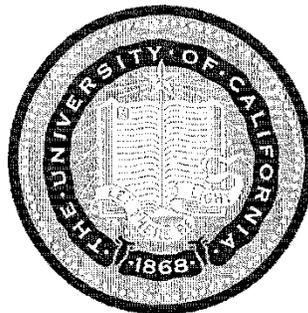


# **Epidemiology MPH Program 2016-17 Student Handbook**



UNIVERSITY OF CALIFORNIA BERKELEY

SCHOOL OF PUBLIC HEALTH

Division of Epidemiology  
101 Haviland Hall, Berkeley, CA 94720-7358

August 22, 2016

Dear Epidemiology MPH Incoming Class,

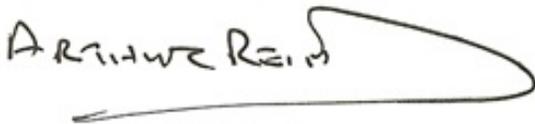
Welcome to the Epidemiology 11-month MPH Program at the School of Public Health at the University of California, Berkeley!

We are thrilled that you selected our program for pursuing your graduate education, and look forward to getting to know you in the classroom, through advising, and in various extracurricular settings.

This handbook will provide you with details on the curriculum, requirements and resources that will help guide you during your time in the program. Furthermore, the Epidemiology group has dedicated and experienced faculty and staff – please reach out to us with any questions you might have as you begin your studies. Our doors are always open.

We look forward to getting to know each of you and supporting you in achieving your educational and professional goals in the field of Epidemiology.

Best wishes,



Arthur L. Reingold, MD  
Professor and Chair, Division of Epidemiology  
School of Public Health  
UC Berkeley

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### Competencies

Upon satisfactory completion of the MPH curriculum with a concentration in Epidemiology, graduates will be able to demonstrate the following competencies.

- Identify the principles and limitations of public health screening programs
- Describe a public health problem in terms of magnitude, person, time, and place
- Explain the importance of epidemiology for informing scientific, ethical, economic, and political discussion of health issues
- Comprehend basic ethical and legal principles pertaining to the collection, maintenance, use, and dissemination of epidemiologic data
- Apply the basic terminology and definitions of epidemiology
- Calculate basic epidemiology measures
- Communicate epidemiologic information to lay and professional audiences
- Draw appropriate inferences from epidemiologic data
- Evaluate the strengths and limitations of epidemiologic reports

### Mission

The one-year MPH program in Epidemiology requires at least 42 units of course work, including selected required courses and seminars in epidemiology and biostatistics. Minimum requirements include two semesters of academic residence and a six-week session in summer sessions prior to the fall semester. This program is generally limited to students with a prior doctoral degree (e.g., Ph.D., MD, DDS, DVM, etc.), who typically complete the necessary course work and the required oral comprehensive examination in one year. Students in this program who wish to extend their academic course work over an additional semester or two may do so with prior consent of the program head, but must be registered, full-time students throughout all semesters in residence.

Graduates of the program will be qualified for positions utilizing their epidemiologic and statistical training in federal, state and local health departments as well as for a wide variety of academic research positions and positions in the private medical and health care fields. On completion of the MPH in Epidemiology, some students may be admitted to doctoral studies in Epidemiology or Biostatistics when such admission is compatible with their interests, goals, and prior performance, and is within the admission quota and resources of the program.

### Learning Objectives

Upon satisfactory completion of the one year MPH program in Epidemiology, graduates will have specific skills in the following areas:

- Mastery of central concepts in epidemiology
- Population health issues
- Formulating and pursuing research question(s)
- Design of epidemiological studies
- Accessing public health data
- Data management
- Data analysis
- Interpreting published epidemiologic studies

*Specific skills to be mastered in these areas are:*

#### **Formulating and pursuing research question(s):**

- pose an appropriate research question or questions when given a public health or medical problem requiring an epidemiologic investigation
- identify demographic, social/behavioral and environmental factors which have an impact on the problem under investigation
- write a study protocol detailing the objects and methods for such an investigation

### **Design of epidemiologic studies**

- describe the basic study designs used in epidemiological research, i.e. cross-sectional, ecological, case-control, and experimental (field trials) designs and the analytic techniques and limitations of each design.
- prepare a study protocol detailing the objects and methods for such an investigation

### **Accessing Public Health data**

- identify sources of health data such as demographic reports, vital statistics records, disease registries, and clinic and hospital records and how to access these sources
- interpret health status indices based on these data, such as mortality and morbidity rates

### **Data management**

- plan, organize and manage procedures for collecting data from existing sources as well as original sources such as household surveys or subjects identified for specific studies
- use computer software for data processing preparatory to statistical analysis
- evaluate the integrity and comparability of data and identify gaps in data sources
- with consultation and under supervision, develop data collection and quality control protocols
- with consultation and under supervision, manage data for a small or medium-scale epidemiologic or clinical study, including preparation of data management plans, data collection protocols, and documentation.

### **Data analysis**

- analyze data using appropriate statistical techniques under the guidance of someone with more advanced training
- use biostatistical concepts and methods appropriate to epidemiological research
- estimate epidemiologic parameters such as the relative risk, and use statistical tests and confidence intervals based on contingency table analyses while controlling one or two categorical variables
- estimate sample size requirements
- conduct standard statistical analyses
- communicate the results of analyses both orally and in writing
- interpret the results in consultation with an experimenter experienced in the problem area

### **Interpreting published epidemiologic literature**

- critique epidemiologic literature for strengths and weaknesses of the methodology in published studies
- evaluate critically the research questions, methods, analyses, and findings of epidemiological research reports and presentations
- write a thesis or equivalent that demonstrates the ability to critique the epidemiologic literature and interpret epidemiologic data

### **Mastery of central concepts in epidemiology**

- describe the basic study designs used in epidemiological research, i.e. cross-sectional, ecological, case-control, and experimental (field trials) designs and the analytic techniques applicable to each design
- prevalence, incidence, rates, relative risk, attributable risk, direct and indirect standardization of rates, standardized mortality ratio, cohort, case-control, precision, bias, confounding, and effect modification.
- explain and apply methods of standardization or adjustment for factors such as age or gender in a study population
  - explain major categories of bias, assess the potential for their occurrence in specific study situations, and propose methods to evaluate and/or reduce their influence on the measures of major interest
  - evaluate the evidence in favor of and against the likelihood that an association observed in epidemiologic studies is causal
  - present the purpose and problems of interpretation in surveillance for acute and chronic disease and other factors important for public health

### **Population health issues**

- define, assess, and understand the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing the use of health services
- contrast the clinical and population perspectives on improving public health
- articulate the role of epidemiology in preserving and improving public health
- describe the nature of disease distributions in populations and the factors which influence these distributions

## Course Requirements

Each student is expected to work closely with an assigned faculty adviser in the planning of his or her individual schedule of courses. Students in the one-year MPH programs must meet all school-wide breadth requirements, either by passing the appropriate exemption exams or by taking courses that are approved for meeting these requirements.

The one year MPH curriculum in epidemiology is an intensive, full-time course of study extending over eleven months (July to May) and requiring enrollment during the summer, fall, and spring. In addition to completing required school-wide breadth courses in public health, students are required to complete advanced coursework in epidemiologic and biostatistical methods, and electives in epidemiology. Students in the one-year MPH program are expected to take PH 200J, PH200L, PH 250B and PH 290 during the fall semester and PH 200K, PH 241, and/or Epidemiology electives in the spring semester, all for a letter grade. All students in the one-year MPH program must take the epidemiology seminar PH 292 in the fall and spring semesters. The seminar is graded on a satisfactory/unsatisfactory basis only.

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Students are also required to write a master's paper on an epidemiologic topic previously approved by and under the supervision of the faculty and to present and defend their master's paper during a required oral examination in the spring semester prior to graduation.

### 11-month Schedule

#### FIRST YEAR

##### SUMMER SESSION D

PB HLTH	141	Intro to Biostats	5.0
PB HLTH	299	Independent Study	3.0

##### FALL SEMESTER

PB HLTH	200J	HPM Breadth	2.0
PB HLTH	200L	HSB Breadth	2.0
PB HLTH	290	Applied Linear Models	4.0
PB HLTH	250B	EPI methods II	4.0
PB HLTH	292	Seminar for 11-mo students	2.0
PB HLTH	Electives	as desired	≥3 units

##### SPRING SEMESTER

PB HLTH	200K	EHS Breadth	2.0
PB HLTH	144A	Intro SAS Program	2.0
PB HLTH	144B	Intermediate SAS Program	2.0
PB HLTH	241	Anal Categorical Data	4.0
PB HLTH	292	MPH Seminar	2.0
PB HLTH	Electives	as desired	≥5 units

### Grading

Students have the option of taking courses on a Satisfactory/Unsatisfactory (S/U) basis, but no more than one-third of the master's program may be fulfilled by courses graded Satisfactory. Students cannot take MPH breadth course requirements on an S/U basis. The option of changing an S/U to a letter grade or vice versa is never approved after the fifth week deadline for changes unless your Graduate Advisor documents in writing that he/she has misadvised you. No more than 10 units may be 299 series units.

## Comprehensive Examination

During the spring semester preceding graduation, students in the one-year MPH program must present and defend an in-depth paper on an epidemiologic topic to be handed in early in the spring semester. The paper can take the form of a critical review of the existing epidemiologic literature about a particular topic; a formal meta-analysis; a paper describing the results of an original epidemiologic study by the student; or a detailed research proposal for an epidemiologic study. In the fall semester before the paper is due, each student will be assigned to a faculty member with expertise in the subject matter of the student's proposed paper. The student will work with and receive ongoing input from that faculty member during the various stages of planning and writing the paper. (Details concerning the paper topic, format, due dates for various stages of development of the paper can be found in the Epidemiology Masters Paper Guidelines.)

In the spring semester, each student will give a brief (ten minute) oral presentation concerning his or her paper on a pre-assigned date and will then be questioned by two or more faculty. Specifically, in this oral comprehensive examination, the student will be expected to defend his or her written paper and, in the process, demonstrate competence in and a firm grasp of epidemiologic and biostatistical methods and approaches relevant to studies of disease causation and prevention. Decisions on the outcome of the comprehensive examination will be given to the student the day of the examination as satisfactory or unsatisfactory. In the event of an unsatisfactory outcome, a written and/or oral re-examination is the usual recommended course of action. Students who do not pass the re-examination are not eligible to receive the Masters degree.

## Advancement to Candidacy

Masters students must advance to candidacy prior to taking the comprehensive examination. Graduate Division requires that a minimum period of study of one term must intervene between formal advancement to candidacy and the conferring of the master's degree. Therefore, the Division will submit a list of students who are advancing to candidacy no later than the end of the fifth week of classes in the term in which students are expected to complete the degree requirements.

The School of Public Health Student Services Unit reviews students' applications against their academic records to determine eligibility for advancement to candidacy. A student who is not eligible to advance will be notified that advancement has been deferred. Once the deficiency has been cleared and can be verified, the student will be advanced to candidacy.

## Academic Advising

### Program Advising

The Epidemiology/Biostatistics Advisor, Janene Martinez, is available to guide you through the entire graduate degree, including: choosing courses, preparing a plan of study, connect you to SPH faculty, staff, and/or alumni, and check your progress towards graduation. She can provide information about the program, school or campus resources/activities. You will be required to meet with Janene once per semester. Please also feel free to contact Janene if you ever need advice, help, or if you need to talk. Conversations are confidential unless there is a threat to an individuals' health or safety.

### **Student Services Advisor; Epi and Epi/Biostat Programs**



Originally hailing from Southern California, Janene moved to Berkeley in 2003 for her undergraduate career and double-majored in History and Ethnic Studies. She has been working on campus since 2007 and has been advising graduate students since 2008; first at the Department of Materials Science and Engineering and now in the Division of Epidemiology. Janene started her position in the School of Public Health in May 2012 and greatly enjoys the working relationships she has been able to create and foster with staff, faculty and students.

Janene is also part of two SPH committees: The Staff Advisory Council (SAC) a committee that advocates on behalf of staff and the Recognition and Enrichment Committee (REC) which plans staff luncheons and holiday events. In her spare time Janene loves to throw dinner parties, work out, walk along Lake Merritt and listen to music.

### Faculty Advising

All students will be assigned an academic faculty advisor. Students are encouraged to meet with their advisors regularly to discuss their programs of study, academic progress, and career goals. Each Faculty Advisor will make available sufficient hours to advise students throughout the semester. Students are also free to consult with other faculty throughout their time in the program, and to change their assigned advisor if they feel their professional or educational goals and interests are a better match with another advisor. Contact Janene Martinez if you would like to change advisors.

*Student Initiative:* It is each student's responsibility to schedule appointments with his/her advisor. If your advisor's office hours conflict with your course schedule, please contact him/her to request alternate appointment times. You are encouraged to meet with your advisor early in the first semester to 1) get to know your faculty advisor's interests and research focus; 2) share

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with your advisor who you are and what you hope to accomplish during your studies; and 3) learn what you might expect from your relationship with your faculty advisor.

Plan ahead and have an agenda for your meeting. Be prepared to talk about your background in the context of how you've developed your current academic goals and interests. Read about your faculty advisor's work and interests and be specific about your questions or topics of discussion. If you want to talk about the field, use the advisor's recent articles to guide your conversation.

### Health and Wellness

Graduate school can be stressful, so be sure to create a lifestyle that supports your mental and physical health throughout the program. We encourage you to be physically active, eat well and pursue methods of relaxation so that you can enjoy the program and do your best work. If you are experiencing difficulty, stress, or hardship at any time while in the program, please let Janene, a faculty member or your advisor know as soon as possible so we can explore arrangements to assist you.

### **Counseling Services- University Health Services**

(<http://www.uhs.berkeley.edu/students/counseling/>) provides group and individual counseling for students; personal, academic, and career-related issues. The Tang Center has great resources on how to cope with grad school and stress <http://uhs.berkeley.edu/bewell/>.

We also welcome any suggestions for ways to improve the training and services we provide.

## Things you should know

### **Policies and Procedures**

Policies and procedures that govern graduate work at UC Berkeley are found in the Guide to Graduate Policy on the Graduate Division website at <http://www.grad.berkeley.edu/policies/guide.shtml>. Note that SPH has its own set of policies and procedures that may be different from the Graduate Division policies. The SPH guide to policies and procedures is located in the SPH School-Wide Student Handbook at <http://sph.berkeley.edu/students/handbooks.php>. If there is ever any discrepancy, please consult your graduate advisor for clarification. It is your responsibility to read these policies and procedures.

### **SPH Student Services**

The School of Public Health Office of Student Services and Admission is located in Room 417 University Hall. Student Services staff are responsible for many school-wide events and procedures such as pre-application advising, admissions, Spring Visit, Welcome Week and commencement.

### **School Listserv for Students**

Important messages are sent to the general School of Public Health student population via bspace. Instructions for enrolling in the SPH listserv are on the SPH website under Current Students: Resources for New Students: Student Announcements on bspace. These messages

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include fellowship opportunities, job postings, course advertisements, and deadlines specific to the School of Public Health from our Office of Student Services. Messages from Student Services are especially important, as *crucial School of Public Health deadlines may differ from general campus deadlines, ex: adding/dropping classes.*

### **Epidemiology Listserv**

As a student in the epidemiology program, you will be automatically enrolled in our student listserv. The listserv is intended to encourage sharing of information and resources among students. Important messages will be sent from the Epi group faculty and staff. Messages can include scholarship/fellowship opportunities, job postings, course/curriculum changes/information, and deadlines specific to Epi/Biostat students.

### **Registration and Enrollment- CalCentral**

Registration involves two steps: enrolling in classes and paying fees.

You may enroll using Cal Central: <https://calcentral.berkeley.edu>. Full instructions are on the Registrar's website (<http://registrar.berkeley.edu>). You may use CalCentral during your appointment period to add and drop classes, or change grading option and units, through the *third week of instruction*. CalCentral will no longer be available after the third week of instruction. Changes in your course schedule may be made *after* the third week of classes by submitting a Petition to Change Class Schedule Form which you can pick up at 113 Haviland Hall. Please note that you will need your CalNet ID and passphrase in order to access the on-line CalCentral system.

You may also use CalCentral to obtain information regarding your current schedule, your final grades from the previous semester, financial aid application/award status, billing information, and much more.

A \$5 fee is charged for an added class and \$10 for a dropped class after the *third week* of instruction. A **late registration fee of \$150** will be charged to any student not officially arrested by Friday of the third week of instruction.

To be officially registered, you must meet three criteria:

1. You must be enrolled in at least one course.
2. Your registration fees must have been paid, either in full, or, if on the Deferred Payment Plan, at least your first installment.
3. You must have no blocks against your registration.

You can also access CalCentral to update your postal address, email address, and telephone information, view and order copies of your transcript; access your e-Bill, and more.

### **Fees and Tuition**

All registered students are liable for fees. For information regarding fees and tuition, including non-resident tuition, please refer to the UC Berkeley Office of the Registrar's website at <http://registrar.berkeley.edu>.

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Your registration and fees are billed through the **Campus Accounts Receivables System (CARS)**. Your first CARS billing statement (e-Bill) will be available in early August and must be viewed online through BearFacts.

### **Fellowships, Stipends, and Financial Aid Disbursements**

Fellowship, stipend, and financial aid recipients are strongly encouraged to sign up for Electronic Funds Transfer (EFT) to expedite receipt of their disbursements or CARS refunds via direct deposit to your personal bank account. Students using EFT receive their refunds faster and avoid standing in line. CARS refunds paid to students by a paper check can be picked up in person at Cal Student Central office located at 120 Sproul Hall. **Checks that are not picked up timely will be mailed to the local address on file in BearFacts.** Make sure your local address is current on BearFacts.

**Cal Student Central** 120 Sproul Hall Hours: Monday to Friday, 9:00am-4:00pm

Phone: (510) 664-9181 Website: <http://studentcentral.berkeley.edu>

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### Faculty and Staff Information

<b>Name</b>	<b>Title</b>	<b>Email</b>	<b>Phone (510)</b>	<b>Location</b>
<b><u>Faculty</u></b>				
Barbara Abrams	Professor	<a href="mailto:babrams@berkeley.edu">babrams@berkeley.edu</a>	642-4216	103 Haviland
Jennifer Ahern	Assoc Prof	<a href="mailto:jahern@berkeley.edu">jahern@berkeley.edu</a>	643-4350	285 U-Hall
Lisa Barcellos	Assoc Prof	<a href="mailto:lbarcellos@genepi.berkeley.edu">lbarcellos@genepi.berkeley.edu</a>	642-7814	324 Stanley
Patrick Bradshaw	Assistant Prof	<a href="mailto:pbradshaw@berkeley.edu">pbradshaw@berkeley.edu</a>	664-7299	106 Haviland
Jack Colford	Professor	<a href="mailto:jcolford@berkeley.edu">jcolford@berkeley.edu</a>	643-9370	113A Haviland
Sandrine Dudoit	Professor	<a href="mailto:sandrine@stat.berkeley.edu">sandrine@stat.berkeley.edu</a>	643-1108	450 Li Ka Shing
Brenda Eskenazi Ave	Professor	<a href="mailto:eskenazi@berkeley.edu">eskenazi@berkeley.edu</a>	643-3496	1995 University
Alan Hubbard	Assoc Prof	<a href="mailto:hubbard@stat.berkeley.edu">hubbard@stat.berkeley.edu</a>	643-6160	113B Haviland
Nicholas Jewell	Professor	<a href="mailto:jewell@berkeley.edu">jewell@berkeley.edu</a>	642-4627	107 Haviland
Mahasin Mujahid	Assistant Prof	<a href="mailto:mmujahid@berkeley.edu">mmujahid@berkeley.edu</a>	643-7155	105 Haviland
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Maya Petersen	Assistant Prof	<a href="mailto:mayaliv@berkeley.edu">mayaliv@berkeley.edu</a>	642-0563	102 Haviland
Art Reingold	Chair/Professor	<a href="mailto:reingold@berkeley.edu">reingold@berkeley.edu</a>	642-0327	104 Haviland
Steve Selvin	Professor	<a href="mailto:selvin@stat.berkeley.edu">selvin@stat.berkeley.edu</a>	642-4619	110 Haviland
Mark Van Der Laan	Professor	<a href="mailto:laan@stat.berkeley.edu">laan@stat.berkeley.edu</a>	643-9866	108 Haviland
<b><u>Program Staff</u></b>				
Janene Martinez	Grad Advisor	<a href="mailto:jcarolm@berkeley.edu">jcarolm@berkeley.edu</a>	643-2731	113 Haviland
<b><u>Career Services Staff</u></b>				
Ruthann Haffke	Career Svcs Manager	<a href="mailto:haffke@berkeley.edu">haffke@berkeley.edu</a>	642-0431	141-H U-Hall
<b><u>Diversity Coordinator</u></b>				
Darlene Francis	Director of Diversity	<a href="mailto:arincon@berkeley.edu">arincon@berkeley.edu</a>	643-7900	141-J U-Hall

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### Fellowships and Awards

Shederick McClendon Asst Dean of Students [sammclendon@berkeley.edu](mailto:sammclendon@berkeley.edu) 643-9654 417-H U-Hall