:

- 1. Are either entering or continuing in a

degree program. This includes nonresident students who must register for each academic year.

- 2. 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 course work requirements for the degree, and are engaged in dissertation research or the equivalent. See the section on Post-certified Status.
- 3. 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.
- 4. Are not degree candidates but are attending classes either full- or part-time as regular or limited special students. Auditors must register.
- 5. 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, doctoral students must register for a minimum of three (3) credit units per term; MHS and ScM candidates for a minimum of two (2) credit units per term.

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

**RESIDENCE AND COURSE CREDIT**

The 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:

1. The student has completed all course requirements, including examinations, and has received a passing grade.
2. The student has registered to take the course for academic credit at the time of enrollment during the official registration period.
3. 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 continuing education 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.

Course work 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 (credit and audit). 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. 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 Johns Hopkins Bloomberg School of Public Health programs.

## GRADING SYSTEM

### Purpose

The grading system at the Johns Hopkins Bloomberg School of Public Health 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 Student Web Services, <https://registration.jhu.edu>.

### 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. *Grade Quality Points Meaning*

A 4.0 Excellent

B 3.0 Good

C 2.0 Fair (satisfactory)

D 1.0 Poor

F 0.0 Fail

In addition, the letter “I” is used to designate incomplete, “W” to indicate withdrawal, “M” for multiple-term courses (grade assigned in a subsequent term), “N” or “X” in cases where the instructor fails to report grades. (Note: I, M, N, 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 N or X (grade not received from course instructor) is received. No course credit will be acquired for undergraduate level courses taken 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:

1. A minimum grade point average of 2.25 for graduation in the MHS and ScM degree programs and 2.75 for graduation in the MPH program.
2. A minimum grade point average of 2.75 for graduation in a doctoral program.
3. Grades of A, B, C, or P (pass) in all courses required by the School or by the student's department.
4. Written documentation of successful completion of all School and departmental degree requirements within the established time limitations. (Refer to the sections on Graduation in each degree program description for specific requirements.)
5. Confirmation of satisfactory performance by the student's department and/or advisor 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 Johns Hopkins Bloomberg School of Public Health may elect to take courses on a pass/fail basis only with the consent of their academic advisor. 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.

Course instructors do not know which registrants are enrolled on a pass/fail basis until final grade rosters are distributed, usually the sixth week of the term. 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 advisor, student, or department needs to know the specific grade a student earns, the student should not be permitted to enroll 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 view their registration periodically by logging onto Student Web Services, <https://registration.jhu.edu>.

*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 two consecutive terms 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 advisor'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. The student's advisor 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 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 view their registration periodically by logging onto Student Web Services, <https://registration.jhu.edu>.

### **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, 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.

### **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 entered along with a comment regarding the circumstances that caused the change to be made.

The School of Public Health 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 view their grades periodically by logging onto Student Web Services, <https://registration.jhu.edu>.

## **TRANSCRIPTS**

Beginning with the 2005-06 academic year, students who want transcripts of their Johns Hopkins Bloomberg School of Public Health academic records or who want them forwarded elsewhere may submit online requests at [www.jhsph.edu/student\\_affairs/registrar/transcripts.html](http://www.jhsph.edu/student_affairs/registrar/transcripts.html) or by completing 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 \$10.00 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 5). There is a nominal fee charged for non-rush requests. Rush request transcripts will be available the next business day. 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.

Transcripts are normally issued only at the request of the student or with his or her consent. The only exception to this policy is the issuance of transcripts to offices and departments in the School. No charge is made under these circumstances.

## **GRADUATION**

The graduation ceremony is held once annually. Diplomas bear the date of the University's annual Commencement exercises. The School has its own convocation ceremony, typically conducted the day before Commencement, during which time doctoral students are hooded and masters 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 School's Academic Ethics Code can be viewed at <http://apps1.jhsph.edu/academicethics/>.

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

Students enrolled in the Johns Hopkins Bloomberg School of Public Health 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 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 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 <http://apps1.jhsph.edu/academicethics> that reviews the Academic Ethics Code and provides case studies of academic ethics violations. All students must complete this online module before graduation.

## **STUDENT CONDUCT CODE**

The faculty, staff, and students of the Johns Hopkins Bloomberg School of Public Health and the Johns Hopkins University 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 faculty, staff, and students 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 Johns Hopkins Bloomberg School of Public Health 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 Johns Hopkins Bloomberg School of Public Health. The Conduct Code covers students of the Johns Hopkins Bloomberg School of Public Health 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 enforcement 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 Johns Hopkins Bloomberg School of Public Health. 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.

A complete copy of the student conduct code is available at: [www.jhsph.edu/schoolpolicies/policy\\_student\\_conduct.html](http://www.jhsph.edu/schoolpolicies/policy_student_conduct.html) as well as from the office of the Associate Dean for Student Affairs.

## **HUMAN SUBJECTS**

The Johns Hopkins Bloomberg School of Public Health is committed to protecting the rights and welfare of individuals participating as subjects in research studies. This commitment is an important aspect in the responsible conduct of human subjects' research. To meet this obligation, the School has two duly constituted standing Committees on Human Research (Institutional Review Boards) comprised of members of the faculty, student body, and the community. The Committees on Human Research 1 and 2 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 the use of human subjects. It is the responsibility of students and faculty to make certain that approval is obtained from one of the Committees on Human Research before beginning any research involving human subjects. Exempt status for research must be certified by the Committees on Human Research 1 and 2. Participation as a human subject may not be required either explicitly or implicitly as a term or condition of a student's academic enrollment or progress.

For additional information and requirements on conducting human research, please contact the Office for Research Subjects (ORS), Room E1100, Wolfe Street Building (410-955-3193); or visit the website at [www.jhsph.edu/chr](http://www.jhsph.edu/chr).

## **INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE**

Many faculty and students in the School 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 School of Public Health, 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 protocol MUST be obtained before animals can be purchased. Questions involving submissions of protocols to the IACUC should be addressed to Mickie Bell-Frazier at 443-287-3738. An online internet training module is available at <https://secure.lwservers.net/jhmrcr> (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](http://www.jhu.edu/animalcare).

## **UNIVERSITY POLICY STATEMENTS**

### **Campus Security Act**

In keeping with the mandates of the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act, the University's annual report contains statistical compilations of reported crimes that occurred on campus, in certain off-campus buildings owned or controlled by the University, and on public property within or immediately adjacent to and accessible from the campus for the three most recent calendar years. Also included are campus security policies, including those related to alcohol and drug use, sexual assault, crime prevention, and reporting of crimes.

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 call 410-516-4600.

All Johns Hopkins faculty, staff, and students are encouraged to read and print out the report from <http://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 protected 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, Director of Career Services and Disability Support, School of Public Health, 615 N. Wolfe Street, Suite E1002, Baltimore, Maryland 21205, 410-955-3034. Ms. Addison will submit the documentation to the Associate Director for 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. It is important to make an appointment, or consult by phone, with the School's disability services coordinator at least two 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 problems, faculty and staff concerns, and identification of other support services, please contact Peggy Hayeslip, Associate Director for Disability Services in the Office of Equal Opportunity and Affirmative Action Programs, 3400 North Charles Street, 130 Garland Hall, Homewood Campus. Phone: 410-516-8949, TTY: 410-516-6225.

### **Nondiscriminatory Policy as to Students**

The Johns Hopkins University admits students of any race, color, gender, religion, national or ethnic origin, age, disability, marital status or veteran status to all of the rights, privileges, programs, benefits, and activities generally accorded or made available to students at the

University. It 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 protected characteristic in any program or activity, including the administration of its educational policies, admission policies, scholarship and loan programs, and athletic and other University-administered programs or in employment. Accordingly, the University does not take into consideration personal factors that are irrelevant to the program involved.

Questions regarding access to programs following Title VI, Title IX, and Section 504 should be referred to the Office of Equal Opportunity and Affirmative Action Programs, 130 Garland Hall, 410-516-8075.

### ***Policy on the Reserve Officer Training Corps.***

Present Department of Defense policy governing participation in University-based ROTC programs discriminates on the basis of sexual orientation. Such discrimination is inconsistent with the Johns Hopkins University nondiscrimination policy. Because ROTC is a valuable component of the University that provides an opportunity for many students to afford a Hopkins education, to train for a career, and to become positive forces in the military, the University, after careful study, has continued its ROTC program but encourages a change in federal policy that brings it into conformity with the University's policy.

### **Photography and Film Rights Policy**

The Johns Hopkins University reserves the right from time to time to film or take photographs of faculty, staff, and students 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. Faculty, students, and staff who do not want their photographs used in the manner(s) described in this policy statement should contact the Office of Communications and Public Affairs.

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 a 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 faculty and staff. 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.

#### **Privacy Rights of Students**

The Johns Hopkins University complies with the provisions of the Family Educational Rights and Privacy Act of 1974 (Public Law 93-380) as

amended (Public Law 93-568) and regulations promulgated thereunder. Eligible students, as defined in the regulations, have the right to inspect and review their education records, as defined in the regulations; to request the amendment of their education records if they are inaccurate, misleading, or otherwise in violation of the student's rights; to consent to the disclosures of personally identifiable information in their education records except to the extent permitted by law, regulation, or University policy; to file a complaint with the United States Department of Education if the University has failed to comply with the requirements of law or regulation. The University's policy on Family Educational Rights and Privacy is published periodically in the University Gazette. Copies of the policy are available at: [www.jhu.edu/news\\_info/policy/ferpa.html](http://www.jhu.edu/news_info/policy/ferpa.html) and Student Affairs (Room E1002, Wolfe Street Building).

#### **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 faculty, staff, or students from 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 distribution of alcohol or other drugs on University property or as a part of University activities.

It is the policy of the Johns Hopkins 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 the University policy on alcohol abuse and maintenance of a drug-free workplace, 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 the University Drug-Free Workplace 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 (5) 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 (10) 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 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 can only exist when each member of our community is assured an atmosphere of mutual respect, one in which they are judged solely on criteria related to academic or job performance. The university is committed to providing such an environment, free from all forms of harassment and discrimination. Each member of the community is responsible for fostering mutual respect, for being familiar with this policy and for refraining from conduct that violates this policy.

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, and other behavior of a sexual nature when:

- 1) submission to such conduct is made implicitly or explicitly a term or condition of an individual's employment or participation in an educational program;*
- 2) submission to or rejection of such conduct by an individual is used as the basis for personnel decisions or for academic evaluation or advancement;*
- 3) 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.*

Fundamental to the University's purpose is the free and open exchange of ideas. It is not, therefore, the University's purpose, in promulgating this policy to inhibit free speech or

the free communication of ideas by members of the academic community.

***Policy***

The University will not tolerate sexual harassment, a form of discrimination, a violation of federal and state law and a serious violation of university policy. In accordance with its educational mission, the university works to educate its community regarding sexual harassment. The University encourages individuals to report incidents of sexual harassment and provides a network of confidential consultants by which individuals can report complaints of sexual harassment. The means by which complaints are resolved can range from informal to formal.

The University encourages reporting of all perceived incidents of sexual harassment, regardless of who the alleged offender may be. Individuals who either believe they have become the victim of sexual harassment or have witnessed sexual harassment should discuss their concerns with any member of the Sexual Harassment Prevention and Resolution system. Complainants are assured that problems of this nature will be treated in a confidential manner, subject to the University's legal obligation to respond appropriately to any and all allegations of sexual harassment.

The University prohibits acts of reprisal against anyone involved in lodging a complaint of sexual harassment. Conversely, the university considers filing intentionally false reports of sexual harassment a violation of this policy.

The University will promptly respond to all complaints of sexual harassment. When necessary, the university will institute disciplinary proceedings against the offending individual, which may result in a range of sanctions, up to and including termination of university affiliation.

Complaints of sexual harassment may be brought to the dean or director of a division, Ray Gillian, associate provost and director of Equal Opportunity for the University, or

Caroline Laguerre-Brown, associate director for compliance and conflict resolution, 130 Garland Hall, Telephone: 410.516.8075, TTY: 410.516.6225.

**Student Grievance Procedure**

On occasion, disputes arise between students and other members of the School of Public Health community. The School encourages individuals involved in such disputes to resolve the matter directly between them. 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 School of Public Health procedure or regulation by an instructor or other member of the faculty or School administrator or body.

Some conduct is governed by other policies in the 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 Student Affairs website at <http://www.jhsph.edu/schoolpolicies/ppms.html> (select PPM Students #7 - Student Grievance Procedure), or a copy may be obtained from the Associate Dean for Student Affairs in Suite E1002, Wolfe Street building.

### **Policy on 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.

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.

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.

For additional information, please visit the University’s web site at [www.jhu.edu](http://www.jhu.edu).

### **Weather Emergency Policy**

In the event of snow or other weather emergency, the provost of the University or his designee will decide whether and when to curtail operations of the University. The Hopkins Weather Hotline and Web site are the best sources of complete Hopkins information.

#### ***Hopkins Weather Hotline***

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

#### ***Hopkins Weather Web Site***

Johns Hopkins University:  
<http://webapps.jhu.edu/emergencynotices>

The decision will also be reported to the following radio and television stations:

#### ***Radio***

WYPR-FM 88.1 (Baltimore)  
WBAL-AM 1090 (Baltimore)  
WIYY-FM 97.9 (Baltimore)  
WPOC-FM 93.1 (Baltimore)  
WMAL-AM 630 (Washington)  
WGMS-FM 103.5 (Washington)  
WTOP-AM 820 (Washington)  
WTOP-AM 1500 (Washington)  
WTOP-FM 107.7 (Washington)

#### ***TV***

WMAR-TV 2 ABC (Baltimore)  
WBAL-TV 11 NBC (Baltimore)  
WJZ-TV 13 CBS (Baltimore)

*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 Johns Hopkins Bloomberg School of Public Health (the 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 paper brochures, electronic format on the internet, or other media. By your presence in these facilities you consent to capture of your image and use by the School.

## **BLOOMBERG SCHOOL OF PUBLIC HEALTH NOTIFICATION OF FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT**

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 *State 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

[http://www.jhu.edu/news\\_info/policy/ferpa.html](http://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 linkages between the academic mission of the School and public health careers. Student Affairs brings together the functions of several offices to serve a student from the time of initial inquiry through graduation and beyond: Admissions, Career Services, Disability Support Services, Student Outreach Resource Center (SOURCE), Records and Registration, Student Diversity, Student Financial Services, and Student Affairs Operations.

### **LIVING ACCOMMODATIONS**

#### ***Reed Hall***

The Johns Hopkins Medical Institutions provide residence hall living accommodations in the Lowell J. Reed Hall for single students or married students not accompanied by their spouses. This facility is located within easy walking distance of the Johns Hopkins Bloomberg School of Public Health. 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. The East Wing consists of 4-person and 8-person suites of rooms arranged with common living, kitchen, and bathroom areas with adjacent private bedrooms. In both wings room furnishings include bed, chest of drawers, desk and desk lamp, chair, bookshelves, and closet. Each West Wing room is furnished with carpet, study chair, and venetian blinds. The residents of both wings

must provide their own bedding and towels. In addition, residents of the East Wing must provide 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. A recreational center is located adjacent to Reed Hall. Membership to the Denton A. Cooley Center is free to all full-time degree students and full-time regular 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, three outdoor lighted tennis courts, weight room, exercise areas, and locker rooms with saunas. An outdoor pool is available on a membership basis. Reservations for room rentals must be made in advance of arrival. Single rooms are available from approximately \$375 to \$450 per month depending on size. Suites in the East Wing range from \$410 to \$425 per month per person. A one-month security deposit is required. An application for on-campus housing is available on the Admissions Office “Accepted Student Website” in the spring of the year. Information regarding off-campus housing can be obtained by writing to the Off-Campus Housing Office at Reed Hall, 1620 McElderry Street, Baltimore, MD 21205 or calling 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 the following: [www.hopkinsmedicine.org/housing](http://www.hopkinsmedicine.org/housing).

### **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.

It is a city of contrasts, mixing the old and the new. Baltimore ranks among the largest of the industrial and seaport cities.

Among the cultural resources are 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 Gallery.

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 8 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.

In addition, fine music is also available from the Peabody Conservatory of Music, the Baltimore Symphony Orchestra, and the Baltimore Civic Opera Company. 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 Hippodrome Theatre, and contemporary drama is produced by a resident company at Center Stage. The Harborplace is an exciting atmosphere, blending the National Aquarium, the Baltimore Convention Center, and many restaurants and unusual shops to create a fascinating and attractive environment. Shows, fairs, and ethnic festivals held throughout the year draw large crowds to the inner harbor area.

## **PARKING FACILITIES**

Registered JHSPH students are eligible for discounted monthly parking at the **Church Home Garage** located on E. Baltimore St. between Broadway and Caroline and the **Monument Street Lot** located 1.5 miles east of the JHMI Campus at 3700 E. Monument Street.

Parking access is sold in the Support Services Office located in the Wolfe Street Building Room W3041. Payment for parking maybe made monthly, or in advance for the balance of the academic year.

Shuttle services are provided from the parking lots 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/](http://www.jhsph.edu/supportservices/ParkingandTransportation/)

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

### **UNIVERSITY HEALTH SERVICES**

Adult internal medicine and routine gynecological primary care is provided through the University Health Services (UHS) for full-time and part-time students and their spouses of the School of Public Health who elect the Student Health Program (SHP insurance).

The health center is staffed by Hopkins faculty and junior faculty (clinical fellows) who are Board certified in Internal Medicine. Students are strongly advised to call ahead for an appointment. University Health Services is located on Carnegie 1, Room 136, in the hospital. Hours for appointment scheduling are from 8:00 a.m. to 4:30 p.m., Monday through Friday.

There is 24-hour physician coverage from 5:00 p.m. until 8:30 a.m. weekdays, and throughout weekends and holidays. To make an appointment, call 410-955-3250. This number will give information during hours when the UHS is closed as well, but to reach the emergency after-hours answering service directly, call 410-955-4331. School of Public Health students not covered by the Student Health Program will not be seen at UHS for any reason, including emergencies.

Emergency cases should use the Johns Hopkins Hospital Emergency Room. Information describing the services provided by the health center may be obtained at the Business Office or by reading the appropriate section in the Student Handbook, which is distributed at orientation. Questions regarding exact coverage may be answered by calling Mr. Darnell Williams at 410-955-3872 in the University Health Service Benefits and Billing Office, located at 144

Blalock Building, in the Johns Hopkins Hospital. Hours of operation: 8:30 a.m.–5:00 p.m.

### **JHMI DEPARTMENT OF STUDENT AND HOUSESTAFF SERVICES**

The Department of Student and Housestaff Services, located on the first floor of Reed Hall, was developed to meet the recreational, social, and housing needs of students and housestaff associated with the Johns Hopkins Medical Institutions. The goals of this department are to work with students and housestaff to organize activities, sports events, forums, and other programs that stimulate student-to-student interaction, student-faculty interaction, and interchange among the schools and the hospital.

Tickets to a number of events in the Baltimore/Washington area are available each month at special rates for students. Social events, informal classes, movies, trips and ticket sales are sponsored by the Student Activities Office.

### **JHMI INTERNATIONAL SOCIETY**

The JHMI International Society 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, tours to nearby places of interest, a newsletter of JHMI and Baltimore activities, a hospitality program, and referral to English language instruction.

### **OFFICE OF INTERNATIONAL SERVICES**

The Office of International Services serves non-citizens who come to study and work at JHMI. 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. State Department, 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 of the medical institutions, regardless of sponsorship, and whether immigrant or nonimmigrant, are required upon arrival at Hopkins to visit the JHMI Office of International Services to provide the necessary passport and visa 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 advisor offices found on many university campuses, acts as liaison between Hopkins and various embassies and 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, payroll clearance, and dependent information.

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

Registration in the Johns Hopkins Bloomberg School of Public Health is not considered complete until the Office of International Services has documented a student's legal status in the United States.

## **CAREER DEVELOPMENT**

The Career Services Office provides career planning and job search assistance to all students of the School. Seminars, forums, video tapes, and individual counseling sessions are provided to aid students in focusing their career

objectives, developing résumés and CVs, and embarking on job searches. A career resource library, which includes many resource books, is a useful tool for job seekers. eRecruiting, 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 résumés, 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 frequent email postings of positions and internships available, several alumni panels during the academic year, 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 Johns Hopkins Bloomberg School of Public Health. 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 publication of a quarterly student newsletter and 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.

## **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; Robin Fox, associate dean for academic affairs; Sharon Krag, associate dean for graduate education and research; and James Yager, senior associate dean for academic affairs, with input from and collaboration with student members to the network.

### **DELTA OMEGA PUBLIC HEALTH HONOR SOCIETY, ALPHA CHAPTER**

Established in 1924 at the School of Public Health, 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. For more information, contact the Johns Hopkins Bloomberg School of Public Health, 615 N. Wolfe Street, Room W1600, Baltimore, MD

21205-2179; 410-614-0794 or [http://www.jhsph.edu/delta\\_omega/](http://www.jhsph.edu/delta_omega/).

### **SOCIETY OF ALUMNI**

The Society of Alumni is a professional organization of graduates of the Johns Hopkins Bloomberg School of Public Health. 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. Ricky Fine, executive director, Society of Alumni, the Johns Hopkins Bloomberg School of Public Health, 615 N. Wolfe Street, Room W1600, Baltimore, MD 21205-2179; 410-955-5194; email: [rfine@jhsph.edu](mailto:rfine@jhsph.edu), or visit the School's website at [www.jhsph.edu](http://www.jhsph.edu).

## Financial Assistance

The Student Financial Services Office administers all student loan programs plus the Federal Work-Study program at the School. In addition to determining a student's eligibility for loan assistance and work-study, the Student Financial Services Office provides personal and confidential financial 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.

Eligibility for financial assistance is based on a combination of factors such as financial need, merit, 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 be:

1. Officially accepted as a regular student
2. Enrolled for the appropriate credits per term
3. Maintaining satisfactory academic progress
4. A U.S. citizen or eligible non-citizen and have a valid Social Security Number
5. Current (not in default) on a federal student loan
6. Registered 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, funding, or financial status may affect his or her eligibility to receive or retain financial 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. Each department at the 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.

### 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 Johns Hopkins Bloomberg School of Public Health. 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 United States. This support may be for specific or general areas of study. Departmental scholarship aid is awarded by the departmental chairperson; requests for scholarship aid should be submitted directly to the appropriate academic department. Master of Public Health (MPH) scholarships are awarded by the MPH program office. Individuals who apply to the MPH program are automatically considered for scholarship assistance by the MPH office.

#### Public Health Traineeship Grant

Traineeship awards (tuition support) are for students in professional degree programs from the following specialized under-represented topic areas: Epidemiology; Environmental Health; Biostatistics; Toxicology; Nutrition; Maternal and Child Health; and Health Care Delivery Systems. Students who comply with established criteria are identified and selected by a School Committee based on their academic qualifications. Students do not specifically apply for support from this grant. Information about the training programs available at the School of Public Health is available on the training programs website:

<http://commprojects.jhsph.edu/academics>.

### **Departmental Scholarships**

Many departments offer financial support, that includes stipends, insurance, tuition, and fees. The amount and type of this assistance varies and specific departments may only offer tuition support to students. 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 and Master of Health Science Candidates.**

Master's Tuition Scholarships worth up to 75% of the School's tuition are available to eligible ScM and MHS 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 is limited to four (4) academic terms. Candidates for the MTS are recommended by their departments. Students should contact their departments or the Student Financial Services Office for eligibility criteria.

### **Graduate Fellowship for Nurse-Midwives**

The Graduate Fellowship for Nurse-Midwives in Population and Family Health Sciences provides an opportunity for a nurse-midwife to train at the doctoral level in preparation for a professional role in research, education, and service. In establishing this fellowship, the Department of Population and Family Health Sciences continues its historical association with midwifery education at the graduate level and reemphasizes the important role nurse-midwifery has to play in maternal and child health.

### **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 School's website at [www.jhsph.edu/SFR](http://www.jhsph.edu/SFR). Inquiries should be directed to the Office of Student Funding Resources, room W1033, Wolfe Street Building.

**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 grant and scholarship assistance.

### **Research Awards**

Opportunities for support from various research sources are usually available within most departments. For further information, candidates should contact the chairperson from the department to which they intend to apply.

## **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. Financial aid information is available on the School's website at [www.jhsph.edu/student\\_affairs/financial](http://www.jhsph.edu/student_affairs/financial). The recommended filing date for new students is March 15. The recommended filing date for returning students is May 1.

### **Student Loans**

Loans, unlike grants or work-study, are borrowed money that must be repaid with interest. 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 educational expenses. If you are a regular student, enrolled in an eligible program on at least a half-time basis, you may receive a Direct Loan. Under the Direct Loan Program, the U.S. Department of Education makes loans, through schools, directly to students. Direct Loans simplify the loan application process and eliminate the need for an outside lender, such as a bank or credit union. Direct Loans are either subsidized or unsubsidized.

1. 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.
2. 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 8.5%.

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

**Other Loan Funds-** Several alternative student loan programs are offered by private lending institutions. These 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 earnings to meet the cost of postsecondary 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 University (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 should apply to the Veterans Administration for education benefits after being accepted for admission. Students must state the same educational objective in making application both to the School and to the Veterans Administration. Students are required to pay the usual fees to the School at the time of registration. Additional information regarding veterans' benefits may be obtained from the Student Financial Services 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 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 School has no mechanism for tuition waivers.**

Foreign students using their own source of support should be prepared to show clear documentation as to how they will support themselves for tuition and living expenses during their entire program. The School must receive official certification from the 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 candidates intending to support themselves from personal funds must provide a letter from a bank in the United States indicating that sufficient funds are on deposit to cover tuition and living expenses for the first year of the program.

### **Financial Assistance**

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

## **SCHOOL OF PUBLIC HEALTH SCHOLARSHIPS AND AWARDS**

Students registered full-time in the 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](http://www.jhsph.edu), 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.

***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.

***Baker, Reinke, Taylor Scholarship in***

***International Health***—Supports graduate students in the Department of International Health.

***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 masters 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 an incoming doctoral student working in the area of health services research in the Department of Health Policy and Management.

***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 PhD students 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.

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

**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 Ph.D. students in the W. Harry Feinstone Department of Molecular Microbiology and Immunology.

**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 and Family Health Sciences 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 and Family Health Sciences whose research has application for the practice of maternal and child health.

**The Council for Population and Family Health Scholarship**—Awarded to a deserving student in the Department of Population and Family Health Sciences.

**Frances A. Coventry Fund**—Provides support for outstanding School of Public Health students.

**June Culley Scholarships in Biostatistics and Health & 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 and Family Health Sciences.

**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 women health issues.

**Endowed Student Support Fund**—Support students undertaking research projects on injury control or population control in low income

countries with preference given to China, India, and Indonesia.

***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.

***Fellowship in Family Planning and Reproductive Health***—Supports graduate students or postdoctoral fellows in the Department of Population and Family Health Sciences working in the area of family planning and reproductive health.

***The Charlotte Ferencz Scholarship in the Department of Epidemiology***—Supports 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.

***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 Department of Molecular Microbiology and Immunology.

***General Preventive Medicine Residency Endowment***—Provides tuition and stipend support for outstanding first year general preventive medicine residents.

***The Pearl & Jeremiah German Scholarship in Gerontology***—Provides tuition assistance and/or stipend support to an incoming doctoral students in the Department of Health Policy and

Management with a declared interest in gerontology.

***The Alice J. Gifford Fund for Occupational Health Nursing***—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.

***Howard C. and Jane R. Goodman Fund***—Provides tuition support for an MPH student.

***J.B. Grant Scholarship*** - Provides partial support to a masters of public health student at the Bloomberg School of Public 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.

***Harold and Sylvia Halpert Endowment Fund***—Provides support to students in the Department of Mental Health in recognition of both past achievement and promise of future contributions in their fields.

***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 and Family Health Sciences whose research focuses on population issues, and students studying maternal and child health whose academic performance has been judged outstanding.

**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.

**Diana Hess Memorial Fund**—Provides support to students in the Department of International Health from or working on a project related to Africa.

**The Richard J. and Margaret Conn Himelfarb Student Support Fund**—Supports graduate students with medical degrees who are pursuing a PhD in 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.

**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 and 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.

**Josephine Kohn and Family Fund**—Provides support to incoming or continuing international doctoral students in the Department of Population and Family Health Sciences 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. Kruse 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.

**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.

**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.

**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.

**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 plan to devote their lives 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 and Family Health Sciences 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 at the Johns Hopkins Bloomberg School of Public Health.

**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 & Gamble Fellowships**—Support masters, doctoral and postdoctoral students who are committed to advancing the health and well being of women and children through 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 United States 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.

**Refugee Health Training Fund**—Given to students on leave from relief organizations who wish to strengthen their expertise in providing health care to refugees and other displaced persons.

**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 & Arthur Samet Student Support Fund in Epidemiology**—Supports students in the Department of Epidemiology.

**Carl Swan Shultz Endowment Fund**—Presented to an outstanding doctoral student in the Department of Population and Family Health Sciences whose work focuses on reproductive health, family planning, demography, or reproductive biology.

**The Jean and Sidney Silber Fund in Population and Family Health Sciences**—Provides stipend support to a student at 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 or doctoral students in the Department of International Health who are within two terms of anticipated graduation.

**David Leslie Swift Fund in Environmental Health Engineering**—Supports masters, doctoral and postdoctoral students from the Division of Environment Health Engineering.

**Mary & Carl E. 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 and Family Health Sciences who has demonstrated outstanding academic achievement 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 Hopkins medical students who wish to pursue public health training and vice versa.

**Katharine E. Welsh Fellowship in Immunology & 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 from the Departments of Health Policy and

Management or Population and Family Health Sciences in recognition of outstanding research in the area 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.

***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 United States.

## Tuition and Fees

### TUITION

Tuition for the 2006-2007 academic year for full-time enrollment for a four-term, nine-month academic year is \$32,976. Tuition for the 2006-2007 academic year for the eleven-month, full-time MPH program is \$41,220. 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 2006-2007 academic year, the charge is \$687 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 or \$1000 for five-term periods, which include the summer term. 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 4th term are as follows. Please note: All special students must pay at the time of registration.

Summer–July 21, 2006

1st Term–September 13, 2006

2nd Term–November 3, 2006

3rd Term–January 19, 2007

4th Term–March 23, 2007

Electronic statements are generally posted on the web on the 2<sup>nd</sup> Thursday of each month. The payment due date for each statement is the following week 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.

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, or Visa.

### 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 Student Financial Services Office prior to any withdrawals from the School.

### FEES

#### Matriculation Fee

All new degree candidates entering academic year 2006–2007 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, with the exception of distance education students, 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. An online request can be made at [www.jhsph.edu/student\\_affairs/registrar/transcripts.html](http://www.jhsph.edu/student_affairs/registrar/transcripts.html)

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 the next business day or sent by standard mail. A \$15 fee 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 online requests and in-person requests.

### Returned Check Fee

A fee of \$25 is assessed without exception for any check returned to the School by a banking institution. The University reserves the right to not accept future payments by personal checks 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.

### Nonresident Fee

For nonresident students, an assessment of fifteen percent of full tuition is made for registration of each academic term during which a student elects to be on nonresident status, until the term in which all degree requirements are

completed or there has been a change in status. Should the student return to resident status in any remaining academic term, any nonresident fee paid for that term will be applied to the full term’s tuition charge. Upon return to resident status during the academic term in which the degree will be conferred, the usual tuition schedule will apply.

### Leave of Absence Fee

The University will assess a \$50 fee per term (excluding summer) for students who are on official leave of absence.

### Insurance

The University requires that all full-time and foreign 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 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 Term – September & October

2nd Term – November & December

3rd Term – January, February & March

4th Term – April, May & June

Premiums are due by the payment due date for each term. Monthly premiums for 2006–2007 are as follows:

\$182 for individual, \$404 for two-party and \$504 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 only 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 health 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 Office of Records and Registration after the student's thesis has been officially approved and at the time that copies are deposited in the Office of Records and Registration 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 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 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 [http://www.jhsph.edu/dept/BMB/Resources\\_Links/index.html](http://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 Mechanisms of Preservation of Genome Integrity. In addition, students must take two of the following electives: Reproductive Biology for Biomedical Scientists, Structure Determination, Developmental Biology, Mechanisms in Bioorganic Chemistry, Neurobiology, Epigenetics, Transcription Mechanisms, Virology, Post-Transcriptional Events in Gene Regulation, Structure and Chemistry of Lipid Bilayers, The Nucleus, Fundamentals of Membrane Physiology, 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 specialize in biochemistry and molecular biology take Molecular Biology of Carcinogenesis (120.615), whereas those who are specializing in reproductive biology take either Molecular Endocrinology (120.621) or Molecular and Cellular Mechanisms of Reproduction (120.622) and 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 (550.865).

In addition, prior to their PhD oral qualifying exam, students must complete nine (9) credit units of course work outside the Department, but within the School of Public Health. Three (3) of the nine (9) 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 and Family Health Sciences. Students are also required to take, prior to graduation, three seminar courses, which are offered by various members of the Department faculty throughout the academic year. 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 second exam, which is given in the late spring of the second year, is chosen by the students from a list of topics offered by the faculty.

Each student spends a month preparing for this exam. Again, the student writes a five-page research proposal and defends it orally before a departmental faculty committee. 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.

### **Masters Programs of the Department**

The Department offers the Master of Health Science (MHS) Degree in Reproductive Biology. The MHS program requires one year 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

library-based MHS 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), Research Ethics (550.860), Molecular Biology of Carcinogenesis (120.615), Molecular Endocrinology (120.621), 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 (advisors from doctoral and masters departments) and integration of PhD and ScM research into a single dissertation. The IPME dissertation will include results of both masters 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 Masters 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.

**Bioorganic Chemistry**—organic and enzymatic synthesis of nucleic acids; antisense oligonucleotides; nucleic acid analogs.

**Biophysics**—biopolymer structure and interaction; fluorescence spectrometry of protein conformation and function, and of protein-protein interactions.

**Structural Biology**—x-ray crystallography; protein and nucleic acid structure; RNA splicing.

**Cellular and Molecular Biology**—molecular carcinogenesis; regulation of chromosomal DNA replication; signal transduction

mechanisms; DNA repair; biosynthesis, trafficking, and function of glycoproteins; nuclear transport; cell adhesion and interactions; protein turnover during erythroid differentiation; glycobiology; mechanisms of heat shock protein function; control of eukaryotic gene expression during differentiation and alterations in gene expression during neoplastic transformation; control of plant gene expression; mechanisms of DNA rearrangement; eukaryotic genome structure and sequencing; 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; structure, function, and synthesis of membrane molecules; 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 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](http://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*

140.651-654 Methods in Biostatistics I-IV  
 140.671-672 Introduction to Probability I-II  
 140.673-674 Introduction to Statistical Theory I-II  
 110.405-Analysis I\*  
 140.693-694 Advanced Probability I\*-II\*  
 340.601 Principles of Epidemiology  
 Electives

\* PhD students only

#### *Year Two*

140.751-754 Advanced Generalized Linear Models I-IV  
 140.771-772 Advanced Statistical Theory I-II  
 140.773-774 Foundations of Statistics I-II  
 140.693-694 Advanced Probability I\*-II\*  
 550.860 Research Ethics and Integrity OR  
 306.665  
 Research Ethics and Integrity: US and International Issues Electives  
 \* PhD students only, if not taken in year one

#### *Year Three*

550.865 Public Health Perspectives on Research  
 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, and there is a departmental oral examination, including the preparation and presentation of a statistical and scientific literature review, at the end of the second 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 is the same as that for doctoral candidates, with the exception of analysis and advanced probability. 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 as well as a course in research ethics (either 550.860 Research Ethics and Integrity or 306.665 Research Ethics and Integrity: US 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 *Biostatistics* 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, 140.671-674, and 340.601. 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: US 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 Johns Hopkins Bloomberg School of Public Health. 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 advisor 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 Co-Directors: Karl Broman, PhD; Fernando Pineda, 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 course work.

### **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 Johns Hopkins Bloomberg School of Public Health. 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.

*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 masters and doctoral students 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 140.621-624, linear algebra and multivariable calculus are used as tools of instruction. This sequence is designed for masters or PhD-level students in biostatistics or students with strong quantitative skills in other disciplines.*

## Environmental Health Sciences

The Department of Environmental Health Sciences is concerned with the adverse influence of the environment on human health and with controlling these adverse influences. In this regard, the Department considers “environment” in its broadest sense, including the *natural*, *built*, and *social* environments. Here, the *natural* environment is that part of our physical environment not created by humans, while the *built* environment is that part of our physical environment created by our activities. The *social* environment includes factors that do not arise primarily from physical processes, such as community socioeconomic status, social integration, neighborhood safety, or level of political empowerment.

Traditionally, the field of environmental health sciences has focused on hazardous agents in the environment, including biological, chemical, and physical environmental agents. The Department engages in a number of activities within this traditional approach, including studies of the sources and environmental distribution of such agents; human exposure to such agents; the body’s response at the molecular, cellular, organ system, and whole-body levels; environmental risk assessment; and prevention and intervention strategies (including environmental engineering, law, policy, and communications solutions).

New thinking on the environment and health has encouraged us to consider how the built environment influences human health and health-related behaviors beyond the traditional focus on hazardous agents. For example, urban sprawl, clearly an emergent environmental issue, has been linked to asthma, cardiovascular disease, and obesity risks; it also influences physical activity and other health-related behaviors. The social environment influences how socioeconomic and other social interactions among people can directly affect health and also

modify the risks associated with traditional hazardous agent exposures. Our Department is also pursuing research on the health effects of global environmental change, including those due to global warming, persistent organic pollutants, and ecosystems change.

The Department is committed to the performance of the highest quality mechanism-based and population-based research and the application of this research to help define, analyze, prevent, and control adverse influences of the environment on human health. Our faculty is particularly committed to educating and training students and professionals; the Department offers a variety of rigorous, flexible educational programs to meet these needs.

For more detailed information on departmental resources and programs, visit [www.jhsph.edu/dept/ehs](http://www.jhsph.edu/dept/ehs).

### DEGREE PROGRAMS

Paramount to our mission is a commitment to the education and training of public health researchers and professionals to solve environmental health challenges ranging in scale from molecular to global. Students of environmental health sciences pursue a deeper understanding of the effects of various natural and human-made environmental agents on biological structures at every level of organization from the molecule to the organism. Applicants to the Department of Environmental Health Sciences seeking graduate education come from widely differing backgrounds. Many seek advanced education in one of the more specific disciplines through focused master’s or doctoral programs—the Master of Health Science (MHS) in Occupational and Environmental Hygiene and the various Doctor of Philosophy (PhD) or Doctor of Science (ScD) programs. Others seek a more generalized appreciation of the interaction between biological substrates and the environment, as well as the legislation, regulatory actions, and enforcement pertinent to the environment, through broader degree programs—the MHS in Environmental Health Sciences and the Doctor

of Public Health (DrPH) in Environmental Health.

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](http://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 our Office of Educational Programs at 410-502-5918 or [ehs@jhsph.edu](mailto:ehs@jhsph.edu).

### **Master of Health Science (MHS) Programs**

Two master's programs are offered by the Department of Environmental Health Sciences to meet academic and professional goals of its students. The MHS in Environmental Health is used as a foundation for further academic training such as medical school or doctoral programs. The MHS in Occupational and Environmental Hygiene is designed for students who wish to begin or advance professional careers in occupational and environmental hygiene after graduation. In addition, the department also offers a Bachelor of Arts/Masters of Health Science 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 provides a generalized, systematic introduction to environmental health sciences. The program is intended for talented baccalaureate graduates who want a broad introduction to environmental studies to help identify long-term career goals and provide a foundation for further education and training as well as experienced government or industry employees who desire to become more qualified in environmental health issues and physicians seeking training in the environmental factors involved in disease and health. The MHS graduate will have competence in the following areas: basic biological mechanisms; toxicology; statistical evaluation of data; epidemiological studies in environmental health; legal and regulatory issues in environmental health; and occupational or

environmental disease from either an engineering or medical perspective.

Students work with faculty advisors to design a program that satisfies these requirements in the context of the student's interest and career goals. Required course topics include environmental health, toxicology, physiology, epidemiology, risk sciences, and biostatistics. Students may enroll for up to two courses in other schools of the University offering graduate level environmental sciences programs.

In addition to successful completion of coursework, MHS students are required to prepare an essay addressing an environmental health problem and make a formal presentation on the topic to an audience of faculty and students. No written or oral comprehensive examination is required for this degree. This MHS program is designed to maximize flexibility in a given student's curriculum. Accordingly, students develop their own course plan, in consultation with their advisor, who must ultimately approve the plan. The program also offers a part-time option, taking advantage of courses offered on-line, at Montgomery County, and during Summer and Winter Institutes. The part-time program has the same requirements as the full-time option.

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, <http://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 MHS program in Occupational and Environmental Hygiene is designed for students who are developing or advancing professional careers in occupational and environmental hygiene within consulting, private industry, or government sectors. Training includes

traditional occupational hygiene and environmental health practice, air pollution, exposure assessment, environmental monitoring, and risk assessment. This program is appropriate for individuals pursuing broad-based professional careers in occupational and environmental health as well as individuals seeking to pursue careers in occupational and environmental hygiene. The curriculum includes physiology, toxicology, occupational health, biostatistics, epidemiology, principles of occupational and environmental hygiene, safety, health and safety program management, occupational health law, noise and physical agents in the environment, air sampling, exposure assessment and control technology.

This program, supported by a National Institute for Occupational Safety and Health (NIOSH) training grant, is accredited by the Accreditation Board for Engineering Technology (ABET). The program requires one-and-a-half academic years to complete and entails a three month internship. The purpose of the internship is to provide an appropriate professional experience tailored to the needs of each student. During the internship, the student is expected to assume independent responsibility for a project and to submit a written report of the project as a master's essay in partial fulfillment of the requirements of the MHS degree. Applicants should have a strong background in the physical, chemical, and biological sciences, including college level physics and calculus. Admission is based on academic records, Graduate Record Examination scores, references, and a résumé of professional experience. The program also offers a part-time option, taking advantage of courses offered on-line, at the Montgomery County Campus, and during Summer and Winter Institutes. The part-time program has the same requirements as the full-time option.

### **BA/MHS Program**

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,

Department of Environmental Health Sciences offers early graduate school admission to students enrolled in this undergraduate program. One-half of the School of Public Health course credits earned toward the BA also apply toward the MHS, up to a total of 16 credits. In addition, students in this program will receive co-advising from both schools to optimize their academic experience. Applications for the BA/MHS degree are due by July 1 between the junior and senior year. Applicants may apply during their senior year but credit requirements for the MHS will be the same as for other students entering the MHS program. Please note that admitted students must complete the BA degree before formally enrolling in the Bloomberg School. Additional information about this program may be found in The Johns Hopkins University Krieger School of Arts and Sciences catalog.

### **DOCTORAL PROGRAMS**

The Department of Environmental Health Sciences awards the Doctor of Philosophy (PhD), the Doctor of Public Health (DrPH), and the Doctor of Science (ScD). Students in the PhD and ScD programs select from one of five areas to focus their academic studies and research: Environmental Health Engineering, Molecular Imaging, Occupational & Environmental Health, Physiology, or Toxicology. 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) and Doctor of Science (ScD) Programs**

### ***Concentration 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. Candidates for research training should have a strong background in the physical, chemical, and biological sciences, including college-level physics and calculus.

### ***Concentration in Molecular Imaging***

The doctoral program in molecular imaging seeks to prepare students in the use of *in vivo* imaging techniques in the broad research areas of cancer, toxicology, neurotoxicology/neuroscience and lung physiology as they relate to human disease. The program prepares students to use molecular imaging and understand its importance in biomedical and environmental health science research; describe the tracer principle and categories of imaging tracers; understand and operate the major types of instrumentation used in molecular imaging, including SPECT, PET, MRI and MRS; and to use molecular biology, pharmacological and biochemical approaches to validate and apply molecular imaging techniques to help elucidate the molecular basis of environmental disease. Before applying to this program, contact Program Director Dr. Tomas Guilarte at 410-955-2485 or [tguilart@jhsph.edu](mailto:tguilart@jhsph.edu).

### ***Concentration in Occupational & 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 pathophysiologic mechanisms involved in the development of occupational and environmental disease. The research of faculty advisors 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.

### ***Concentration in Physiology***

Research toward a doctoral degree in physiology leads to competency in at least one of several domains focused on cardiopulmonary pathophysiology, including lung epithelial function, airway smooth muscle function, vascular regulation and homeostasis, animal models of asthma and emphysema, effects of inhaled pollutant gases and particles, control of ventilation, and immunologic responses. Students develop their knowledge and expertise in general subject areas relevant to: structure/function relations in human and animal models; genetic and environmental factors underlying lung disease, particularly asthma and emphysema; hypothesis generation and testing; application of contemporary research and imaging tools; and writing scientific papers and grant proposals. Students in this program may have backgrounds in biology, chemistry, biomedical engineering, physics, pharmacology, or toxicology.

### ***Concentration in Toxicology***

Pre-doctoral trainees in toxicology receive basic training in toxicology as well as cell biology, biochemistry, molecular biology, physiology, and biostatistics. Experience is also gained through laboratory research rotations. Following completion of basic course work and laboratory rotations, trainees proceed to advanced training in a selected area of concentration, including biochemical/molecular toxicology, neurotoxicology, immunotoxicology, toxicogenomics, and molecular biomarkers. The diverse research interests represented by the faculty provide predoctoral trainees with a unique interdisciplinary background in toxicology that will ultimately permit them to address toxicological problems in comprehensive and innovative ways. Students should have prior coursework in chemistry, biochemistry, molecular biology, biology or medicine.

### **Doctor of Public Health (DrPH) Program in Environmental Health**

The goal of the Doctor of Public Health in Environmental Health Program is the development of senior-level professionals with sufficient understanding of the biomedical sciences, behavioral sciences, epidemiology and biostatistics, legal, economic and social issues, engineering technologies, management technologies, management concepts and communication skills to be able to analyze and assess complex environmental risks and problems and to be able to offer leadership, sound guidance and advice for the reduction of these risks and the resolution of environmental problems. The graduate is a practitioner who can comprehend and integrate the many dimensions of environmental health sciences, define the disciplines that can best be applied to a problem, make sound and critical judgment and interpret his or her recommendations clearly in the decision-making processes of policy formulation in industry, government, or academia. Graduates are expected to communicate and convey information effectively to the public as well.

In order to be accepted into the DrPH program in Environmental Health Sciences, an individual

must meet the basic admission requirements of the School and the department. The School also sets minimum academic requirements for the program, on which the department imposes additional requirements. These requirements include formal coursework, a written comprehensive examination, a preliminary oral examination, an acceptable dissertation, and a final oral examination. In general, a minimum of four consecutive terms of registration as a doctoral student in full-time residence is required for all doctoral degrees. The requirement may be waived on an individual basis, but this is not common. Please see the School's DrPH section of this catalog for more information.

### **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 course work 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. 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, dermatology). Depending on prior training of the individual applicant, specialized fellowships involving only the first or second year of the residency program are possible. 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 410-955-4157 or fax 410-955-1811.

### **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 Education and Research Center (ERC) for Occupational Health and Safety. 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 School-wide Master of Public Health (MPH). Students may combine the MPH with the MSN degree from the School of Nursing in a dual MSN/MPH option, with OEHN program requirements applying to the MPH degree component of that alternative.

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, principles of occupational and environmental hygiene, injury prevention, management and policy, and toxicology as it relates to human health. Requirements of the respective 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@jhsph.edu](mailto:sfitzger@jhsph.edu) or 410-955-4082 or Dr. Jacqueline Agnew, ERC Director, at [jagnew@jhsph.edu](mailto:jagnew@jhsph.edu) or 410-955-4037.

### **Program on the Health Effects of Global Environmental Change**

The Program on Health Effects of Global Environmental Change is dedicated to the scientific discovery and application of new knowledge pertaining to the human health risks posed by global environmental degradation. Such problems include global climate change, ecosystem decay, depletion of marine fisheries, deforestation, stratospheric ozone depletion, urban sprawl, the built environment and biodiversity loss. Drawing upon the strengths of

a number of public health and environmental disciplines, the program strives to further the understanding of complex and dynamic environmental systems as they affect human health. Through substantive interdisciplinary efforts, the program seeks to gain valuable insights into many of the new global environmental health issues confronting the world today and communicating these research findings to public health professionals in training, decision makers, and the general public. Students in the MPH, MHS, and DrPH programs are encouraged to participate in the activities of the program. For additional information, contact Dr. John Groopman at [jgroopma@jhsph.edu](mailto:jgroopma@jhsph.edu) or 410-955-3720.

### **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 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 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 (advisors from doctoral and masters departments) and integration of PhD and ScM research into a single dissertation. The IPME dissertation will include results of both masters 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 Masters 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 or [pstrickl@jhsph.edu](mailto:pstrickl@jhsph.edu).

### **Certificate Programs**

Two certificates are offered by the Department of Environmental Health Sciences: The Certificate in Environmental Health and the Certificate in Occupational Health

***Certificate Program in Environmental Health*** educates and trains students to identify major environmental health issues facing public health professionals today. Courses explore the sources of environmental agents, their distribution in the environment, transfer routes to the human, and possible health effects; the basic biological mechanisms underlying the association between prior exposure and subsequent development of adverse health effects; and control strategies, including primary, secondary, and tertiary interventions. The program is intended for public health professionals currently practicing environmental health without adequate formal training, current degree candidates in the School, and non-degree candidates wishing to begin their formal training

in environmental health. For more information contact Dr. Jonathan Links at 410-955-9622 or [jlinks@jhsph.edu](mailto:jlinks@jhsph.edu).

**Certificate Program in Occupational Health** educates students to identify the major occupational health issues (i.e., the impacts of work including workplace exposures on health and the impacts of health conditions that workers bring to work on productivity) facing public health professionals today. Courses explore the application of environmental, biological, and public health principles to the recognition, reduction, and prevention of occupational disease and adverse health effects; control strategies for occupational problems including primary, secondary, and tertiary interventions; and current areas of concern, such as employee assistance programs, employee health promotion, impairment and disability issues and health and productivity issues. The program is designed for public health professionals who are currently practicing occupational health seeking formal training and current degree candidates in the School wishing to focus on occupational health issues. For more information, contact Dr. Jacqueline Agnew at 410-955-4037, [jagnew@jhsph.edu](mailto:jagnew@jhsph.edu) or Dr. Brian Schwartz at 410-955-4130, [bschwartz@jhsph.edu](mailto:bschwartz@jhsph.edu).

### **Postdoctoral Fellowship**

The postdoctoral fellowship program provides concentrated training with individual faculty from the department. Postdoctoral programs are open to qualified individuals with a health sciences/biology background. Most applicants contact a faculty member and determine the details of their research program before applying. Interested applicants should follow application procedures as specified by the Office of Admissions, which is available at [www.jhsph.edu/GER/postdocs.html](http://www.jhsph.edu/GER/postdocs.html).

### **Winter Institute**

The Department of Environmental Health Sciences occasionally offers courses during the School of Public Health 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](http://www.jhsph.edu/Academics/Continuing_ed).

## **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. Although no specific minimum score is specified, it should be noted that students successful in the graduate program generally have combined scores of at least 1200 or greater in the verbal and quantitative sections. For those who have a D.V.M., M.D. or other acceptable post-graduate degree or relevant experience in the field, the requirement for the GRE may be waived. 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 on-line at [www.jhsph.edu/dept/ehs](http://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 (or 250 on the computer-based test).

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 key faculty if desired. Visits can be coordinated independently or as part of a formal Recruitment Weekend that is arranged for selected applicants

on one or two weekends every year by the Department (usually in January or February).

Prospective students who are interested in scheduling a campus visit should contact the Office of Educational Programs at 410-502-5918 or [ehs@jhsph.edu](mailto:ehs@jhsph.edu). Application information is available at [www.jhsph.edu/Admissions/Audiences/PS\\_apply.html](http://www.jhsph.edu/Admissions/Audiences/PS_apply.html).

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.

## **ACADEMIC DIVISIONS**

### **Toxicology**

Division Director: Valeria Culotta, PhD, [vcuotta@jhsph.edu](mailto:vcuotta@jhsph.edu); 410-955-3029

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. The major theme of research and training within the division is mechanisms of toxicity in cells, tissues, and organisms at the chemical, biochemical, cellular, and molecular levels. Faculty research programs involve investigation of the mechanisms of toxicity of environmental agents, the mechanisms controlling host responses to environmental toxicants, the potential hazards of exposure to such agents, and methods for protecting the exposed host from environmentally induced disease. Emphasis is on cellular macromolecules and biochemical/molecular processes as targets for environmental toxicants.

### **Physiology**

Division Director: Wayne Mitzner, PhD [wmitzner@jhsph.edu](mailto:wmitzner@jhsph.edu); 410-955-3612

Physiology is the branch of biology dealing with the processes, activities, and dynamics of life and living organisms. Physiology thus differs

from other basic biologic sciences in that its end point is on function, rather than on the individual processes that contribute to that function. Traditional physiologic approaches have emphasized studies in intact animals and organs. Modern physiologic studies extend the living system to the cellular and molecular levels, to the extent that technology allows probing and experimentation. As such, the research spectrum of the division is broadly based with investigators working at the system, organ, cellular, and molecular levels. The division has a primary focus on the physiology of the lung, which is a major target organ for environmental air pollutants. Faculty members investigate the basic mechanisms involved in lung disease and the interactions with toxic gases and airborne particles. Strong collaborations with the Respiratory Division of the Department of Medicine and the Department of Anesthesiology help maintain a practical relevance to the basic research.

### **Environmental Health Engineering**

Division Director: Patrick Breysse, PhD [pbreysse@jhsph.edu](mailto:pbreysse@jhsph.edu); 410-955-3608

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.

## **Occupational and Environmental Health**

Division Director: Paul Strickland, PhD  
[pstrickl@jhsph.edu](mailto:pstrickl@jhsph.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.

## **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 of the highest caliber to promote health and prevent disease, and to provide service to the School 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, respiratory diseases, digestive 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 evaluate health care delivery
- Develop methodology for translating epidemiologic research findings into clinical medicine
- 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.

Doctoral departmental students are required to take the four-course comprising the epidemiologic research track. Masters degree candidates (MHS and ScM) may omit the fourth course, Methodologic Challenges in Epidemiologic Research.

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 three 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 Masters, Doctoral and MPH students (in the Concentration in Epidemiological & Biostatistical Methods for Public Health & Clinical Research) and the fourth course (340.754 - Methodologic

challenges in epidemiologic research) will be required only for Epidemiology doctoral students, and others at the discretion of their departments or programs.

The proposed sequence of courses is synchronous with the Biostatistics 620 sequence, which also focuses on design issues in Quarter 2 and regression models in Quarter 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.

In addition, degree candidates will take 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.

Programs of study are offered leading to six degree programs: Master of Health Science, Master of Science, Doctor of Public Health, Doctor of Science, and Doctor of Philosophy degrees. 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.

The department also offers a set of courses in the Applied Epidemiology 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 Applied Epidemiology 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 epidemiologic or clinical

research. The focus of this sequence is on the application of epidemiology to public health problems, as utilized in health departments, health interventions, and health policy. In this course sequence, we expect students to develop competencies in epidemiology, communications, leadership, and analytic assessment skills.

The sequence of courses in the Applied Epidemiology 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.

Students who begin in the Applied Epidemiology track will not be able to transfer into the Epidemiologic Research track mid-sequence.

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, 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.

## **ADMISSION**

In addition to meeting the general admission requirements of the 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, 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. 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 are required to submit the results of a recent (less than 3 years) general Graduate Record Examination (GRE). Occasionally MCAT scores are accepted for review purposes. 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 individual public health/epidemiologic researchers.

In the Statement of Objectives and Plans on the application form, 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.

## **DEGREE PROGRAMS IN EPIDEMIOLOGY**

- MHS and ScM
- PhD and ScD
- DrPH

## **Degree Program Overview**

Programs of study are offered leading to five degrees—Master of Health Science, Master of Science, Doctor of Public Health, Doctor of Science and Doctor of Philosophy. Completion of the requirements for a master's degree in the Department of Epidemiology generally takes one and one half to two years; a doctoral degree requires between three and five years, with an average of four and a half 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. 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.

## **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
- Human Genetics/Genetic Epidemiology
- Infectious Disease Epidemiology
- Occupational and Environmental Epidemiology

## **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 Diseases Epidemiology
- Clinical Epidemiology
- Clinical Trials
- Epidemiology of Aging

- General Epidemiology
- Human Genetics/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.

Areas of faculty research include the following:

Disparities in Access to Health Care  
Environmental Induced Illness  
Epidemiologic Methodology  
Evaluation of Access to Health Care  
Evaluation of Health Behaviors  
Gene-Environment Interaction  
HIV Infection and AIDS  
Industrial and Occupational Exposures  
Molecular Epidemiology of Cancer  
Outcomes Research  
Prevention of Infectious Diseases  
Risk Assessment  
Sleep Disorders  
Social Epidemiology  
Tuberculosis  
Vision Research

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.

#### **PhD and ScD Programs in Epidemiology**

- Cancer Epidemiology
- Cardiovascular Disease Epidemiology
- Clinical Epidemiology
- Clinical Trials
- Epidemiology of Aging
- General Epidemiology
- Human Genetics/Genetic Epidemiology

- Infectious Disease Epidemiology
- Occupational and Environmental Epidemiology

#### **DrPH Programs in Epidemiology**

These are 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. Applicants are expected to develop research in one of the areas listed 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 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 (advisors from doctoral and masters departments) and

integration of PhD and ScM research into a single dissertation. The IPME dissertation will include results of both masters 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 Masters 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.

## **SPECIAL RESOURCES AND FACILITIES**

The working relationships that the Department enjoys with other departments within the University and with a number of institutions both in the United States and abroad concerned with health and disease offer students opportunities to broaden their experience. These resources include the Johns Hopkins School of Medicine and the Johns Hopkins Hospital and Comprehensive Cancer Center, metropolitan Baltimore hospitals, the Social Security Administration, the Maryland State Department of Health and Mental Hygiene, Baltimore City Health Department, and a number of institutions in other cities.

In the past, arrangements have been made for students and faculty to work at the National Center for Health Statistics, the Frederick Cancer Research Center of the National Cancer Institute, the National Institutes of Health, Walter Reed Army Institute of Research, U.S. Veterans Administration, Armed Forces Institute of Pathology, Centers for Disease Control, and the World Health Organization. Our students also enjoy rotations with our collaborative centers at Chiang Mai University in Thailand and in Blantyre, Malawi. Additional learning opportunities for students and fellows

are listed below and are described in the School-Affiliated Centers and Institutes section of this catalog.

Within the Johns Hopkins Bloomberg School of Public Health, joint programs with other departments are also possible. A number of joint programs are affiliated with interdepartmental centers: Center for Clinical Trials, the Johns Hopkins Comprehensive Cancer Center, the Risk Sciences and Public Policy Institute, and the Welch Center for Prevention, Epidemiology and Clinical Research. A full listing is in the School-affiliated Centers and Institutes chapter.

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 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.

The institute's flagship educational programs provide professionals and decision makers with the tools necessary to bridge health research, environmental science, and policy. A formal certificate, comprised of designated course work, is offered. For more information, contact Mr. Ronald White at 410-614-4961. Email [rwhite@jhsph.edu](mailto:rwhite@jhsph.edu).

The Certificate in Gerontology is designed for doctoral students and postdoctoral fellows who are pursuing an "academic" masters degree (either ScM or MHS) involving a research-oriented thesis and is intended for students at the 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 their particular area of specialization. The co-directors are Dr. Pearl German and Dr. Chad Boulton.

For more information, contact Ms. Carol Han at [chan@jhmi.edu](mailto:chan@jhmi.edu) or 410-614-3755.

**The Epidemiology Students' Organization, (ESO)**, is comprised of all masters', doctoral, and postdoctoral 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 a advocate for student needs. This is accomplished by working with faculty, administration, and other student organizations in the School. Our goal is to create an environment that facilitates discussion, student-student interaction, and networking.

## **Health, Behavior and Society**

### **MISSION**

The Department of Health, Behavior and Society 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) and the Doctor of Science (ScD) degrees and master's-level training leading to a Master of Health Science (MHS) in Behavioral Sciences and Health Education, a Master of Science (ScM) in

Genetic Counseling, and a Master of Public Health (MPH) concentration in Social and Behavioral Sciences.

### **MASTER OF HEALTH SCIENCE IN BEHAVIORAL SCIENCES AND HEALTH EDUCATION**

Program Director(s): Dr. Andrea Gielen, Ms. Lee Bone and Ms. Eileen McDonald  
Program Contact: Ms. Eileen McDonald, 731 Hampton House, 410-614-0225  
[emcdonal@jhsph.edu](mailto:emcdonal@jhsph.edu)

#### **General Program Information**

The Master of Health Science (MHS) in Behavioral Sciences and Health Education 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 and health promotion practitioners in professional firms, units of government at all levels, and private corporations dealing with health affairs. The program equips students with the fundamental skills and knowledge necessary for a career in health education and health promotion practice. 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 course work 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 Masters 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 course work 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 MHS 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 course work 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. The placement should be in the Maryland, Washington D.C., or Virginia area. This geographic proximity is needed so students can participate in the monthly seminar series required during year two of the program. The purpose of the seminar series is to allow students 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 SCIENCE IN GENETIC COUNSELING**

Program Director: Barbara Biesecker, MS, CGC  
Academic Director: Debra Roter, Dr.Ph.  
Program Coordinator: Mary Ann Dunevant, 756  
Hampton House, 410-955-2315  
[mdunevan@jhsph.edu](mailto:mdunevan@jhsph.edu)

### **General Program Information**

The Genetic Counseling Graduate Program is a joint effort between the Department of Health, Behavior & 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, policy makers 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 course work in the areas of human genetics, genetic counseling, public policy, research methodology, ethics, and health education. The course work 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 DC. Per School regulations, at least 12 credits of formal course work must be completed outside the Department of Health, Behavior & Society, of which at least eight (8) must be earned in another department of the School of Public Health.

### **DOCTORAL PROGRAMS**

Health, Behavior and Society offers doctoral training leading to the Doctor of Philosophy (PhD) and the Doctor of Science (ScD). The Department organizes its doctoral training into two areas of concentration: psychological and social factors influencing health, and health education and communication. All applicants must select one of these concentrations. Doctoral

students are required to take departmental core courses in addition to required courses with the chosen concentration. Concentrations also recommend selected courses for their students and provide ample opportunity for elective coursework. In the second year, students take courses in preparation for beginning research in the chosen concentration. 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 School-wide 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.

The department expects students to complete the requirements as described in each area of specialization. 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 faculty of Social and Behavioral Sciences 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 sciences 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 & 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 Department of Health Policy and Management is responsible for training public health professionals and researchers in diverse disciplines and promoting the translation of public health science into practice and policy. Our mission is to train public health leaders to protect and improve the public's health through effective, efficient and equitable policies, programs and services. The department seeks to identify policies and interventions that promote and protect the health status of populations; strategies that improve access to health and preventive services, particularly among the most vulnerable; methods that enhance the effectiveness and efficiency of health care for medical and mental illness; and models for improving the financing, organization, and delivery of preventive and curative health services.

The department has a multidisciplinary faculty from many fields and disciplines, including biostatistics; economics; environmental policy; epidemiology; ethics; gerontology; health finance; health law; health services research; medicine; nursing; operations research; organizational behavior and management sciences; political science; policy analysis; psychology; public policy; public health practice; and sociology. Many hold joint appointments in the Johns Hopkins Schools of Medicine, Nursing, Arts and Sciences, and Engineering. The faculty also contribute to Schoolwide programs, including the Master of Public Health program, the Doctor of Public Health program, the Preventive Medicine Residency Program, and the Interdepartmental Program in Gerontology.

The department is fortunate to have distinguished part-time faculty, including leaders in policy, management, 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. In addition, faculty from other Johns Hopkins schools have joint appointments in the department, reflecting their interest in teaching and serving as mentors to our students.

### DEGREE PROGRAMS

#### Masters Programs

##### *Master of Health Science in Health Policy*

The MHS Program in Health Policy is a professionally-oriented degree program designed for individuals seeking specialized academic training in health policy in order to establish or expand their careers as health policy analysts. The program requires one year of academic coursework, followed by a 9-month field placement consisting of full-time employment in a professional health policy setting. Through their coursework, students acquire a solid foundation in fundamental policy analysis, along with substantive knowledge of the US 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 decision 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 from those offered by the Department of Health Policy and Management or any other department in the School of Public Health, subject to consent of the student's advisor. The interdisciplinary faculty is recognized nationally and internationally for its excellence in policy analysis, health services research and teaching, and is actively involved in formulating and implementing health policy at federal, state, and municipal levels.

*Director: Dr. Thomas Oliver;*  
*Associate Director: Ms. Dana Sleicher*

***Master of Health Science in Health Finance and Management***

The Master of Health Science Program in Health Finance and Management is a graduate professional degree that prepares students for management, leadership and consultant/advisor positions in the health care delivery system. In today's 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. Since it began in 1972, the program has graduated over 400 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). The program requires one academic year of coursework and an 11-month paid, supervised field placement in a health care organization. A part-time program is available for those who hold management positions in healthcare organizations; these students conduct a project in lieu of a field placement. 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. Required courses address theories and practice of management, financial accounting and budgeting, financial management, policy analysis, health law, legal and ethical issues, strategic planning, payment mechanisms, human resources, quantitative tools, health management information systems, marketing, health economics, epidemiology, and biostatistics.. The faculty have broad national and international experience and include practitioners who bring the "real world" into the classroom.

*Director: Mr. William Ward;*  
*Associate Director: Ms. Donna Shiloh*

**Doctoral Programs**

***Doctor of Public Health***

The professional DrPH program offered in HPM is principally designed for part-time students working full-time during their enrollment in the program. It is expected that students will complete the elective and required coursework over a three-year period while participating in collaborative activities. These activities include a program of seminars, research opportunities, journal clubs and other opportunities to promote interaction among program students and faculty. After the completion of all coursework, students will sit for the written comprehensive exam. Students then present themselves for the preliminary oral examination, after which they may begin substantive work on their dissertation. It should be possible to complete the DrPH within a seven year period.

***DrPH Concentration in Healthcare Management and Leadership***

The objective of the DrPH concentration in health care management and leadership is to prepare individuals for leadership positions in health care organizations. 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 who have master's level training related to health care management. The program is designed for completion on a part-time basis.

*Faculty associated with this concentration include: Drs. Davis, Morlock and Pronovost; Ms. Gundlach, Ms. Shiloh and Mr. Ward*

***Doctor of Philosophy Program***

The Department offers a research-oriented, Doctor of Philosophy program. 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. In the second year, students take courses in preparation for research within the

area of concentration. 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 the faculty examine student's readiness to begin research. Upon passing, students pursue a research topic leading to a written dissertation acceptable to their advisor and a committee of faculty. It is possible to complete the PhD program in four years of full-time study. The department organizes its PhD program into two broad areas of focus; health services research, and health and public policy. There are several specialized areas of study, known as concentrations, within the two broad focus areas. Students are admitted into either health services research or health and public policy at the time of admission, and then must select an area of concentration in which to focus their studies. Each of the areas of concentration has their own curriculum and learning objectives.

***Ph.D. Concentration in Bioethics and Health Policy***

Falling within the health and public policy area, the concentration in Bioethics and Health Policy is designed for students who want bioethics to be the distinguishing characteristic of their career in public health. The Johns Hopkins PhD program in Bioethics and Health Policy is distinguished from other bioethics training programs in two ways: it focuses on bioethics as it relates to questions in public health and health policy (rather than, for example, medical ethics). Thus, students consider ethical issues in population health practice, research, and policy such as domestic and international research ethics, genetic screening policy, HIV screening, and social justice/resource allocation. The concentration provides rigorous training in empirical research methods. By the end of their training, students are prepared to provide not only normative recommendations regarding ethics and public health policy but they are also equipped to function as independent researchers conducting empirical bioethics research related to public health and health policy.

*Faculty associated with this concentration include: Drs. Faden, Kass, Taylor; Professors Gostin and Teret; and Mr. Vernick*

***Ph.D. Concentration in Environmental and Occupational Health Policy***

Also falling within the health and public policy area, the program in environmental and occupational health policy examines factors in the human environment which affect health. The concentration emphasizes evaluation, development and refinement of policies at the local, state, federal and international levels. The concentration uses a multidisciplinary approach to evaluation, integrating courses from the departments of Epidemiology, Environmental Health Sciences and Health Policy and Management to provide a foundation for the application of science to occupational and environmental policy.

*Faculty associated with this concentration include: Professor Baker; Drs. Burke, Fox, and Silbergeld; Ms. Resnick*

***Ph.D. Concentration in Gerontology and Long-Term Care***

Using the tools of health services research, this concentration integrates the field of gerontology into health policy. Students learn the principles of health services research and apply them to the study of all aspects of health and health care for the aging population. The required coursework prepares students for leadership positions in agencies and institutions charged with administering services as well as conducting research into the health and well being of the older population.

*Faculty associated with this concentration include: Drs. Burton, Boulton, German, Kasper and Wolff*

***Ph.D. Concentration in Health Economics***

The curriculum in health economics prepares doctoral students to understand the application of economic analysis to the health field and to carry out original studies in health economics. The curriculum stresses a solid grounding in modern economic theory, quantitative methods, and econometrics, and offers a broad exposure to economic studies in the health field. It

provides students with a working knowledge of basic public health statistics and methods, and familiarity with health policy, management, and research issues. This base of public health knowledge enables the student to appreciate the variety of disciplinary perspectives and institutional concerns that are relevant to the analysis of resource allocation questions within the health field. Many electives are available and are selected with the guidance of the student's advisor.

*Faculty associated with this concentration include: Drs. Bridges, Frick and Gaskin*

***Ph.D. Concentration in Health and Public Policy/Medical Care Policy***

This area of concentration focuses on the analysis and comprehension of the patterns of organization, funding, and delivery of health care in the United States and other developed countries. The impact that social policies have on the level of health and well-being of populations is a focus of the concentration, as is the relationship between health care and social care, patterns of productivity, consumption, utilization of health services, and satisfaction with health services.

*Faculty associated with this concentration include: Drs. Navarro, Oliver, Shi and Starfield*

***Ph.D. Concentration in Health Services and Outcome Research***

In a changing health care delivery system, health services researchers increasingly are concerned with the effects of different health care financing and organization models on the care outcomes for individuals and populations. Outcomes may include such factors as client satisfaction, functional status, health-related quality of life, excess morbidity, and mortality.

Outcomes may also be used to construct performance indicators for hospitals, health plans, and other organizations, information which can be used by consumers, managers, payers, and policy makers. In this doctoral concentration, students acquire the conceptual and methodological tools needed to conduct research and program evaluation to advance the state of knowledge of these issues. The curriculum emphasizes the following areas:

understanding variations in the organization and financing of health care delivery; methodologies for measuring and predicting quality of care and health outcomes; assessing the impact of technology and treatments on patient outcomes; and assessing the impact of health care policy on individuals and populations. Approaches employing primary data, secondary data, and integrated data sources are included to expand students' skills. The concentration prepares students for careers as health services researchers and as leaders of health care delivery organizations or programs in which the evaluation of quality of care and health outcomes is of central interest.

*Faculty associated with this concentration include: Drs. Anderson, Dy, Forrest, Kasper, LaVeist, MacKenzie, Marsteller, Morlock, Riley, Steinwachs, Weiner, and Wu*

***Ph.D. Concentration in Injury Prevention***

The Injury Prevention concentration focuses on the science and policy of preventing injuries, reducing disability and providing emergency services and rehabilitation. In conjunction with the Center for Injury Research and Policy, the faculty and students focus on injuries of all types, including highway injuries, falls, burns, drowning and violence. The epidemiology of these injuries is determined, and strategies to prevent the injuries are formulated and evaluated.

*Faculty associated with this concentration include: Professors Baker and Teret; Drs. Frattaroli, Pollack, MacKenzie, Webster and Mr. Vernick*

***Ph.D. Concentration in the Practice of Prevention***

This area of concentration examines specific public health problems such as AIDS, injuries, tobacco, and violence, and studies the social, economic, political, and legal forces that constitute obstacles for their resolution. Strategies for addressing these problems through traditional and innovative policies are developed and evaluated.

*Faculty associated with this concentration include: Professors Baker and Teret; Drs. Kass, Li, Taylor and Webster*

## **International Health**

The Department of International 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 (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, Disease Prevention 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 (i.e., division) 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), and for those interested in public health practice. The PhD is program area specific, whereas the DrPH is designed to develop senior-level professionals in the broad area of international health. Unlike the PhD, which focuses on building skills in a specific program area, 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 substantial public health experience, and ideally should have graduate-level training in the field (such as an MPH degree). The department also offers master's level training through the Master of Health Science degree. Students would select one of the four program area for their concentration when applying for admission to the MHS program.

Graduates of the Disease Prevention and Control program are expected to have acquired technical competence for entry-level positions coordinating disease prevention 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. Students in the Human Nutrition program focus 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.

Applicants for the MHS 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 training program consists of a minimum of four academic terms (64 units) of course work 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. A written comprehensive exam is taken after completion of course work, and a master's essay is produced in connection 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. Internship 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. The student has the principal responsibility for securing the field placement, with the support of the department. These arrangements must be approved by the faculty advisor prior to starting the field work. In the course of the internship, 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 this School and the School of Advanced International Studies (SAIS), students may enroll in a dual MA/MHS degree program. Both two-year degrees may be earned in a total of three years by fulfilling certain requirements of SAIS in lieu of the internship year. For more information, see Dual Graduate Degree Programs.

### **Concurrent Schoolwide Doctoral/Master of Health Science 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 Health Science degree during the course of doctoral studies. A student currently enrolled in a doctoral program in departments other than International Health at the Johns Hopkins Bloomberg School of Public Health may apply to one of the four programs in the Master of Health Science degree program in International Health by submitting application materials to the departmental Admissions Committee. A separate application essay on why the MHS 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 advisor must be documented in the application.

Program requirements are the same as those for MHS students in International Health. Students are assigned an International Health advisor in addition to the advisor 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 MHS internship and essay requirements. The MHS degree will be awarded only after completion of all doctoral degree requirements.

### ***Program in Disease Prevention and Control***

*Director: Joanne Katz, ScD*

*Deputy Director for Academic Programs:*

*Lawrence Moulton, PhD*

*Assistant Director for Academic Programs:*

*Karen Charron, BSN, MPH*

The goals of the Program in Disease Prevention 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, the Cameroon, Ethiopia, the Gambia, Ghana, Guatemala, Haiti, India, Indonesia, Iran, Kenya, Myanmar, Nepal, Pakistan, Peru, South Africa, Tanzania, Thailand, Uganda, Vietnam, Zimbabwe, Native American populations, and in disadvantaged populations in the United States. Faculty members are in full-time residence in Bangladesh, the Cameroon, Ethiopia, Guatemala, Nepal, Peru, and South Africa. The program serves as the home for the Center for Immunization Research and the Institute for Vaccine Safety.

#### **Academic Training in Disease Prevention and Control**

For information, contact Ms. Jennifer Shaffer, 410-955-3734, [jshaffer@jhsph.edu](mailto:jshaffer@jhsph.edu)

This program provides training for public health practitioners (MHS) 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.

Master of Health Science candidates should have a strong 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, Bourgeois, Burke, Burnham, Casey, Chaisson, Charron, Coberly, Coles, Cummings, Darmstadt, Durbin, Gilman, Halsey, Harro, Karron, Katz, Moss, Moulton, Nachege, Nelson, Pierce, Ruff, B. Sack, D. Sack, Salmon, Santosham, Sazawal, Steinhoff, D. Taylor, Tielsch, and Zenilman.*

#### **Program in Health Systems**

*Director: Mathuram Santosham, MD, MPH  
Deputy Director for Academic Programs: David Peters, MD, 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 of Public Health 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 prevention and control; and (12) neonatal and child health.

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
- The program serves as the home for the Center for International Emergencies,

Disaster, and Refugee Studies and the Center for American Indian Health.

### ***Academic Training in Health Systems***

*For information, contact Ms. Jennifer Shaffer, 410-955-3734, [jshaffer@jhsph.edu](mailto:jshaffer@jhsph.edu)*

Academic training is offered at both the master's and doctoral levels. Graduates of the program will have the competencies to play leadership roles in (a) health policy; (b) health planning, management, and evaluation; (c) public health education; (d) institution building; and (e) community development in a variety of settings, from community to national and international levels. Students seeking admission are encouraged to have a prior degree in biological or health sciences or alternatively in management or social sciences. Doctoral students may also elect to undertake a specialization in Health economics.

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 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, private sector analysis, injury prevention and control, and neonatal health programs.

*Advising Faculty: Drs. Baker, Black, Brieger, Burnham, Darmstadt, Hsu, Hyder, Jones, Levine, Morrow, O'Brien, Peters, Raj, Reinke, Robinson, Santosham, Seaton, Sorkin, Taylor, Thorne, Waters, Weiss, and Winch.*

### ***Program in Human Nutrition***

*Director: Laura Caulfield, PhD  
Deputy Director for Academic Programs: Parul Christian, DrPH*

The goals of the Program in Human Nutrition are to develop new practical approaches for the assessment of nutritional status, to improve understanding of the biochemical and metabolic processes associated with nutritional diseases, and to propose effective strategies for the prevention of those diseases. As part of the Department of International Health, faculty in the program focus on issues of under-nutrition in developing countries, and through the Center for Human Nutrition, faculty focus on domestic nutrition issues as well as emerging chronic disease problems in developing countries. The interdisciplinary nature of nutrition is reflected by the diverse faculty, which include physicians, biochemists, epidemiologists, physiologists, anthropologists, and biostatisticians.

Beyond their primary specialty, all program faculty have expertise in public health nutrition and in field work in a variety of diverse settings. Current research of program faculty include the determination of protein and energy requirements under varying physiological conditions; studies on the regulation of body weight and energy balance in health and disease; assessment of the biological and sociocultural determinants of nutritional status in the community; effects of micronutrient deficiencies (vitamin A, iron, iodine, zinc) on morbidity, mortality, and reproductive health; design and evaluation of nutritional interventions; feeding of infants and children, and nutrition of women during child-bearing years. International collaborative research is currently taking place in Bangladesh, China, India, Nepal, Peru, Tanzania, Thailand, and Zimbabwe. Faculty are in residence in Bangladesh, Nepal and Zimbabwe.

### ***Academic Training in Human Nutrition***

For information, contact Dr. Laura Caulfield, 410-955-2786, [lcaulfie@jhsph.edu](mailto:lcaulfie@jhsph.edu).

The program provides training leading to both the Master in Health Science (MHS) and doctoral (PhD) degrees in Human Nutrition. The objective of the program is to provide students with the scientific foundations and the practical skills to address major nutrition-related public

health problems. Through required and elective course work and with the guidance of their academic advisor, doctoral students are able to concentrate in the areas of international nutrition, nutritional biochemistry, nutritional epidemiology, nutritional anthropology, or clinical nutrition. Opportunities for thesis research include the study of maternal and child nutrition, obesity, relationships between diet and chronic diseases, micronutrient deficiencies (with emphasis on vitamin A, iron, calcium, zinc, selenium, and iodine) and nutrition interventions in developing countries, protein-energy metabolism in health and disease, and use of stable isotopes for metabolic research. In the MHS program, students concentrate during the first year on coursework in the core area of public health nutrition, and choose electives in accordance with their intended career path in public health nutrition. During the second year (2 quarters), students complete an internship/field placement designed to provide practical experience in their intended work area. Students in the program plan to pursue careers in management of nutrition and health programs, in the technical content of health promotion disease prevention programs, or go on to doctoral degrees in nutrition (PhD), medicine (MD) or related fields.

*Advising Faculty: Drs. Black, Caballero, Caulfield, Cheskin, Christian, Gittelsohn, Humphrey, O'Brien, Treuth, Watkins, and West.*

### ***JHU/Cornell University Educational Collaboration in Public Health Nutrition***

To enhance the training available in public health nutrition, The Johns Hopkins Bloomberg School of Public Health and Cornell University's Division of Nutritional Sciences are offering students an opportunity to attend courses given at both universities. Graduate students enrolled in a doctoral or master's program at Cornell or at The Johns Hopkins Bloomberg School of Public Health are able to study at the other school for up to one academic year. Students are eligible for the program after they have completed one academic year of study at their home institution. Tuition is charged by the student's home institution, and information on courses attended at the institution visited are

recorded on the student's transcript at the home institution.

### ***Program in Social and Behavioral Interventions***

*Director: Michael Sweat, PhD*

*Deputy Director for Academic Programs:  
Deanna Kerrigan, PhD*

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 and policies 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***

The Social and Behavioral Interventions Program offers both Master of Health Science 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 a broad exposure to applied theory and methods from the fields of social psychology and medical anthropology and sociology 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 both survey research methods, as well as in-depth interviews, focus group discussions, 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.

For information, contact Ms. Jennifer Shaffer, (410) 955-3734, [jshaffer@jhsph.edu](mailto:jshaffer@jhsph.edu).  
Advising Faculty: Drs. Brieger, Gittelsohn, Kerrigan, Fritz, Leontsini, Maman, Sweat, and Winch.

### **DOCTOR OF PUBLIC HEALTH (DRPH)**

*Director: David Peters, MD, DrPH*  
410-502-5364; [dpeters@jhsph.edu](mailto:dpeters@jhsph.edu)

The Doctor of Public Health (DrPH) Program in International Health is designed to train mid to senior level professionals in the broad area of international public health, 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, a field practicum, and a doctoral dissertation relevant to the practice of public health in an international context.

### **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 and will 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 the residency program at (410) 955-3630 or [lmeyers@jhsph.edu](mailto:lmeyers@jhsph.edu) or visit [www.jhsph.edu/GPMR/](http://www.jhsph.edu/GPMR/).

## Mental Health

The mission of the Department of Mental Health is to advance understanding of the causes and consequences of mental health and mental disorders, in order to improve health in the general population. The central focus of the mission is the prevention and control of mental disorders and impairments.

The target outcome of mental health and mental disorders is the distinguishing feature of the department. 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 expression of mental and behavioral problems in humans is diverse, and most disorders involve problems of varying intensity in all three areas of cognition, emotion, and behavior. Mental disorders typically involve disruption of the social relations of the individual, and are associated with neurological changes. Mental disorders occur at all ages and in all social groups.

Understanding causes and consequences of mental health and mental disorders from the perspective of public health involves population-based surveys in a developmental framework. Prevention and control of mental disorders involves design and execution of intervention trials to prevent disorder in individuals who are currently healthy, as well as to minimize future consequences for those with current disorder or a history of disorder. Interventions for promotion of mental health are part of the mission because good mental health protects against onset of a variety of mental disorders, as well as being a valued outcome in itself.

### Training Programs

The Department emphasizes ongoing research that enriches and stimulates the teaching 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 Psychiatric Epidemiology*

This interdisciplinary doctoral and postdoctoral program is affiliated with the Departments 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 Children's Mental Health Services 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. 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 teach prevention research. 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 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 treatment activities. Professional affiliation with national and state governmental research and policy agencies affords the opportunity for immediate involvement in ongoing activities leading to research paper productivity. Applicants to the fellowship program must have completed training in a relevant field and have experience in the drug or alcohol field. Participants in this program develop an academic plan in consultation with their advisor. This fellowship program leads to a certificate but not a degree. The program is jointly funded by a grant by the United States Department of State and the National Institute on Drug Abuse (NIDA) 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 infra-structure 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 Follow-up 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 casual determinant for many mental disorders and health problems. Cognitive characteristics, behavioral characteristics, and social settings are studied as potential cause 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 Mental Health Services and Service System Research***

Department faculty conduct 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 of Public Health, 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 structure and 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.

### ***Other Resources***

The Department faculty work in close association with city, state, 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 of Public Health 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 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 advisor'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 December 1.

### 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 advisor. 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 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 course work experience. All MHS students must complete a final research paper in his/her 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 advisor. 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  
330.601 Perspective of Psychiatry: The Public Health Framework.  
340.601 Principles of Epidemiology *or*  
340.751 Epidemiologic Methods 1  
550.865 Public Health Perspectives on Research

### **Second Term**

140.622 Statistical Methods in Public Health II  
*or*  
140.612 Statistical Reasoning in Public Health II  
330.602 Epidemiology of Drug and Alcohol Dependence *or*  
330.603 Psychiatric Epidemiology  
340.602 Intermediate Epidemiology *or*  
340.608 Observational Epidemiology *or*  
340.752 Epidemiologic Methods 2  
550.860 Research Ethics (or 306.665 Research Ethics and Integrity)  
550.865 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 must choose six additional units of electives in the departments of Mental Health. Students are encouraged to combine the MHS in Mental Health with one of

the 17 certificate programs offered in other departments of the school.

**Requirements for the Doctoral Degree in the Department of Mental Health**

**First Term**

140.621 Statistical Methods in Public Health I \*  
330.601. Perspective of Psychiatry: The Public Health Framework.  
330.657 Statistics for Psychosocial Research: Measurement \*\*  
340.601 Principles of Epidemiology  
550.865 Public Health Perspectives on Research

**Second Term**

140.622 Statistical Methods in Public Health II  
330.602 Epidemiology of Drug and Alcohol Dependence  
330.603 Psychiatric Epidemiology\*\*\*  
330.840 Special Studies in Mental Health \*\*\*  
340.602 Intermediate Epidemiology  
550.865 Public Health Perspectives on Research  
550.860 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 \*\*\*  
340.603 Cohort Studies: Design, Analysis, and Applications  
330.840 Special Studies Ground Rounds in Psychiatry \*\*

**Fourth Term**

140.624 Statistical Methods in Public Health IV  
330.607 Prevention of Mental Disorders: Public Health Interventions \*\*\*  
330.623 Neuropsychology of Mental Disorders  
340.604 Design and Applications of the Case-control Method  
330.840 Special Studies Ground Rounds in Psychiatry \*\*

\* Biostatistics 140.651-654 may be substituted for the 140.621-624.

\*\* 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, and Epidemiology of Drug and Alcohol Dependence, 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. 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 School 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 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. For detailed information on the three degree programs and other department information, please see the department's webpage - [www.jhsph.edu/Dept/MMI/index.html](http://www.jhsph.edu/Dept/MMI/index.html).

Applicants for any degree program should meet the general requirements of the 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) taken within two years of their application. Applications for September 2007 admission to the doctoral program should be submitted by January 2. The department will invite selected PhD applicants to one of two visiting weekends on February 2-3 or March 9-10. Applications to the ScM program should be submitted by April 1, but 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 are required to 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 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 United States 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 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 Comparative Medicine. 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 Academic Information. 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.

The department also offers a Master of Health Science degree. This program provides educational opportunities to students who do not wish to pursue an extensive research program but wish to gain greater knowledge within specific areas of the department and to participate in the departmental academic activities. The program has a defined curriculum and requires 9 months in residence. A written essay, which is usually based on a literature search, and a presentation at a departmental seminar are required for graduation. Applicants interested in the MHS degree should request additional information for this program from 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 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 (advisors from doctoral and masters departments) and integration of PhD and ScM research into a single dissertation. The IPME dissertation will include results of both masters 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 Masters 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 and Family Health Sciences**

### **MISSION STATEMENT**

Population and Family Health Sciences (PFHS) 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 shape 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, administrators, and health professionals for careers related to a broad range of population and family 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 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, the Center for Adolescent Health Promotion and Disease Prevention, The Women's and Children's Health Policy Center, the Rakai Health Project, 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 set of students at both the masters 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 and Family Health Science graduates, MHS, 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 seven centers that are either administratively located within or linked with the department. Six 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; the Center for Adolescent Health Promotion and Disease Prevention; the Women's and Children's Health Policy Center, and the Sexually Transmitted Diseases Center. University centers linked to the department include the Hopkins Population Center, , and the Urban Health Institute. In addition, the Rakai Health Sciences Program performs many functions comparable to the department's centers. Separately and together, these centers greatly enrich the department's capacity for research, training, technical assistance, internships, program development and evaluation, translation of research for policy, practice and to influence health behavior.

Fourth, the diversity of backgrounds, knowledge, skills, and prior experiences of our masters 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 & Development; Population and Health; and Reproductive, Perinatal, and Women's Health.

## ACADEMIC PROGRAMS

### Master of Public Health

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 Health Sciences (PFHS). 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 United States. 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 PFHS through established course sequences and/or special studies work with individual faculty.

### **Master of Health Science**

The MHS degree is offered as either a one-year or two-year program, depending on the student's background and career goals. The MHS in Demography program is one year. The MHS is intended for individuals with baccalaureate preparation who wish to focus their public health training in Population & Health studies; Child and Adolescent Health & Development; Reproductive Perinatal, and Women's Health. The MHS 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 the Census Bureau, government ministries, non-governmental health organizations in developing countries, state and local MCH agencies in the U.S., managed care organizations, 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 and family health sciences. Program requirements allow

flexibility so that students may tailor their academic program to concentrate in one of three tracks:

- Child and Adolescent Health & Development
- Population and Health
- Reproductive, Perinatal, and Women's Health

The one-year MHS 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 experience, and wish to strengthen their skills and knowledge base through improving their potential for advancement. Given the public health practice prerequisite for the one-year masters program, additional field experience is not included. 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 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 MHS degree would benefit their professional goals and objectives.

The one-year MHS in Demography program is designed for specialized training with a minimum of 32 units in demography courses of the 64 units required to complete the program. A research paper is also required.

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 MHS 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 advisor. 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 PFHS such as the Bill and Melinda Gates Institute for Population and Reproductive Health offer internship opportunities.

### **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 and an MPH or equivalent masters degree. It is intended for individuals who plan to assume a leadership position in the practice of public health. The PhD degree, is intended for students who are more oriented toward a research career. The department's doctoral programs are organized by the three academic program areas: Child and Adolescent Health & 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 will begin the first year with a set of core departmental courses intended to provide common theoretical foundations for the work of the entire department, encompassing biological/developmental foundations, demographic/social science foundations, 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 research 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/PFHS/Degree\\_Programs/index.html](http://www.jhsph.edu/dept/PFHS/Degree_Programs/index.html)

### **Academic Tracks**

The department's academic programs at the doctoral level are organized in three major tracks:

#### ***Child Health & Development***

The Child Health & 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. These 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 this program is housed in the Department of Population and Family Health Sciences, 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. Instruction is further crafted to reflect student experience, interest, and objectives. 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 sciences, communication, 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](mailto: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

- (1) population birth, death and growth rates;
- (2) population composition, including such characteristics as sex, age, and marital/ union status;
- (3) population distribution, including migration patterns and urbanization;
- (4) mathematical and statistical patterns underlying population change;
- (5) the measurement of population parameters in developing countries; and
- (6) measures of population health.

Student and faculty research interests include measuring and explaining levels and trends of 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: Professor Stan Becker, [sbecker@jhsph.edu](mailto:sbecker@jhsph.edu)*

### **Reproductive, Perinatal and Women's Health**

The Reproductive, Perinatal and Women's Health track provides integrated training at the doctoral and masters 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 diseases, HIV/AIDS, determinants and prevention of unwanted pregnancy, abortion or reproductive health related problems, provision of family planning, and contraceptive evaluation; (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@jhsph.edu](mailto:dstrobin@jhsph.edu).*

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.jhsph.edu/admissions](http://www.jhsph.edu/admissions).

## **SPECIALIZED PROGRAMS**

### **Post Doctoral 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 and family health sciences, but who do not wish to pursue another academic degree. Programs of

## **School-Affiliated Centers and Institutes**

Since the School 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 partial list of these centers and institutes may be found below. Further information may be found in the “Research and Centers” area of the School’s website at [www.jhsph.edu/researchcenters/index.html](http://www.jhsph.edu/researchcenters/index.html) where all centers are identified and a link to each center’s website is provided.

Adolescent Health Promotion & Disease Prevention  
Aging and Health  
Alternative to Animal Testing  
American Indian Health  
Autism and Developmental Disabilities  
Epidemiology  
Autoimmune Disease Research  
Bill and Melinda Gates Institute for Population & Reproductive Health  
Biostatistics  
Clinical Trials  
Communication Programs  
Evidence-Based Practice  
Excellence in Community Environmental Health Practice  
Excellence in Environmental Health Tracking  
George W. Comstock Center for Public Health Research and Prevention

Global Tobacco Control  
Gun Policy and Research  
Health Disparities Solutions  
Health Effects of Global Environmental Change  
Health Services Research and Development  
Human Nutrition  
Immunization Research  
Injury Research & Policy  
Institute for International Programs  
Law and the Public’s Health  
Livable Future  
Malaria Research Institute  
Mid-Atlantic Health Leadership Institute  
Mid-Atlantic Public Health Training  
Occupational Safety & Health  
Phoebe R. Berman Bioethics Institute  
Prevention of Youth Violence  
Population Center  
Primary Care Policy Center for Underserved Populations  
Public Health and Human Rights  
Public Health Preparedness  
Refugee and Disaster Response  
Research on Services for Severe Mental Illness  
Risk Sciences & Public Policy Institute  
Roger E. Lipitz Center for Integrated Health Care  
Tuberculosis Research  
Urban Environmental Health  
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Vaccine Safety  
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Welch Center for Prevention, Epidemiology and Clinical Research  
Women’s and Children’s Health Policy

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