

## **Epidemiology of Aging Training Program Guidelines for Advisors and Trainees**

### **I. Didactic Program**

Based on pre- or post-doctoral status and past degrees, specific course work is required according to current degree program and prior training. Both pre-doctoral students in Epidemiology and post-doctoral trainees without a prior degree in Epidemiology must complete required GSPH and Epidemiology core courses (please see the Student Handbook, <http://publichealth.pitt.edu/epidemiology/academics/student-handbook>). As part of the Training Program, trainees will be required to complete additional courses and may select elective courses pertinent to their field of interest or area of concentration based on the direction and guidance of their advisors. Post-doctoral trainees who already have a doctoral degree in Epidemiology will work with their advisors to take appropriate courses in a non-degree program to supplement their research activities.

There are four Epidemiology of Aging courses which are required for all trainees:

**EPIDEM 2980 – Biology and Physiology of Aging (1 credit).** This course introduces students to the aging process as a foundation for research in the epidemiology of aging. Some topics for the course will include: Overview of aging physiology, molecular and biological processes of aging, model systems of aging and study designs that are currently relevant to human population research.

**EPIDEM 2981 – Epidemiology of Aging Methods (2 credits).** This course will introduce the methodological aspects of epidemiologic research in the field of aging and to critically evaluate research in older adults. The course will focus on: demography, study design, sampling, recruitment, retention, measurement of key variables and special populations. Students will write a critical review of a published article and comment on proposed future directions for epidemiologic studies addressing these questions in older populations. The course has been formulated to provide the students with the “building blocks” of the epidemiological study of aging. By the end of the course, the students will be able to critically evaluate various components of a study to further address the research questions in aging populations.

**EPIDEM 2900 – Advanced Course in Epidemiology of Aging (2 credits).** This is an advanced course targeted towards Epidemiology PhD students. The purpose of this course is to understand in depth the current epidemiologic research findings regarding common health conditions and geriatric syndromes in the aging population. The course will focus on the common age related processes and chronic health conditions that contribute to disability and frailty and on enhancing successful aging and preventing disability. Advanced research methods will be reviewed as part of each class.

**EPIDEM 2950 – Epidemiology of Aging Workshop (1 credit).** The workshops are designed as practical professional skill development to supplement the additional coursework for the Epidemiology of Aging trainees and students. The workshop will include sessions on: presentations by the students from their research, journal article reviews, longitudinal analyses techniques, and professional skills sessions. The presentation sessions provide an opportunity for students to present and refine their interim research and data analyses by obtaining feedback from peers, faculty and mentors on their work in progress. Journal article review sessions will provide an opportunity for students to identify and share current articles relevant to the epidemiology of aging and develop proficiency in the critical review of scientific literature. Emphasis will be placed on understanding emerging and novel methods in the field, particularly

longitudinal statistical analyses techniques (e.g. handling missing data longitudinally; interpreting changes in slopes over time; joint modeling). A faculty member will help student leaders select articles (distributed before the meeting) and will work with students to encourage questions and discussion among the group. Professional skill sessions will vary by semester and cover topics such as post-doctoral career development, grant and professional medical writing, and longitudinal data analysis. *Epidemiology of Aging trainees are expected to attend for the duration of their training and register for a minimum of two terms.*

Together, these courses build on the foundation provided in our physiology and pathophysiology and methods courses or that the trainees bring from prior training. The curriculum develops trainees that have the knowledge and skills to conduct independent research in aging and epidemiology. Trainees may also select from a number of elective courses offered in the Graduate School of Public Health as well as other schools and departments on campus. Please refer to the required and recommended course table in Appendix A. All trainees are required to maintain this table and submit to the Training Program administrator at the completion of each academic year.

## **II. Other Requirements and Professional Development Activities**

Trainees will be required and encouraged to participate in a number of other academic activities throughout the course of the program. These are outlined below.

### **A. Field Training**

#### Research Study Experience

A key component of the training program is the hands-on experience that trainees have available to them. The Department of Epidemiology has numerous observational studies and clinical trials being conducted that provide trainees with the opportunity to be involved in data collection and data analysis. Trainees will be encouraged to participate in research that is relevant to their area of concentration. The selection of a specific study will be determined by the trainee and his/her advisor and will need to be approved by the study investigator(s).

#### Laboratory Training

The Molecular Epidemiology Laboratory course is recommended for trainees that do not have experience in molecular and genetic laboratory methods.

### **B. Responsible Research Conduct Training**

All trainees conducting research with human subjects will be required to complete the University of Pittsburgh Collaborative Institutional Training Initiative (CITI) research ethics education program <http://www.citi.pitt.edu/citi/>. Trainees are also required to complete the University of Pittsburgh HIPAA Researchers Privacy Requirements and Conflict of Interest. Information for these requirements can be found at <http://www.rcco.pitt.edu/> and <http://www.irb.pitt.edu/>. The University of Pittsburgh Faculty/Researcher (PHS Funded) Conflict of Interest form can be completed at: <https://www.hsconnect.pitt.edu/HSC/public/sign-in.htm>.

All trainees will be required to complete a research ethics course unless documentation is provided that the training was already completed. The following research ethics course has been identified in which trainees may enroll.

- The Graduate School of Public Health offers [PUBHLT 2030 \(Research Ethics\)](#). This course provides an introduction to topics in research ethics and the responsible conduct of research particularly pertinent to basic and non-clinical, population-based research employing a variety of methods. Students will learn key concepts and methods of ethical reasoning and requirements of human subjects' protection and nonhuman animal research, and will analyze historical and contemporary examples of research misconduct, as well as ethical concerns arising in their own work. Using lecture and small group discussion of assigned readings and participants' research, the course will develop students' skills requisite to design and conduct ethical research, avoid research misconduct, and ethically negotiate the tasks and milestones of academic education and careers (e.g. issues of mentorship and publication). Students will be evaluated (by letter grade) on the basis of the quality of their discussion contributions and quiz/exam responses. More information about the Research Ethics Course can be found here: <http://publichealth.pitt.edu/epidemiology/academics/courses/course-details?cid=184699>.
- The Association of Schools and Programs of Public Health (ASPPH) in collaboration with Health Resources and Service Administration (HRSA) has developed a training resource entitled *Ethics and Public Health: Model Curriculum*. It consists of a series of on-line modules that address various issues related to research bioethics and can be used as points of discussion in a small group or classroom setting. The curriculum can be viewed or downloaded at <http://www.aspph.org/educate/#educational-models>.
- The Center for Bioethics and Health Law coordinates a series of lectures focusing in issues of bioethics and law from both the theoretical and clinical perspectives. Trainees are encouraged to attend relevant or specific lectures/seminars. A list of events can be found at <http://www.bioethics.pitt.edu/>.

### **C. Career Development**

Several career development opportunities exist which may particularly benefit post-doctoral trainees, however, pre-doctoral trainees are welcome in all of the activities sponsored by the Postdoctoral Association and the Office of Academic Career Development. These opportunities include the following:

- [All Postdoctoral trainees will be required to register for a 90 minute Career development orientation within the first 30 days of their appointments. For more information on the orientation please visit the Center for Doctoral and Postdoctoral Career Development: http://dpcd.pitt.edu/postdoctoral-orientation-career-development](http://dpcd.pitt.edu/postdoctoral-orientation-career-development)
- Career Development Plan (*required* for post-doctoral trainees within 3 months of arrival) through the Center for Postdoctoral Affairs in the Health Sciences <http://www.oacd.health.pitt.edu/postdocprogress/>
- Postdoctoral Professionalism Series Workshops (recommended for post-doctoral trainees) through the Office of Academic Career Development <http://www.oacd.health.pitt.edu/>
- University of Pittsburgh Postdoctoral Association (post-doctoral trainees are strongly encouraged to join this association) <http://www.uppda.pitt.edu/>

- A list of Student and Professional Organizations and upcoming events can be found on the University of Pittsburgh, Public Health website: <http://www.publichealth.pitt.edu/home/life/student-life/student-and-professional-organizations>

In addition, the Office of the Provost has established guidelines for postdoctoral associates and scholars. The guidelines are periodically updated, so please visit <http://www.provost.pitt.edu/information-on/guidelines.html>, for the most current version.

Post-doctoral trainees are encouraged to apply and attend the Butler-Williams Scholars Program (formerly the NIA Summer Institute on Aging Research Workshop), which includes lectures, seminars, and small group discussions in research design relative to aging. More information is available on the NIA website: <http://www.nia.nih.gov/about/events>

#### **D. Participation in Research Conferences and Seminars**

##### Center for Aging and Population Health (CAPH) Epidemiology of Aging Workshop (EPIDEM 2950)

The Epidemiology of Aging Workshop is held in the Fall and Spring semesters, with the course description listed under *I. Didactic Program*. Epidemiology of Aging trainees are expected to attend for the duration of their training and register for a minimum of two terms. Trainees on this training grant are required to serve as teaching assistants and will organize the seminar and workshop/journal review sessions, typically 1 post-doctoral and 1 pre-doctoral trainee respectively, per semester.

##### Conference Participation and Special Awards

Every effort is made to encourage trainees to present their research in a variety of venues including national meetings as relevant to their area of concentration. All trainees will be required to present their research topic and progress once per year as part of EPIDEM 2950: Epidemiology of Aging Workshop.

Trainees should submit their publications and dissertation as part of the GSPH Dean's Day (for the student prize paper) and Dissertation of the Year award that is sponsored by the Delta Omega Honor Society. The Department of Epidemiology holds an Annual Research Symposium each December for students in degree programs. Additionally a University-wide Research Day in Geriatrics, sponsored by the University of Pittsburgh Aging Institute (UPAI), <http://www.upmc.com/services/aginginstitute/pages/default.aspx>, is held annually, which trainees and early career faculty from the Epidemiology of Aging Program have been active participants.

##### Additional Seminars:

Pittsburgh Claude D. Pepper Older Adults Independence Center (<http://www.pepper.pitt.edu/>) sponsors a seminar series for research related to mobility and balance. If applicable, trainees will be encouraged to present their research as part of the seminar series. The Pepper Center Research Career Development Core (RDRC) supports the development of independent investigators who wish to conduct age-related balance and mobility disorders research and includes a seminar series for trainees of investigators active in the Pepper Center.

Trainees are encouraged to attend other seminars based on their interest, including but not

limited to those in Geriatric Medicine, Geriatric Psychiatry and Neurology, the Alzheimer Disease Research Center (ADRC), and the Stimulating Pittsburgh Research in Geroscience (SPRIG) seminars. SPRIG investigates the basic mechanisms underlying diseases associated with aging, including mitochondrial disorders, cancer, cardiovascular disorders, and neurodegenerative disease. Several relevant workshops are taught in the Department of Epidemiology, including one focused on neuroepidemiology and another on cardiovascular disease. The Population Neuroscience Seminar (EPIDEM 2017) focuses on the methods and current literature in population neuroscience to understand the intrinsic and extrinsic factors that contribute to brain structure and function in various populations. The Student Workshop in Cardiovascular Disease Epidemiology (EPIDEM 2152) is a "hands-on" workshop that will provide the opportunity for students to practice many of the concepts that they learn in class in the context of CVD epidemiology. A list of upcoming Epidemiology seminars can be found on the University of Pittsburgh, School of Public Health website: <https://www.publichealth.pitt.edu/epi-seminars>.

### **E. Independent Research**

All trainees will design, implement, analyze data, and report the results of an independent study as part of the program. Typically, this is done as an ancillary study to a study that is ongoing in the department. The selection of a topic and specific study from which data will be collected will be decided upon by the mentor and trainee, and will need to be approved by the study investigator(s). The ultimate goal will be to submit 3 manuscripts for publication based on the data collected.

### **E. Graduate Certificates In Gerontology and Health Equity**

Pre- and post-doctoral trainees who are new to the field of aging may additionally obtain the Graduate Certificate in Gerontology. The certificate is comprised of 15-16 credits which may be applied to trainee's terminal degree, if desired. The certificate program has specialized tracks in dentistry, law, nursing, occupational therapy/ rehabilitation, social work, and public health. More information about the program can be found at <https://ucsur.pitt.edu/gerocert.php>.

The Department of Behavioral and Community Health Sciences and the Center for Health Equity have created the Graduate Certificate in Health Equity. This certificate provides students with an academic foundation for eliminating racial and ethnic disparities through conducting community based interventions, mobilizing communities where disparities exist, advocating for healthy public policy and for culturally tailoring interventions that are appropriate to minority populations. Matriculated students must meet all departmental and school wide requirements for admission. The overall goals of this certificate program are: to develop professionals with an understanding of the root causes of health inequities; to increase cultural competence of public health and other professionals; to equip public health professionals with appropriate methods of research and intervention in health inequities; and to provide an interdisciplinary vehicle through which students can pursue and strengthen their individual career interests relevant to health equity. The 15 credit certificate requires the following courses: Introduction to Community Health (BCHS 2554), Overview of Health Equity (BCHS 2524), Health Equity Research and Practice (BCHS 2526), and Health Equity Integrative Seminar (BCHS 2528). The remaining credits will be taken as approved electives. More information about the program can be found at <http://www.healthequity.pitt.edu/certificate-health-equity>.

### **III. Evaluation Procedures**

All trainees will undergo annual evaluations, to be completed with the trainee's mentor. The mentor and trainee will meet to review the evaluation, discuss progress and future goals, and, if necessary, devise a plan of action to correct areas of weakness. A written progress report will be submitted biannually. The annual review will additionally include an in person meeting with Drs. Newman, Cauley and Strotmeyer, and the primary mentor if different, to evaluate new and planned activity, the written progress report, CV, and plans with advisor comments. The evaluation forms with comments from the advisor, and the written progress report must be submitted to the Directors after the annual evaluation. Continuation of support from the training program will be partially dependent on the final results of the evaluation and will be ultimately determined by the Director, Dr. Newman, and Co-Directors, Drs. Cauley and Strotmeyer.

Trainees must maintain a B or higher average to be eligible for ongoing support from the training program. Remedial action and decisions regarding termination will be decided upon by the Director, Dr. Newman and Co-Directors, Drs. Cauley and Strotmeyer.

Epidemiology of Aging Training Annual Evaluation Forms and Guidelines can be downloaded on the [CAPH website](#).

Pre-Doctoral Trainees:

1. Complete T32 Progress Report Pre-doctoral Annual Evaluation
2. Checklist on program requirements
3. Updated CV in GSPH or Digital Vita format

Post-Doctoral Trainees:

*Epidemiology of Aging Training Evaluation Forms:*

1. Complete T32 Progress Report Post-doctoral Annual Evaluation
2. Checklist on program requirements
3. Updated CV in GSPH or Digital Vita format

*Center for Postdoctoral Affairs in the Health Sciences Required Forms:*

1. Complete/Update Post-doctoral Career Development Plan
2. Complete/Update Post-doctoral Self-Assessment
3. Complete Post-doctoral Outcome Summary – upon exit

Submit evaluation forms with advisor comments, CV, and written progress report to Elsa S. Strotmeyer, PhD, MPH, Training Program Co-Director, [strotmeyere@edc.pitt.edu](mailto:strotmeyere@edc.pitt.edu), and Adrienne DiFiore, MS, Project Coordinator, [add48@pitt.edu](mailto:add48@pitt.edu).

**Appendix A. Epidemiology of Aging Area of Concentration Course/Program Checklist**  
**(Refer to Student Handbook for Departmental and School Degree Requirements)**

<b>Student Name:</b>	<b>Date Updated:</b>
<b>Advisor Name:</b>	
<b>Course/program</b>	<b>Mo/Yr Completed/Attended</b>
<b>REQUIRED (unless already completed)</b>	
EPIDEM 2980 Biology and Physiology of Aging	
EPIDEM 2981 Epidemiology of Aging -Methods	
EPIDEM 2900 Advanced Epidemiology of Aging	
EPIDEM 2950 Epidemiology of Aging Workshop (2 terms minimum)	
<i>See Department of Epidemiology guide for requirements for degrees</i>	

The Department of Epidemiology student forms can be found on the University of Pittsburgh, Public Health website: <https://www.publichealth.pitt.edu/epidemiology/academics/forms>.

Department of Epidemiology requirements for degree programs:

- [MPH Student Graduation Checklist](#)
- [MS Student Graduation Checklist](#)
- [PhD Student Graduation Checklist](#)



**Appendix B. Postdoctoral Start-up Checklist**

<b>Requirement</b>	<b>Resource</b>	<b>Date Completed</b>
CITI Modules - Human Subjects - COI - Responsible Conduct of Research - Privacy & Information Security for Researchers	<a href="http://www.citi.pitt.edu/citi/">http://www.citi.pitt.edu/citi/</a>	
Conflict of Interest Superform	<a href="https://coi.hs.pitt.edu/iCOI/protected/summaryPage.htm">https://coi.hs.pitt.edu/iCOI/protected/summaryPage.htm</a>	
Postdoctoral Orientation to Career Development (within first 30 days)	<a href="http://dpcd.pitt.edu/postdoctoral-orientation-career-development">http://dpcd.pitt.edu/postdoctoral-orientation-career-development</a>	