



HARVARD SCHOOL OF PUBLIC HEALTH

## 2012 19th Annual Summer Session



for Public Health Studies

July 5–July 27 | July 30–August 17



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## 2012 SUMMER SESSION COURSE SCHEDULE

### Summer 1 July 5–July 27

8:30–10:20

- BIO 202 Principles of Biostatistics: Part I
- HPM 510 Introduction to Management of Health Care Organizations

10:30–12:20

- EPI 500 Fundamentals of Epidemiology
- ID 251 (1) Ethical Basis of the Practice of Public Health\*

1:30–3:20

- GHP 532 Introduction to Global Health Care Delivery\*
- HPM 277 Current Issues in Health Policy\*
- HPM 530 Measuring Health Outcomes\*
- ID 251 (2) Ethical Basis of the Practice of Public Health\*
- RDS 286 Decision Analysis in Clinical Research\*

3:30–5:20

- BIO 517 Using Next Generation Sequencing Analysis and Public Health
- EPI 295 Introduction to Pharmacoepidemiology
- HPM 276 Methods and Applications in Health Services Research\*
- ID 215 Environmental and Occupational Epidemiology
- SHH 201 Society and Health

### Summer 2 July 30–August 17

8:30–10:20

- BIO 203 Principles of Biostatistics: Part II
- BIO 224 Survival Methods in Clinical Research\*
- NUT 217 Global Nutrition

10:30–12:20

- BIO 214 Principles of Clinical Trials\*
- EPI 202 Elements of Epidemiologic Research
- HPM 209 Economics for Health Policy

1:30–3:20

- EH 201 Introduction to Environmental Health
- HPM 253 Improving Quality in Health Care\*
- HPM 512 Medical Informatics\*
- IID 232 Global Health and Infectious Diseases: Vector-borne and Zoonotic Infections
- RDS 288 Methods for Decision Making in Medicine\*

3:30–5:20

- BIO 234 Research Synthesis and Meta Analysis
- BIO 501 Linear and Longitudinal Regression\*
- HPM 299 Research with Large Databases\*
- IID 233 Global Health and Infectious Diseases: Infections Transmitted through Water and Food

\* Limited enrollment: Prerequisites and faculty approval are required.



“THE SUMMER SESSION WAS A GREAT WAY TO LEARN CORE PRINCIPLES OF PUBLIC HEALTH FROM WORLD-RENOWNED EXPERTS IN THE FIELD. I GAINED A DEEPER UNDERSTANDING FOR TOPICS LIKE BIOSTATISTICS AND EPIDEMIOLOGY FOR WHICH I HAD ONLY HAD SUPERFICIAL TRAINING IN THE PAST. THERE IS AN ARRAY OF INTERESTING COURSES OFFERED DURING THE SUMMER SESSION TAUGHT BY AMAZING PROFESSORS WHO ARE CLEARLY DEDICATED TO TEACHING AND IMPROVING PUBLIC HEALTH. IT WAS A GREAT WAY TO BECOME IMMersed IN HSPH AND GET A HEAD START ON THE ACADEMIC YEAR.”

— Monica Bharel, MD  
MPH candidate, HSPH  
Commonwealth Fund/Harvard University  
Fellow in Minority Health Policy  
Medical Director, Boston Health Care  
for the Homeless Program

## INTRODUCTION

### About the Harvard School of Public Health

Since 1922, the Harvard School of Public Health (HSPH) has led the world in public health research and education. It has guided an ever-expanding field and embodied the highest standards of scientific rigor and social commitment. Its landmark discoveries and world-class graduates have saved lives and lifted the burden of disease around the globe.

The school pursues its mission to advance the public’s health through learning, discovery, and communication. The school’s distinguished faculty of 400 have been recognized by various awards (including two Nobel Prizes, a Lasker Prize, and five MacArthur Awards), and represent a range of disciplines that constitute public health, including medicine, health services, environmental science, epidemiology, biostatistics, psychology, and the biological sciences. During the academic year, HSPH hosts about a 1,000 students from more than 60 countries.

The school’s main buildings for research, teaching, and administration are located in the heart of Harvard’s Longwood Campus. The facilities adjoin those of Harvard Medical School, Harvard School of Dental Medicine, and Harvard-affiliated hospitals such as Brigham and Women’s, the Dana-Farber Cancer Institute, and Children’s Hospital.

## GLOBAL HEALTH EFFECTIVENESS

The Global Health Effectiveness (GHE) Program, sponsored by the Harvard School of Public Health and Harvard Medical School, is co-directed by Paul Farmer, MD, PhD, Joseph Rhatigan, MD, and Rebecca Weintraub, MD. This program, now entering its fourth year, trains public health leaders and other mid-career health professionals through a curriculum of epidemiology, management science, and global health delivery case studies to more effectively design and manage programs that improve health outcomes for the populations they serve. The three-and-a-half week program consists of two credit-granting courses and one seminar taught by senior Harvard faculty. To learn more, please visit: [www.globalhealthdelivery.org/ghd-academic-offerings/harvard-global-health-effectiveness-program](http://www.globalhealthdelivery.org/ghd-academic-offerings/harvard-global-health-effectiveness-program).

**Please note:** The GHE Program has limited enrollment. Applicants should have a demonstrated commitment to global health.

**Deadline: February 1, 2012**

Also, the Summer Session coordinates with and shares one course, GHP 532, with the Global Health Effectiveness Program.

Additional courses with a global health focus: IID 232, IID 233, and NUT 217. GHE students, who wish to continue in Summer 2, may also apply for the Summer Session.



### Summer Session for Public Health Studies

The Summer Session is intended for health professionals in training or those who are considering a mid-career change into public health and feel the need to strengthen their skills. Participants include public health professionals, primary care practitioners, physicians engaged in the evaluation of health care delivery and management, physicians in training (including preventive medicine residents and medical students in an MD/MPH joint degree program), and candidates for a part-time MPH program.



During the 2011 Summer Session, over 500 students from across the U.S., Asia, Canada, Europe, and Latin America attended the school. More than 60 percent of those students were physicians; others included mid-level managers, lawyers, other health professionals, and graduate students.

### Curriculum

The Summer Session offers courses in epidemiology, biostatistics, statistical analysis, economics, environmental health, ethics, global health, health care management, infectious disease, nutrition, and society, human development, and health. These courses provide the framework for advanced study in every field of public health. They are essential for the practice of public health, for population-based primary care, and for the evaluation of clinical effectiveness in specialty medicine. The public health “core” curriculum offered during the Summer Session remains largely the same from year to year.

Summer Session courses are taught by members of the Harvard faculty and are academically challenging. The courses are the same as those offered to degree candidates during the regular academic year except they are compressed into

three weeks of daily classes. Students may complete one or two 2.5 credit courses per session, for a maximum of 5 credits per session or a total of 10 credits for the two sessions. As the coursework is very intensive and fast-paced, students registered for two courses in one session should not undertake other work commitments. No auditors are allowed.

Current HSPH students and students accepted for admission to a 2012 degree program may have greater flexibility in their course selection during the regular academic year by taking courses in the Summer Session. Current degree applicants and HSPH students will receive information regarding summer enrollment in February.

### **Degree Programs**

HSPH offers programs leading to the graduate degrees of master of public health (MPH), master of science (SM), and doctoral programs (SD and DPH) in public health. Courses taken in the Summer Session or in the Program in Clinical Effectiveness may count toward academic credit for the MPH, SM, or doctoral degrees.

### **Summer-Only Master of Public Health (MPH) Programs in Clinical Effectiveness and Quantitative Methods**

HSPH offers two summer-only MPH concentrations, one in clinical effectiveness, the other in quantitative methods. Qualified students with an interest in the areas of clinical effectiveness or quantitative methods may complete the MPH degree through courses offered in the Summer Session. The summer-only MPH degree program is available only for the two areas noted, and the selection of courses is limited. The degree requirements take three years to complete, over three consecutive summers. Applicants to the summer-only degree program must hold a doctoral degree. Students selecting a summer-only degree option may not take courses during the academic year.



### **WEEKLY SEMINAR SERIES**

Each summer, HSPH faculty members present a weekly seminar on topics of current interest in the field. These seminars are offered during lunchtime and are free to all Summer Session students. The seminars provide an opportunity for summer students to meet and talk informally with faculty from a range of disciplines.

### **2011 PRESENTATIONS**

#### **Inside National Health Reform**

John McDonough, Professor of the Practice of Public Health; Director of the Center for Public Health Leadership

#### **What to Do About Obesity? Cost-Effective Strategies**

Steven Gortmaker, Professor of the Practice of Health Sociology

#### **Location, Location, Location: How Where You Live in the U.S. Affects Your Health**

Francine Laden, Mark and Catherine Winkler Associate Professor of Environmental Epidemiology

#### **Positive Feelings are Good for Your Heart: Emotion and (Mal) Adaptive Processes Over the Life Course**

Laura Kubzansky, Associate Professor of Society, Human Development, and Health

#### **Leveraging Science to Shape the Future of Early Childhood Policy**

Jack Shonkoff, Julius B. Richmond FAMRI Professor of Child Health and Development; Director, Center on the Developing Child at Harvard University

#### **Humanitarian Assistance in War and Disasters: Trends and Technologies**

Michael VanRooyen, Associate Professor in the Department of Global Health and Population

## SUMMER COURSE OFFERINGS 2012

In the list below, “Summer 1” or “Summer 2” indicates the session in which the course is given:

Summer 1: July 5–July 27; Summer 2: July 30–August 17

Please note: An asterisk (\*) following a course title indicates limited enrollment; prerequisites and faculty approval are required.

Please review all course notes for information regarding prior preparation or other requirements.

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### BIostatISTICS

#### BIO 202 [Summer 1] Principles of Biostatistics: Part I

Instructor: Dr. Marcia Testa

8:30 A.M.–10:20 A.M. (Mon.–Fri., lecture sessions)

10:30 A.M. or 1:30 P.M. (Mon.–Fri., labs)

Five 2-hour labs each week (required).

2.5 credits

This course is the first part of introductory biostatistics and acquaints the student with the basic concepts and methods of biostatistics, their applications, and their interpretation. The material covered includes data presentation, numerical summary measures, rates and standardization, and life tables. Probability is introduced to quantify uncertainty, especially as it pertains to diagnostic and screening methods. Also covered are sampling distributions so that students may be introduced to confidence intervals and hypothesis testing. The computer is used throughout the course, and the student will gain familiarity with the software package STATA. Course note: Requires a basic knowledge of mathematics and familiarity with use of personal computers.

#### BIO 203 [Summer 2] Principles of Biostatistics: Part II

Instructor: TBA

8:30 A.M.–10:20 A.M. (Mon.–Fri., lecture sessions)

10:30 A.M. or 1:30 P.M. (Mon.–Fri., labs)

Five 2-hour labs each week (required).

2.5 credits

This course is the second part of introductory biostatistics; it continues to explore inference in greater depth. Lectures and laboratory exercises will emphasize applied data analysis, building upon the fundamentals emphasized in BIO 202. Topics covered include the comparison of two means, analysis of variance, nonparametric methods, inference on proportions, contingency tables, multiple 2 x 2 tables, correlation, simple regression, multiple regression and logistic regression, analysis of survival data, and sampling theory. The computer is used throughout the course, and the student will gain more familiarity with STATA.

**Please note:** Students enrolled in BIO 202 and BIO 203 are required to attend two hours of lab sessions each day, in addition to a daily lecture. BIO 202 and 203 must be taken consecutively and students must register for both courses in order to fulfill the biostatistics core requirement. Students will not be given credit for BIO 200 or BIO 201 during the academic year.

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#### BIO 214 [Summer 2] Principles of Clinical Trials\*

Instructors: Dr. Scott Evans,  
Dr. Sandra Lee

10:30 A.M.–12:20 P.M. (Mon.–Fri.)

Lectures. 2.5 credits

Designed for individuals interested in the scientific, policy, and management aspects of clinical trials. Topics include types of clinical research, study design, treatment allocation, randomization and stratification, quality control, sample size requirements, patient consent, and interpretation of results. Students design a clinical investigation in their own field of interest, write a proposal for it, and critique recently published medical literature. Course note: A course in introductory statistics or signature of instructor is required.

#### BIO 224 [Summer 2] Survival Methods in Clinical Research\*

Instructor: Dr. Roger Davis

8:30 A.M.–10:20 A.M. (Mon.–Fri.)

Lectures. 2.5 credits

This course will cover the common approaches to the display and analysis of survival data, including Kaplan-Meier curves, log rank tests, and Cox proportional hazards regression. Computing, using SAS, will be an integral component of the course. Course note: Students should have taken an intermediate-level course in biostatistics: BIO 210, BIO 211, BIO 213, or equivalent.

#### BIO 234 [Summer 2] Research Synthesis and Meta Analysis

Instructor: Dr. Michael Stoto

3:30 P.M.–5:20 P.M. (Mon.–Fri.)

Lectures. 2.5 credits

Introduction to systematic reviews and meta analysis methods as used in public health and clinical medicine. Students learn how to use a variety of formal and informal methods for identifying, evaluating and synthesizing information from randomized controlled trials and observational studies, assessing the strength of the evidence, and translating the results into policy and practice guidelines. Concepts are introduced and illustrated through case studies of public health and medical issues. Working in groups of 3 to 5 individuals, students will be expected to carry out a written research synthesis of a public health or clinical topic of their choosing. Intermediate results will be presented and discussed in class. Requires strong quantitative skills as well as knowledge of the design, analysis, evaluation, and interpretation of randomized clinical trials and observational/epidemiological studies. MPH-level courses in biostatistics and epidemiology are a prerequisite or a corequisite. Priority for enrollment will be given to students in the Program in Clinical Effectiveness (PCE). Non-degree students must provide evidence of the necessary knowledge and ability (e.g., grades received in quantitative courses, standardized test scores).

### **BIO 501 [Summer 2] Linear and Longitudinal Regression\***

Instructor: Dr. Garrett Fitzmaurice  
3:30 P.M.–5:20 P.M. (Mon.–Fri.)  
Lectures, laboratories. 2.5 credits

This course is intended for students who are already very comfortable with fundamental techniques in statistics. The course will cover methods for building and interpreting linear regression models, including statistical assumptions and diagnostics, estimation and testing, and model building techniques. These models will be extended to handle data arising from longitudinal studies employing repeated measurement of subjects over time. Lectures will be accompanied by computing exercises using the SAS statistical package. Course note: BIO 200, BIO 201, BIO 206, or BIO 202 and BIO 203 are required. Ordinal grading option only. Lab or section will be announced at first meeting.

### **BIO 517 [Summer 1] Using Next Generation Sequencing Analysis and Public Health**

Instructor: Dr. Winston Hide  
3:30 P.M.–5:20 P.M. (Mon.–Fri.)  
Lectures, laboratories. 2.5 credits

Using a mixed lecture, practical and paper discussion format, this sequence-centric course introduces biomedical scientists and health practitioners to the interpretation and manipulation of Next Generation sequence data. The course provides the basic vocabulary of how to interpret and manipulate gene expression, microbiome surveys, pathogen strain diversity and human genome variation using ChIPSeq, RNASeq, metagenomics, pathogen and whole exome sequencing data. The course provides insight into the interpretation of nextgen data, and exploration of genomic information, including the use and interpretation of functional network information in order to inform translational research and experimental design. Study discussions cover a number of topics including the encode project and personal genomics.

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## **ENVIRONMENTAL HEALTH**

### **EH 201 [Summer 2] Introduction to Environmental Health**

Instructor: Dr. Rose Goldman  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lectures, class discussion. 2.5 credits  
*See interdepartmental listing for additional EH/EPI offering.*

This course offers a general introduction to environmental health from local to global, addressing fundamental topics and current controversies. The first part of the course covers core topics that prepare students to more fully understand and address environmental health issues: toxicology, exposure assessment, environmental epidemiology, risk assessment/risk management, air pollution, water pollution, and environmental justice. Using the tools from the first part of the course, students then participate in sessions on occupational health, children's health and the environment, injuries, climate change and health, the built environment/urban sprawl, and debates concerning pesticide use. Students can actively engage with the course material through in-class and online, case discussions, debates, and review of environment-related current events. This course provides an excellent introductory foundation in environmental health for all professional master's degree candidates, whether or not specializing in environmental health. The course fulfills the environmental health requirement for all professional master's degree programs. Activities: Brief, graded written assignments (assigned written case analysis and pesticide debate position), final individual case project, in-class, online discussions and exercises.

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## **EPIDEMIOLOGY**

### **EPI 500 [Summer 1] Fundamentals of Epidemiology**

Instructor: Dr. Albert Hofman  
10:30 A.M.–12:20 P.M. (Mon.–Fri.)  
Lectures, class discussion, seminars.  
2.5 credits

This course will provide an orientation to epidemiology as a basic science for public health and clinical medicine. It will address the principles of the quantitative approach to clinical and public health problems. The course will discuss measure of frequency and association, introduce the design and validity of epidemiologic research, and give an overview of data analysis. This course is an introduction to the skills needed by public health professionals and clinicians to interpret critically the epidemiologic literature. It will provide students with the principles and practical experience needed to initiate the development of these skills. Lectures are complemented by seminars devoted to case studies, exercises, or critique of current examples of epidemiologic studies. Course note: Credit is not given for more than one of EPI 500, 200, 201, or 208.

### **EPI 202 [Summer 2] Elements of Epidemiologic Research**

Instructor: Dr. Murray Mittleman  
10:30 A.M.–12:20 P.M. (Mon.–Fri.)  
Lectures, seminars. 2.5 credits  
*See interdepartmental listing for additional EH/EPI offering.*

Introduces elements of study design, data analysis and inference in epidemiologic research. Principles and methods are illustrated with examples, and reviewed through homework and in-class exercises. May serve as an introduction to more advanced study or as a concluding course for those desiring a working knowledge of epidemiologic methods. Course note: EPI 200, EPI 201, EPI 208, or EPI 500 are required—concurrent enrollment permitted; BIO 200, BIO 201, or BIO 202 and BIO 203 are required—concurrent enrollment permitted.

### **EPI 295 [Summer 1] Introduction to Pharmacoepidemiology**

Instructor: Kin-Wei A. Chan  
3:30 P.M.–5:20 P.M. (Mon.–Fri.)  
Lectures. 2.5 credits

This is an introductory course on pharmacoepidemiology. How the principles of modern epidemiology methods are used to evaluate the safety, effectiveness, and utilization patterns of drugs, vaccines, and medical devices will be discussed. Examples of descriptive epidemiology studies, cohort studies, case control studies, and intervention studies will be drawn from recent literature to illustrate the application of relevant methods and the challenges in drug safety assessment. Drug safety assessment from the pharmaceutical and biotechnology industry perspective and the regulatory perspective will be discussed. Practical issues such as data sources, ethical principles and advanced methodologic topics, such as confounding by indication and misclassification and the analytic methods to address them will be briefly introduced. Course activities: Written and oral group projects, individual class presentations, class discussion. Course note: Recommended for students interested in a general overview of pharmacoepidemiology. Credits cannot be given for students who have taken EPI 221 (or vice versa.) A minimum enrollment of 8 students is required for the course to be offered.

### **GHP 532 [Summer 1] Introduction to Global Health Care Delivery\***

Instructors: Dr. Paul Farmer, Dr. Joia Mukherjee, Dr. Joseph Rhatigan  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lectures, case studies. 2.5 credits

This course will engage students in analysis of case studies that describe interventions to improve health care delivery in resource-poor settings. Class room discussion of these case studies will help illuminate principles and frameworks for the design of efficient and effective global health interventions. Through a focus on HIV, tuberculosis, and other conditions affecting populations living in poverty, these cases will allow students to carefully consider the question of how epidemiology, pathophysiology, culture, economics, and politics inform the design of interventions.

### **HPM 209 [Summer 2] Economics for Health Policy**

Instructor: Dr. Meredith Rosenthal  
10:30 A.M.–12:20 P.M. (Mon.–Fri.)  
Lectures, class discussion, seminars.  
2.5 credits

Students will learn how to analyze current health policy issues through the application of basic economic principles. No previous economics training is required. The course will begin with an introduction to the U.S. health care “system” because we will be using examples drawn almost exclusively from the American context. The concepts we will be learning, however, are widely generalizable, and students whose interests and experiences extend beyond the U.S. are welcomed. Among the topics we will discuss are health insurance coverage, benefit design, physician payment incentives, public reporting of quality information, and the pharmaceutical industry.

### **HPM 253 [Summer 2] Improving Quality in Health Care\***

Instructor: Maureen Bisognano  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lectures, case studies. 2.5 credits

Improvement in Quality Health Care is designed for practicing physicians and those with an interest in health care management. This interactive and challenging course will provide students with a fresh perspective on improvement in health care systems, and provide them with the necessary tools to affect the kind of real change in their own organizations and practices that can improve outcomes for patients. Topics of the sessions will include: systems thinking; the leadership of improvement; statistical thinking and the management of variation; process knowledge and design; change methods, improvement, and design and creativity; collaborative work; matching service design to needs; personal and professional learning and change; the diffusion of innovations; spreading new methods across organizational silos and boundaries; and work-related psychology and managing resistance to improvement.

### **HPM 276 [Summer 1] Methods and Applications in Health Services Research\***

Instructors: Dr. Arnold Epstein, Dr. Joel Weissman  
3:30 P.M.–5:20 P.M. (Mon.–Fri.)  
Lectures. 2.5 credits

Introduction to Methods and Applications in Health Services Research introduces students to the interdisciplinary field of health services research. The course covers theory, methodology, and applications using a highly interactive teaching approach. Individual sessions will be devoted to research design, analyses of large databases, cost-effectiveness analyses, survey methodology, assessment of health status, assessment of quality, measurement of racial, ethnic, and socioeconomic disparities, appropriateness of care, risk adjustment, and statistical techniques pertinent to health services research. There will be one or more sessions reviewing managerial applications such as case management, use of hospital information systems, and targeting for high-risk patients. The course will also include class sessions and exercises devoted to critique of journal articles. These will supplement didactic presentations and will target development of skills in performing research and writing papers. In the final part of the course, students will work in small groups to critique a “grant proposal” designed to study an important problem in health services or health policy research. Each group of students will write up their critique in a format typical for a federal study section. This effort is designed to educate students on important aspects of grant writing.

### **HPM 277 [Summer 1] Current Issues in Health Policy\***

Instructors: Dr. Arnold Epstein,  
Dr. Anthony Komaroff  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lectures. 2.5 credits

Current Issues in Health Policy introduces students to the major health policy issues facing the United States today. The course focuses on the roles of hospitals, doctors, private and government insurance, and different systems for organizing and financing care (such as traditional fee-for-services, HMOs, and other forms of “managed care”). Individual sessions in the course will be devoted to topics such as malpractice, policy issues related to pharmacologic therapy, physician payment, academic health centers, workforce, physician profiling, managed care, the uninsured, Medicare, and Medicaid. Taken together, the course sessions are designed to provide both a general background of the health care system and knowledge of many of the cutting-edge issues that are on the forefront of the nation’s health policy agenda. The course will provide insight into how and why particular health policies are developed. It will focus on what the major policy questions are, and present examples of health services research methodology. However, the course concentrates much more on policy questions than methodological techniques.

### **HPM 299 [Summer 2] Research with Large Databases\***

Instructors: Dr. John Ayanian,  
Dr. Ellen McCarthy  
3:30 P.M.–5:20 P.M. (Mon.–Fri.)  
Lectures. 2.5 credits

This course addresses potential uses of existing large administrative, clinical, and survey databases to study important questions regarding clinical risk factors, treatment, outcomes and health policy. Strengths and limitations of large databases that are commonly used for research will be considered, and special attention will be devoted to large federal databases that are readily available to new investigators. Practical issues in obtaining, linking, and analyzing large databases will be emphasized in the course and key statistical issues will be addressed, including risk adjustment and sample weights. Students will evaluate published studies based on large databases and develop a proposal for analyzing a specific research question with a large database. Course note: EPI 208, EPI 200, or EPI 500 and BIO 206 or BIO 202 are required.

### **HPM 510 [Summer 1] Introduction to Management of Health Care Organizations**

Instructor: Dr. James Conway  
8:30 A.M.–10:20 A.M. (Mon.–Fri.)  
Lectures, case studies. 2.5 credits

This course provides an introduction to two of the major tasks confronting managers of health care organizations. Building on an introduction to organizational theory, the course focuses on the main problems of organizational strategy and the management of human resources. This course makes extensive use of case based classroom discussions, as well as selected conceptual readings.

### **HPM 512 [Summer 2] Medical Informatics\***

Instructors: Dr. David Bates,  
Dr. Blackford Middleton, Dr. Jonathan Einbinder  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lectures, class discussion, seminars.  
2.5 credits

Medical informatics and health information technology are increasingly critical for delivery of safe, effective health care, and also for research and management. Health information technology will likely transform health care in the coming years, and electronic health records represent a treasure trove of data for anyone interested in clinical effectiveness research, and a vehicle for improving health care delivery. In this course, we describe the core issues in the field of medical informatics, survey the methods used to perform clinical effectiveness research using clinical systems, give examples of health care improvement using health information technology, and describe how to evaluate clinical systems interventions. Major topics include the impact of clinical systems with a focus on clinical decision support, evaluation methods, obtaining information from clinical systems, and the role of informatics standards. Issues such as confidentiality and privacy, organizational factors, interoperability, and return on investment will also be covered. The relevance of informatics in disease management, genomics, patient computing, biosurveillance, and health care policy will also be highlighted. You do not need to be a programmer or have medical informatics as a primary interest to take this course. Course activities: Students will write a paper about a proposed analysis using data from a clinical information system. Ordinal grading only.

### **HPM 530 [Summer 1] Measuring Health Outcomes\***

Instructors: Dr. Marcia Testa,  
Dr. Donald Simonson  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lectures, case studies. 2.5 credits

This course emphasizes introductory concepts, methods, and practical procedures for measuring and analyzing patients’ health status, quality of life, satisfaction, and cost-effectiveness for health outcomes research. The course reviews the fundamentals of health outcomes research methods necessary for demonstrating improvement in patient outcomes, controlling costs and allocating resources, implementing disease management programs, and making effective public health, health technology, and clinical decisions. Statistical methods needed to evaluate and use scales and indices are also presented and discussed. The course would be useful to public health and clinical researchers who must critically review and utilize outcomes data for public health, health care, and clinical decision making. The course should enable students to conceptually define the meaning and purpose of outcomes research; understand the role of epidemiology, health economics, and database and information technology in conducting outcomes research; evaluate the usefulness and utility of outcomes measures; recognize the different types of measures used in outcomes research, including

### RDS 286 [Summer 1] Decision Analysis in Clinical Research\*

Instructor: Dr. Milton Weinstein  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lectures. 2.5 credits

### RDS 288 [Summer 2] Methods for Decision Making in Medicine\*

Instructor: Dr. M.G. Myriam Hunink  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lecture. 2.5 credits

*See interdepartmental listing for additional health policy and management offering.*

clinical, health status, quality-of-life, work/role performance, health care utilization, and patient satisfaction; adopt new methods for modeling patient responses, interpret the meaning of measurement concepts, and obtain a basic appreciation of the statistical analyses appropriate for outcomes research; locate available research-quality instruments for measuring health care outcomes in order to make informed choices among existing instruments; and interpret the results of health outcomes research.

This course introduces the following topics: decision analysis methods relevant to clinical decision making and clinical research; the use of probability to express uncertainty; Bayes theorem and evaluation of diagnostic test strategies; sensitivity analysis; utility theory and its use to express patient preferences for health outcomes; cost-effectiveness analysis in clinical research and health policy; and uses and limits of decision analysis and cost-effectiveness in clinical decision making and research design. Requires knowledge of clinical medicine, though training and/or clinical research experience. Strong quantitative ability/aptitude is also required. Priority for enrollment will be given to students in the Program in Clinical Effectiveness (PCE). HSPH degree candidates who are not in PCE must demonstrate knowledge of clinical medicine, though training and/or clinical research experience. (Others should consider taking RDS 280 as an alternative.) Non-degree students must provide evidence of both clinical training/research experience and mathematical ability (e.g., grades received in quantitative courses, standardized test scores).

This course deals with intermediate-level topics in the field of medical decision making. Topics that will be addressed include modeling issues, evaluation of diagnostic tests, ROC and summary ROC analysis, utility assessment, multi-attribute utility theory, Markov process models, Monte Carlo simulation modeling, methods for sensitivity analysis, value of information analysis, and behavioral decision making.

The course will focus on the practical application of techniques and will include published examples and a computer practicum. During the course you will have the opportunity to work on a decision problem which you select yourself. Course note: Knowledge of probability and statistics required. This is not an introductory course. Some background in decision analysis is required.

## INFECTIOUS DISEASES

### IID 232 [Summer 2] Global Health and Infectious Diseases: Vector-borne and Zoonotic Infections

Instructors: Dr. Edward Ryan, Dr. James Maguire, Dr. Richard Pollack, Dr. Dan Milner  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lectures, case and field studies, laboratories. 2.5 credits

This course will focus on vector-borne and zoonotic infectious diseases of public health importance. The course will cover epidemiology, epizootology, clinical manifestations, pathogenesis, diagnosis, treatment, transmission, medical entomology, prevention, and control of diseases of particular importance in resource-poor areas. Focus areas will include dengue, yellow fever, other arboviruses, rabies, plague, bartonellosis, borreliosis, typhus and other rickettsial infections, malaria, leishmaniasis, Chagas, African trypanosomiasis, filariasis, and will introduce students to medical entomology and the importance of zoonotic reservoirs. Course activities include lectures, case and field studies, lab practica, and readings. Evaluation will be based on an examination and class participation.

### IID 233 [Summer 2] Global Health and Infectious Diseases: Infections Transmitted through Water and Food

Instructors: Dr. Edward Ryan, Dr. James Maguire, Dr. Dan Milner, Dr. Rocio Hurtado  
3:30 P.M.–5:20 P.M. (Mon.–Fri.)  
Lectures, case studies, laboratories.  
2.5 credits

This course will focus on infectious diseases of public health importance that are transmitted through water and food. The course will cover modes of transmission, epidemiology, clinical manifestations, pathogenesis, diagnosis, treatment, prevention, and control of diseases of particular import in resource-poor areas. Focus areas will include intestinal viruses (including enteroviruses, rotavirus, caliciviruses, hepatitis viruses), intestinal bacterial pathogens (including shigella, salmonella, typhoid, cholera, enterotoxigenic *E. coli*), intestinal protozoa (including amebiasis, giardiasis, cryptosporidiosis, cyclosporiasis), intestinal helminths (ascariasis, hookworm, trichuriasis, strongyloidiasis), dracunculiasis, larva migrans, taeniasis, cysticercosis, echinococcosis, liver flukes, lung flukes, and schistosomiasis. Focus areas will include disease prevention strategies, public health treatment strategies including oral rehydration, and effects of globalization, urbanization, and climate change. Course activities include lectures, case and field studies, lab practica, readings. Evaluation will be based on an examination and class participation.

“A TRULY INSPIRATIONAL EXPERIENCE. THE CLASSES PROVIDED DURING THE SUMMER ARE AN OPPORTUNITY TO SURROUND ONESELF WITH INSPIRING STUDENTS AND TEACHERS, BUILD ONE’S ACADEMIC SKILLS IN A SUPPORTIVE TEACHING ENVIRONMENT, AND DEVELOP FIRM FRIENDSHIPS WITH PEOPLE FROM ALL OVER THE WORLD. I WOULD RECOMMEND THE SUMMER SESSION TO ANYONE WITH AN INTEREST IN UNDERSTANDING MODERN HEALTH CARE.”

— Seth Delpachitra, MBBS(Hons)  
Resident Medical Officer, The Townsville Hospital  
MPH student, James Cook University, Australia

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## NUTRITION

### **NUT 217 [Summer 2] Global Nutrition**

Instructor: Dr. Roland Kupka  
8:30 A.M.–10:30 A.M. (Mon.–Fri.)  
Lecture. 2.5 credits

Malnutrition is the leading cause of death and disability worldwide, and is a major impediment to population health and economic development. Under-nutrition has dominated the health profile of developing countries, within a vicious cycle of poverty, under-nutrition, and infectious diseases. However, economic development, urbanization, and associated changes in diet and lifestyle patterns have contributed to the rapid emergence of chronic health conditions in these regions, including obesity, diabetes mellitus, and cardiovascular disease. This course will provide a comprehensive overview of the state of the science in global health nutrition. It will discuss major nutrition-related problems seen in developed and developing countries, ranging from micro- and macronutrient deficiencies to diet-related chronic diseases. Building on the understanding of these problems, the course will discuss types of study designs to further advance knowledge as well as programmatic solutions. Course note: Graduate training in a health-related field and introductory knowledge of epidemiology is recommended.

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## SOCIETY, HUMAN DEVELOPMENT, AND HEALTH

### **SHH 201 [Summer 1] Society and Health**

Instructor: Dr. Ichiro Kawachi  
3:30 P.M.–5:20 P.M. (Mon.–Fri.)  
Lectures, case studies. 2.5 credits

This course analyzes major social variables that affect population health: poverty, social class, gender, race, family, community, work, behavioral risks, and coping resources. The course examines health consequences of social and economic policies and the potential role of specific social interventions. The course reviews empirical and theoretical literature on mechanisms and processes that mediate between social factors and their health effects, and discusses alternative models for advancing public health. Course activities: Short written assignments, class discussion, final examination. Course note: Fulfills a core course requirement for students pursuing an MPH degree at HSPH; fulfills a departmental requirement for students in the Department of Society, Human Development, and Health.

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## INTERDEPARTMENTAL

### **ID 215 [Summer 1] Environmental and Occupational Epidemiology**

Instructor: TBA  
3:30 P.M.–5:20 P.M. (Mon.–Fri.)  
Lectures, case studies. 2.5 credits

This course examines application of epidemiologic methods to environmental and occupational health problems. Objectives are to review methods used in evaluating the health effects of physical and chemical agents in the environment, to review available evidence on the health effects of such exposures, and to consider policy questions raised by the scientific evidence. Topics include lectures on methodology, seminars on the review and criticism of current literature, and presentations by outside experts on specific environmental and occupational health issues of current interest. Course note: EPI 200, EPI 201, EPI 208, or EPI 500 is required; BIO 200, BIO 201, BIO 206, or BIO 202 and BIO 203 are required—concurrent enrollment permitted. Fulfills the environmental health core requirement for all professional master’s degree programs.

### **ID 251 [Summer 1] Ethical Basis of the Practice of Public Health\***

Instructors: Dr. Michelle Mello,  
Dr. David Studdert  
10:30 A.M.–12:20 P.M. (Mon.–Fri.)  
or  
1:30 P.M.–3:20 P.M. (Mon.–Fri.)  
Lectures, case studies. 2.5 credits

This course is intended to provide physicians and public health professionals with an understanding of how politics, economic concerns, law, and ethics interact in health policy decisions. Through discussion of legal cases and articles from the medical and ethics literature, we will explore topics such as informed consent, rights to health, rationing, personal responsibility for health, and genetic screening.

## SUMMER SESSION FACULTY 2012

**John Z. Ayanian, MD, MPP** (Harvard University); Professor of Health Policy and Management; Professor of Medicine and Health Care Policy, Harvard Medical School. Access to care; quality of care; cardiovascular disease; cancer; primary and specialty care; health care disparities.

**David W. Bates, MD** (Johns Hopkins Medical School); SM (Harvard University); Professor of Medicine and Health Care Policy. Safety, quality, informatics, improving safety and quality using information technology, primary care.

**Maureen Bisognano, MS** (Boston University); Instructor in Health Policy and Management, HSPH; President and CEO, Institute for Healthcare Improvement. Quality improvement in health care; strategic planning; leadership.

**K. Arnold Chan, MD** (National Taiwan University); ScD (Harvard School of Public Health); Adjunct Associate Professor, Department of Epidemiology, HSPH. Safety evaluation of medical products, including drugs, vaccines, and medical devices. Early detection and refinement of safety signals.

**James B. Conway**, currently, Principal, PascalMetrics. Previously: 2005-2011, Senior Fellow and Senior Vice President, IHI; 1995-2005, Executive Vice President and Chief Operating Officer of DFCI; 1966-1995 Children's Hospital, Boston. Faculty member at the Harvard School of Public Health, founding member of the Lucian Leape Institute at the National Patient Safety Foundation, member of the IOM Committee on Learning Healthcare Systems, Board member of Winchester Hospital and American Cancer Society (NE).

**Roger B. Davis, MA** (University of Rochester); SD (Harvard University); Associate Professor in the Department of Biostatistics, HSPH; Associate Professor of Medicine, Harvard Medical School. Design and analysis of clinical trials; recursive partitioning methods; collaboration with medical investigators; health services research.



**Jonathan Einbinder, MD** (Columbia University); MPH (Harvard University); Corporate Manager for Quality Data Management, Partners HealthCare System; practicing general internist at Brigham and Women's Hospital. Measuring and improving quality using information systems, with a particular focus on data warehousing, population registries, and clinical dashboards.

**Arnold M. Epstein, MA** (Harvard University); MD (Duke University); John H. Foster Professor and Chair, Department of Health Policy and Management, HSPH; Professor of Medicine, Harvard Medical School. Quality of care and disparities in care for disadvantaged populations.

**Scott Evans, PhD** (University of Massachusetts); Senior Research Scientist, Department of Biostatistics, Center for Biostatistics in AIDS Research, Harvard School of Public Health. Clinical trial design; interim data monitoring; benefit:risk assessment.

**Paul Farmer, MD, PhD**; Kolokotronis University Professor, Harvard University; Chair, Department of Global Health and Social Medicine, Harvard Medical School; Chief, Division of Global Health Equity, Brigham and Women's Hospital; Co-founder, Partners In Health; Co-founder, Global Health Delivery Project. Health and human rights; treatment of AIDS and tuberculosis (including MDRTB) in resource-poor settings; the role of social inequalities in determining the distribution and outcomes of infectious diseases.

**Garrett M. Fitzmaurice, SD** (Harvard University); Professor in the Department of Biostatistics, HSPH; Professor of Psychiatry (Biostatistics), Harvard Medical School. Design and analysis of longitudinal and repeated measures studies; missing-data methods; collaboration with medical investigators.



**Rose Goldman, MD** (Yale University); MPH (Harvard University); Associate Professor in the Department of Environmental Health, HSPH; Associate Professor of Medicine, Harvard Medical School; co-project director, the New England Pediatric Environmental Health Specialty Unit at Cambridge Hospital and Children's Hospital, Boston. Neurotoxicity; metals; pediatric environmental health; repetitive strain injuries; teaching of environmental and occupational medicine.

**Winston A. Hide, MA** (Temple University); PhD (Temple University); Associate Professor in the Department of Biostatistics, HSPH; Associate Faculty, Harvard Stem Cell Institute. Computational biology of disease systems; functional systematics of stem cell characterization; public data sharing.

**Albert Hofman, MD** (University of Groningen); PhD (Erasmus University); Adjunct Professor, Department of Epidemiology, HSPH. Incidence and risk factors of Alzheimer's disease and Parkinson's disease. Determinants of atherosclerosis, heart disease, and stroke. Design and analysis of cohort studies.

**M.G. Myriam Hunink, MD** (University of Leiden); PhD (Erasmus University); Professor of Clinical Epidemiology and Radiology, Erasmus University Medical Center Rotterdam; Adjunct Professor of Health Decision Sciences, Harvard School of Public Health. Research interests are the assessment of diagnostic imaging and prevention of cardiovascular disease, therapeutic lifestyle changes, and integrative medicine. Methodological expertise in developing prediction rules, decision modeling, and cost-effectiveness analysis.

**Rocio M. Hurtado, MD** (Johns Hopkins) is an Infectious Disease physician at the Massachusetts General Hospital, specializing in Mycobacterial diseases, Tropical Medicine and its interface with HIV in resource-limited settings. She is the Director of the Mycobacterial Center in the Infectious Disease Division at Massachusetts General Hospital (MGH), and is also the Associate Program Director for Global Health in the Department of Medicine at MGH. Her clinical and research activity focuses on TB & HIV overseas (Peru, South Africa and Ethiopia), in addition to clinical tropical medicine (trained in the U.K.).

**Ichiro Kawachi, MD, PhD** (University of Otago); Professor of Social Epidemiology and Chair, Department of Society, Human Development, and Health, HSPH. Social determinants of health (particularly social networks effects), neighborhood/community influences on health, stress and cardiovascular disease.

**Anthony L. Komaroff, MD** (University of Washington); Simcox-Clifford-Higby Professor of Medicine, Harvard Medical School. Clinical epidemiologic studies of common problems in primary care; computer systems in medical care; publishing of medical information for the public.

**Roland Kupka, SD** (Harvard University); Adjunct Assistant Professor, Department of Nutrition HSPH. Nutritionist with the United Nations Children's Fund in the Regional Office for West and Central Africa; UNICEF regional focal point for micronutrients and operational research. Role of micronutrients in maternal and child health in Africa.

**Sandra J. Lee, ScD** (Harvard University); Principle Research Scientist, HSPH and Dana-Farber Cancer Institute. Methodological topics in early detection of disease and study designs of clinical trials.



**James Maguire, MD** (Harvard University); MPH (HSPH), Professor of Medicine, Harvard Medical School; Senior Physician, Division of Infectious Disease, Brigham and Women's Hospital; Served as Chief of the Parasitic Diseases Branch, CDC and Professor and Director, International Health, University of Maryland School of Medicine. Recipient of the Ben Keane medal from the American Society of Tropical Medicine and Hygiene; member of several WHO steering committees on Chagas disease research. Clinical and epidemiological research in Brazil, Bangladesh, Thailand and elsewhere on Chagas disease, leishmaniasis and malaria.

**Ellen P. McCarthy, PhD** (Tulane University), MPH (Tulane University); Associate Professor of Medicine, Harvard Medical School. Health services research; decision making in cancer and end-of-life care; health care disparities; public-use databases.

**Michelle Mello, MPhil** (Oxford University), PhD (University of North Carolina), JD (Yale University); Professor of Law and Public Health. Public health law and ethics; research ethics; medical malpractice; medical errors and patient safety; mass tort litigation.

**Blackford Middleton, MD** (SUNY-Buffalo); MPH (Yale University), MSc (Stanford University); Corporate Director, Clinical Informatics Research & Development; Partners HealthCare System. Design and implementation of integrated clinical information systems; special focus on clinical decision support, electronic and personal health records, technology assessment, and patient-centered informatics.

**Danny (Dan) A. Milner, Jr., MD** (University of Alabama) is an anatomic and clinical pathologist at the Brigham and Women's Hospital specializing in infectious disease pathology and microbiology. He holds a faculty appointment at Harvard Medical School (Assistant Professor of Pathology), the Harvard School of Public Health (Assistant Professor in the department of Immunology and Infectious Diseases), and the University of Malawi College of Medicine (Visiting Lecturer). His research focuses on malaria pathogenesis and cancer/virus syndromes.

**Murray A. Mittleman**, MD, CM (McGill University), MPH, DPH (Harvard University); Associate Professor in the Department of Epidemiology, HSPH; Associate Professor of Medicine, Harvard Medical School. Epidemiologic methods; cardiovascular epidemiology; stress and heart disease; injury epidemiology.

**Joia Mukherjee**, MD (University of Minnesota) MPH (HSPH); Associate Professor, Division of Global Health Equity at the Brigham and Women's Hospital and Harvard Medical School, Chief Medical Officer of Partners In Health, with clinical programs in Haiti, Rwanda, Burundi, Malawi, Lesotho, Peru, Mexico, Russia, Kazakhstan, and inner-city Boston. Trained in Infectious Disease, Internal Medicine, and Pediatrics at the Massachusetts General Hospital. Consultant for the World Health Organization on the treatment of HIV and MDR-TB in developing countries. Scholarly work focuses on the human rights aspect of HIV treatment and on the implementation of complex health interventions in resource-poor settings.

**Richard J. Pollack**, PhD (University of Pennsylvania); Research Associate Professor, Boston University; Research Associate in Immunology and Infectious Diseases, Harvard School of Public Health; Adjunct Assistant Professor, Tufts University School of Veterinary Medicine; President & Chief Scientific Officer, IdentifyUS LLC; vector biology and management of vector-borne infections.

**Joseph Rhatigan**, MD (Harvard University); Assistant Professor of Medicine, Harvard Medical School; Assistant Professor, Department of Global Health and Population, Harvard School of Public Health; Director, Doris and Howard Hiatt Residency in Global Health Equity, Brigham and Women's Hospital; Faculty Member, Global Health Delivery Project. Graduate medical education in global health; health care service delivery in resource-poor settings.

**Meredith Rosenthal**, PhD (Harvard University); Professor of Health Economics and Policy. Health economics; U.S. health policy; payment incentives; consumer-directed health plans; pharmaceutical industry.

**Edward T. Ryan**, MD (Harvard University); Associate Professor of Immunology and Infectious Diseases, Harvard School of Public Health; Associate Professor of Medicine, Harvard Medical School; Director, Tropical & Geographic Medicine, Massachusetts General Hospital, Boston; global infectious diseases, enteric infections, parasitic and zoonotic infections, disease control strategies, vaccination, host-pathogen interactions.

**Donald C. Simonson**, MD (Yale University), MBA (MIT), MPH, SD (Harvard University); Lecturer on Medicine, Division of Endocrinology, Diabetes and Hypertension, Brigham and Women's Hospital and Harvard Medical School. Clinical pathophysiology and treatment of diabetes and related metabolic disorders; health outcomes research; disease management; health economics.

**Michael Stoto**, PhD (Harvard University); Adjunct Professor of Biostatistics, HSPH; Professor of Health Services Administration and Population Health, Georgetown University and oversight liaison director for Education, Training and Professional Development of the FDA/Georgetown Center of Excellence in Regulatory Science and Innovation. Methodological topics in research synthesis/meta analysis and other analytical methods



related to comparative effectiveness research (CER), community health assessment, and performance measurements; substantive topics in public health practice, especially emergency preparedness.

**David Studdert**, LLB (University of Melbourne), MPH, SD (Harvard University); Laureate Fellow and Professor, University of Melbourne. Health law and regulation; medical malpractice, medical injuries, and quality of care; dispute resolution; medical ethics.

**Marcia A. Testa**, MPH, MPhil, PhD (Yale University); Senior Lecturer on Biostatistics, HSPH. Applied areas of research: evaluating quality-of-life and health economic outcomes in therapeutic clinical trials and quality-of-care research, and quantifying and evaluating public health preparedness in relation to bioterrorism, counterterrorism, emerging infections and natural disasters; methodological research; measurement of latent constructs, structural equation modeling, analysis of multiple endpoints, and large database analytical algorithms.

**Milton C. Weinstein**, AM, MPP, PhD (Harvard University); Henry J. Kaiser Professor of Health Policy and Management (Health Policy and Management and Biostatistics); Professor of Medicine, Harvard Medical School. Academic Director of the Center for Health Decision Science, and Director of the Program on Economic Evaluation of Medical Technology at HSPH. Cost-effectiveness of medical practices and development of methods of economic evaluation and decision analysis in health care.

**Joel S. Weissman**, PhD, is Deputy Director and Chief Scientific Officer in the Center for Surgery and Public Health at Brigham and Women's Hospital, and Associate Professor of Health Policy at Harvard Medical School. Research interests: Health disparities; Quality of care; Comparative effectiveness; Health services research applied to surgery.

## APPLYING TO SUMMER SESSION

### APPLICATION PROCESS

Please review the following information carefully as the process varies for different applicants.

#### New HSPH Degree Applicants

Current degree applicants will be contacted by email in February with an invitation to participate in Summer Session. The SOPHAS application will be used to support enrollment in summer classes if students plan to begin their program at that time.

*Current degree applicants should not submit an additional SOPHAS application.*

#### Current HSPH Degree Students

All current HSPH students will be contacted separately by email in February with details for Summer Session registration and deadlines.

#### Non-Degree Applicants (including TAP and Affiliates)

All non-degree applicants must apply via SOPHAS, [www.sophas.org](http://www.sophas.org). The deadline to complete and submit the application is February 1, 2012. Be sure to read all instructions carefully and complete sections a–f on the following pages.

For any questions regarding this process, please contact:

Isabelle Bourdonné  
Special Programs Coordinator  
617-432-1030  
[summerprograms@hsph.harvard.edu](mailto:summerprograms@hsph.harvard.edu)

Incomplete or late applications will not be considered for admission to the Summer Session.

For further information on the Summer Session, please refer to the website: [www.hsph.harvard.edu/summer](http://www.hsph.harvard.edu/summer)

Please note, admission to, or academic performance in, the Summer Session does not guarantee admission to the school's other full- and part-time academic degree programs, which require a separate application and admission process. If you are interested in applying to a degree-granting program either before or after attending the Summer Session, please consult the Office of Admissions website: [www.hsph.harvard.edu/admissions](http://www.hsph.harvard.edu/admissions)

Similarly, admission to a degree-granting program at HSPH does not guarantee admission to the Summer Session. Because Summer Session courses are rigorous and space is limited, current and entering HSPH students may not, in some instances, be admitted to Summer Session courses.



“THE ENVIRONMENT IS INCREDIBLY STIMULATING: THE BEST TEACHERS, MOTIVATING LUNCH SEMINARS, AND VERY MOTIVATED PARTICIPANTS FROM ALL OVER THE WORLD. DON'T MISS THE OPPORTUNITY TO STUDY AT HSPH SUMMER SESSION!”

— Ruben Osnabrugge, MSc  
Erasmus Medical Center  
Rotterdam, The Netherlands

## NON-DEGREE APPLICANT INSTRUCTIONS

### SOPHAS Application

Non-degree applicants must apply through SOPHAS and include (upload) the following in their SOPHAS application:

#### a. Statement of Intent

The statement of intent should describe the applicant's interest in public health, reason for applying to the Summer Session, and career plans. The statement should not exceed 500 words.

#### b. Transcripts

Applicants should submit copies of transcripts for each post-secondary institution where they received a degree. The SOPHAS application process requires that applicants enter grade information for each of the transcripts they submit. However, **non-degree** applicants may override this requirement by following the detailed instructions described in the online Transcript Abbreviation Form (TAF). This form can be accessed by visiting: [www.hsph.harvard.edu/summer](http://www.hsph.harvard.edu/summer)

If an academic institution does not provide transcripts, the registrar of the school may submit remarks, rank in class, position in examinations, course curriculum, and so forth in place of a transcript. If an institution does not keep records in English, the transcript must be translated into English. Copies of diplomas will not be accepted in place of the transcript.

#### c. Resume or CV

Please upload an up-to-date copy of your resume or curriculum vitae to SOPHAS.

#### d. Tests

##### 1. TOEFL or IELTS – Required for non-native English speakers

All applicants applying to the Summer Session from countries where English is not the language of instruction, including those who are U.S. permanent residents and U.S. citizens who were granted permanent residency or citizenship after January 1, 2010, must self-report either a TOEFL score report or an IELTS score in SOPHAS and email or mail a copy of the score report to Summer Programs (see section e for contact information). For more information, visit: [www.hsph.harvard.edu/administrative-offices/admissions/application-requirements/test-score-designations/index.html](http://www.hsph.harvard.edu/administrative-offices/admissions/application-requirements/test-score-designations/index.html)

##### 2. GRE – Recommended for all students

Non-degree applicants for the Summer Session are strongly encouraged to self-report their GRE scores or an appropriate substitute in SOPHAS and email or mail a copy of the score report to Summer Programs (see section e for contact information). Scores from such standardized tests can provide important information about applicants' quantitative aptitude in particular. If the transcript submitted from a baccalaureate or post-baccalaureate program does not include a grade for a college-level mathematics course, it is expected that a standardized test score will be submitted. For details, visit: [www.hsph.harvard.edu/administrative-offices/admissions/application-requirements/test-score-designations/index.html](http://www.hsph.harvard.edu/administrative-offices/admissions/application-requirements/test-score-designations/index.html)





“THE SUMMER SESSION WAS AN ABSOLUTELY IDEAL OPPORTUNITY TO COMPLETE THE MPH. THE DIVERSE COURSE OFFERINGS, SUPERB INSTRUCTION, FLEXIBLE CURRICULUM, AND AN UNPARALLELED ACADEMIC ENVIRONMENT GAVE ME EXACTLY THE SKILL SET THAT I WAS LOOKING FOR. IT HAS MADE AN IMMEDIATE AND PROFOUND IMPACT ON MY RESEARCH AND CLINICAL PRACTICE.”

— Timothy R. Smith, MD, PhD, MPH  
Department of Neurological Surgery  
Northwestern University, Chicago, IL

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#### e. Course Selection Form

The Course Selection Form is available in the online brochure and application instructions. Please submit it by email or mail to:

Isabelle Bourdonné  
Summer Session for Public Health Studies  
677 Huntington Avenue, G-4  
Boston, MA 02115-6023  
or  
summerprograms@hsph.harvard.edu

**Please note: Non-degree students may not take more than two classes in each session. Applicants selecting a limited enrollment course (indicated by a \*) must provide a brief statement explaining their interest in the course and its relation to their work/course of study.**

Incomplete applications will not be reviewed.

Descriptions of course content, information, and requirements can be found in this brochure and on the school's website: [www.hsph.harvard.edu/administrative-offices/registrar/courses-and-schedules](http://www.hsph.harvard.edu/administrative-offices/registrar/courses-and-schedules)

#### f. Application Fee

A nonrefundable application fee of \$115, payable to SOPHAS, is required to complete the application.

“THE SUMMER SESSION WAS AN EXCELLENT WAY TO START MY MPH PROGRAM. BY TAKING A SEMESTER’S WORTH OF BIOSTATISTICS COURSES IN THE SUMMER, I WAS ABLE TO ENROLL IN HIGHER LEVEL STATISTICS COURSES IN THE FALL AND IMMEDIATELY APPLY THAT KNOWLEDGE TO MY MPH RESEARCH PROJECT. THE SUMMER SESSION ALSO DRAWS A DIVERSE MIX OF EXPERIENCED PROFESSIONALS, WHICH RESULTS IN SOME GREAT CLASSROOM EXPERIENCES.”

— Kathy Tater, DVM, DACVD (Board Certified in Veterinary Dermatology)  
MPH candidate, HSPH  
Clinical Assistant Professor, Tufts University  
Consultant, Veterinary Information Network

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## FEE AND TUITION SCHEDULE

### Deposit/Registration Fee

Once admitted to the Summer Session, a nonrefundable registration fee/deposit of \$125 is required from all students. This fee is due by April 30, 2012. This nonrefundable fee does not include certain course materials (i.e., textbooks estimated at \$60 per course). In addition, participants are responsible for all other expenses associated with attending courses and/or living in Boston (i.e., food, housing, transportation, health insurance coverage).

### Tuition

Tuition rates for the summer of 2012 are not yet available. In the 2011 Summer Session, tuition for each 2.5 credit course was \$2,225. In the past, tuition rates have increased by approximately five percent.

**Please note:** There is no financial assistance or scholarships available for the 2012 Summer Session.

## CANCELLATION POLICIES

### Withdrawal

Admitted students who withdraw from Summer Session courses on or before July 6, 2012, for Summer 1 and July 30, 2012, for Summer 2 will be reimbursed 100 percent of their tuition fee. A written request to withdraw must be received on or before those dates to receive the full reimbursement. Withdrawal after those dates corresponds to a pro-rated schedule.

### Course Cancellation Policy

We reserve the right to cancel courses with insufficient enrollment.

## HOUSING

Students must arrange for their own housing. There are a variety of accommodation options available in the area, including apartments, dorms, guest houses, bed and breakfast establishments, and hotel rooms. For information about housing for summer students in the Boston area, please visit: [www.hsph.harvard.edu/student-life/housing](http://www.hsph.harvard.edu/student-life/housing)

## LINKS FOR OTHER GROUPS PARTICIPATING IN SUMMER COURSES

**Global Health Effectiveness applicants:** For information on applying to the GHE Program, please follow this link: [www.globalhealthdelivery.org/ghd-academic-offerings/harvard-global-health-effectiveness-program](http://www.globalhealthdelivery.org/ghd-academic-offerings/harvard-global-health-effectiveness-program)

**Program in Clinical Effectiveness and Clinical Scholars applicants:** For information on applying to the PCE Program, please follow this link: [www.hsph.harvard.edu/academics/clinical-effectiveness](http://www.hsph.harvard.edu/academics/clinical-effectiveness)

**June Course in Clinical Epidemiology and Biostatistics:** For information on applying to the CEB Program, please follow this link: [www.hsph.harvard.edu/academics/clinical-epi-bio/index.html](http://www.hsph.harvard.edu/academics/clinical-epi-bio/index.html)

# SUMMER SESSION 2012 COURSE SELECTION FORM FOR NON-DEGREE STUDENTS

## I. BIOGRAPHICAL INFORMATION (Please Print)

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

## II. COURSE SELECTION

Please check the courses to which you are applying for admission. Students may register for a maximum of 5 credits per session. All courses are 2.5 credits. If you need to select a second course in case you do not get into your first selection, please indicate your choices on the line provided as follows:

1a – first course-first choice                      2a – second course-first choice  
1b – first course-second choice                      2b – second course-second choice

**Please note:** If you are selecting a limited enrollment course (indicated by a \*) you must provide a brief statement explaining your interest in the course and its relation to your work/course of study and submit it along with this form.

### Summer 1

- \_\_\_\_ BIO 202, Principles of Biostatistics, Part I (8:30–10:20)
- \_\_\_\_ BIO 517, Using Next Generation Sequencing Analysis and Public Health (3:30–5:20)
- \_\_\_\_ EPI 295, Introduction to Pharmacoepidemiology (3:30–5:20)
- \_\_\_\_ EPI 500, Fundamentals of Epidemiology (10:30–12:20)
- \_\_\_\_ HPM 510, Introduction to Management of Health Care Organizations (8:30–10:20)
- \_\_\_\_ ID 215, Environmental and Occupational Epidemiology (3:30–5:20)
- \_\_\_\_ SHH 201, Society and Health (3:30–5:20)

### Summer 1 Limited Enrollment

- \_\_\_\_ GHP 532, Introduction to Global Health Care Delivery (1:30–3:20)\*
- \_\_\_\_ HPM 276, Methods and Applications in Health Services Research (3:30–5:20)\*
- \_\_\_\_ HPM 277, Current Issues in Health Policy (1:30–3:20)\*
- \_\_\_\_ HPM 530, Measuring Health Outcomes (1:30–3:20)\*
- \_\_\_\_ ID 251, Ethical Basis of the Practice of Public Health (10:30–12:20)\*
- \_\_\_\_ ID 251, Ethical Basis of the Practice of Public Health (1:30–3:20)\*
- \_\_\_\_ RDS 286, Decision Analysis in Clinical Research (1:30–3:20)\*

### Summer 2

- \_\_\_\_ BIO 203, Principles of Biostatistics, Part II (8:30–10:20)
- \_\_\_\_ BIO 234, Research Synthesis and Meta Analysis (3:30–5:20)
- \_\_\_\_ EH 201, Introduction to Environmental Health (1:30–3:20)
- \_\_\_\_ EPI 202, Elements of Epidemiologic Research (10:30–12:20)
- \_\_\_\_ HPM 209, Economics for Health Policy (10:30–12:20)
- \_\_\_\_ IID 232, Global Health and Infectious Diseases: Vector-borne and Zoonotic Infections (1:30–3:20)
- \_\_\_\_ IID 233, Global Health and Infectious Diseases: Infections Transmitted through Water and Food (3:30–5:20)
- \_\_\_\_ NUT 217, Global Nutrition (8:30–10:20)

### Summer 2 Limited Enrollment

- \_\_\_\_ BIO 214, Principles of Clinical Trials (10:30–12:20)\*
- \_\_\_\_ BIO 224, Survival Methods in Clinical Research (8:30–10:20)\*
- \_\_\_\_ BIO 501, Linear and Longitudinal Regression (3:30–5:20)\*
- \_\_\_\_ HPM 253, Improving Quality in Health Care (1:30–3:20)\*
- \_\_\_\_ HPM 299, Research with Large Databases (3:30–5:20)\*
- \_\_\_\_ HPM 512, Medical Informatics (1:30–3:20)\*
- \_\_\_\_ RDS 288, Methods for Decision Making in Medicine (1:30–3:20)\*

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## CONTACT INFORMATION

### Summer Session Admissions

Isabelle Bourdonné  
Special Programs Coordinator  
617-432-1030  
summerprograms@hsph.harvard.edu

### Advising for Summer Session and Master of Public Health Programs

Roberta Gianfortoni  
Assistant Dean for Professional Education,  
Director of Summer Session  
617-432-0090  
roberta@hsph.harvard.edu



### General HSPH Admissions

Vincent James  
Director of Admissions  
617-432-1031  
admissions@hsph.harvard.edu

To receive a Harvard School of Public Health catalog and application information for any of our degree programs, please visit the Office of Admissions website: [www.hsph.harvard.edu/admissions](http://www.hsph.harvard.edu/admissions) or call 617-432-1031.

### Housing

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**February 1: Non-degree application deadline**

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