

**University of Pennsylvania School of Medicine  
Center for Clinical Epidemiology & Biostatistics**

**Graduate Group in Epidemiology & Biostatistics**

**PhD Program in Epidemiology**

**Faculty-Student Handbook**

**2011-2012**



# Contents

<b>INTRODUCTION .....</b>	<b>4</b>
<b>1 MISSION AND OVERVIEW OF THE PHD PROGRAM.....</b>	<b>5</b>
<b>2 GOVERNANCE.....</b>	<b>5</b>
<b>3 APPLICATION AND ADMISSION .....</b>	<b>6</b>
3.1 AFFIRMATIVE ACTION .....	6
3.2 PREVIOUS TRAINING AND EXPERIENCE .....	6
3.3 STANDARDIZED APTITUDE TESTS.....	7
3.3.1 TOEFL.....	7
3.4 APPLICATION DEADLINE AND NOTIFICATION .....	7
3.5 APPLICANTS FROM PENN'S MSCE PROGRAM.....	7
3.6 INITIATING AN APPLICATION.....	8
3.6.1 Combined degree students .....	8
<b>4 FINANCIAL OBLIGATIONS.....</b>	<b>8</b>
4.1 FINANCIAL AID AND FUNDING SOURCES .....	8
4.1.1 Fellowship grants.....	8
4.1.2 Research Grants.....	9
4.1.3 Training Grants .....	9
4.1.4 Faculty-Staff Tuition Assistance .....	9
4.1.5 Funding for combined degree students .....	9
<b>5 ACADEMIC POLICIES .....</b>	<b>10</b>
5.1 CODE OF CONDUCT AND ACADEMIC INTEGRITY .....	10
5.1.1 Code of General Conduct .....	10
5.1.2 Code of Academic Integrity.....	10
5.1.3 Code of Clinical Conduct.....	11
5.2 ACADEMIC ADVISOR.....	11
5.2.1 Policy on advisors.....	11
5.3 ACADEMIC STANDARDS.....	12
5.3.1 Course grades and Academic Probation .....	12
5.3.2 Incompletes .....	12
5.4 COURSE REQUIREMENTS.....	13
5.4.1 Core courses .....	13
5.4.2 Electives.....	13
5.5 MINOR AREAS OF CONCENTRATION .....	14
5.6 DOCTORAL SEMINAR .....	14
5.7 CONSULTING PROJECTS .....	14
5.8 COURSE PLANS .....	15
5.9 PHD EXAMINATIONS .....	15
5.10 PREPARING THE DISSERTATION .....	18
5.10.1 Dissertation advisor.....	18
5.10.2 Dissertation committee.....	18
5.10.3 Additional biostatistics support.....	19
5.10.4 Computing, programming, and database support.....	19
5.10.5 Frequency of dissertation committee meetings .....	19
5.10.6 Laboratory notebook.....	19
5.10.7 Content and format of the dissertation.....	20
5.11 NON-CREDIT REQUIREMENTS.....	20
5.11.1 Research Ethics.....	20

5.11.2	<i>Teaching practicum</i> .....	20
5.11.3	<i>Weekly seminar</i> .....	22
5.11.4	<i>Research rotations</i> .....	22
<b>6</b>	<b>GENERAL PROGRAM POLICIES</b> .....	<b>22</b>
6.1	EXEMPTIONS AND MODIFICATIONS .....	22
6.2	PART-TIME STUDENTS .....	22
6.3	LEAVE OF ABSENCE .....	22
6.4	TRANSFER OF CREDIT .....	23
6.4.1	<i>Transfer from other graduate groups</i> .....	23
6.5	RESIDENCY, TIME LIMITS, AND FEES .....	23
6.6	TERMINAL MASTER'S DEGREE.....	23
6.7	STUDENT RECERTIFICATION .....	24
6.8	STUDENT MEMBERSHIPS .....	24
6.9	STUDENT TRAVEL.....	24
6.10	FACILITIES.....	24
6.10.1	<i>Program web-resource</i> .....	24
6.10.2	<i>Student Space</i> .....	24
6.10.3	<i>PennCard</i> .....	24
6.10.4	<i>PennKey</i> .....	24
6.10.5	<i>The PennPortal</i> .....	25
6.10.6	<i>Black Key</i> .....	25
6.10.7	<i>Health Care Coverage</i> .....	25
	<b>APPENDIX A: TYPICAL COURSE PLANS</b> .....	<b>26</b>
	<b>APPENDIX B: BGS AND GRADUATE GROUP FORMS</b> .....	<b>29</b>

## Introduction

This handbook is intended as a reference manual for the doctoral program in epidemiology at the University of Pennsylvania. As you will see, it covers the entire graduate experience, from admission through required course work, examinations, and the PhD dissertation. Faculty, staff, and potential and admitted students should consult it when seeking information on our program's policies and procedures. This is a living document; readers should feel free to bring errors and omissions to the attention of the Director of the Doctoral Program in Epidemiology, who is responsible for maintaining it.

Many people made essential contributions to this handbook, most prominently Drs. Daniel Heitjan (Chair of the Graduate Group in Epidemiology & Biostatistics); Brian Strom (Chair of the Department of Biostatistics & Epidemiology); Harold Feldman (Director, Clinical Epidemiology Unit); J. Richard Landis (Director, Biostatistics Unit); and Ebbing Lautenbach, John Farrar, and Theoklis Zaoutis (members of the CCEB Educational Programs Committee), as well as Dr. Thomas Kelly and Jennifer Kuklinski and Victoria Frew, administrators of graduate programs within the CCEB and the Division of Epidemiology, respectively. Many others contributed in ways large and small, not least the students in the doctoral program, whose many relevant questions and experiences have led us to review our policies, consider their implications, and write them down clearly. We thank them especially and wish them the best in all their endeavors, at Penn and beyond.

*John H. Holmes, PhD  
Associate Professor of Medical Informatics in Epidemiology at HUP  
Director, Doctoral Program in Epidemiology*

# 1 Mission and Overview of the PhD Program

The mission of the PhD Program in Epidemiology is to train independent researchers in the development and application of epidemiologic methods and to prepare them for positions as scientific leaders in academia and industry. The PhD is a research degree; it indicates the highest attainable level of scholarship, and a commitment to a research career. The PhD does not represent merely the accumulation of course credits, but rather, the development and completion of a well-designed and conscientious program of scientific investigation that makes a unique contribution to the field of epidemiology.

The PhD program in Epidemiology requires a total of 20 course units including basic and advanced courses in epidemiology, statistical methods, as well as electives drawn from other departments and schools that serve the student's research interests. The program also requires written qualifications and oral candidacy examinations, and the successful defense of a doctoral dissertation, in accordance with University of Pennsylvania policy. The PhD program typically requires the equivalent of at least four years of full-time study, in three defined phases: *coursework*, *pre-candidacy*, and *candidacy*. The coursework phase typically takes two years of full time study, and is intended to provide the student with the knowledge needed to pursue advanced, independent study and investigation in epidemiologic research. This phase culminates in the written Qualifications Examination, normally taken after most or all of the student's coursework has been completed. The pre-candidacy phase focuses on the preparation of a scientifically unique, methodologically sound, and feasible dissertation proposal. This phase ends with passing the oral Candidacy Examination, at which time the student is recognized as a Candidate for the PhD and focuses his or her effort on performing the research for and writing the dissertation. A successful public defense of the dissertation then completes the academic requirements for the PhD.

## 2 Governance

The PhD Program in Epidemiology is administered by the Graduate Group in Epidemiology and Biostatistics (GGEB) and is led by the Director of the Doctoral Program in Epidemiology, working with the PhD Program Executive Committee. The Executive Committee is composed of five to seven GGEB faculty members, at least one of whom must be on the faculty in the Division of Biostatistics; the majority of the membership must hold the PhD. The committee is charged with reviewing students' progress through the program and writing and grading the Qualifications Examination. The By-Laws of the GGEB are found at [http://www.med.upenn.edu/bgs/faculty\\_bylaws.shtml#epi](http://www.med.upenn.edu/bgs/faculty_bylaws.shtml#epi).

The Office of Biomedical Graduate Studies provides oversight and coordination for the GGEB and six other graduate groups offering PhD degrees in the biomedical sciences. Biomedical Graduate Studies (BGS) was established in 1985 and serves as the academic home within the University of Pennsylvania for roughly 700 students pursuing a PhD in the basic biomedical sciences. Although BGS is housed within the School of Medicine, it is composed of more than 600 faculty members across seven Penn schools and several associated institutes. BGS provides training and administration through seven graduate groups, some of which have distinct sub-specialty areas. Each graduate group has its own training mission, leadership, and staff, but there is often significant overlap among the groups in respect to faculty membership, courses offered, policies, and procedures. BGS provides

centralized support to the graduate groups for admissions, student fellowships, curricular oversight, record-keeping, and other operations.

Additional, up-to-date information about BGS is available at <http://www.med.upenn.edu/bgs/>.

### **3 Application and Admission**

Individuals who are interested in applying for the PhD Program in Epidemiology must complete an application form, and submit three letters of recommendation and transcripts of all prior undergraduate and graduate work. The application and letters should identify personal attributes, experiences, accomplishments, and goals relevant to success in graduate study in epidemiology. Applicants who are currently enrolled in a degree program must arrange for at least one letter of recommendation to be sent from a faculty member in that program. *Only original letters of recommendation written on official university or business stationery will be accepted.* Official transcripts from all undergraduate, graduate, and professional schools are also required. The transcripts must come directly from the institutions and must be *originals*. Applicants are encouraged to contact the Administrative Coordinator ([ceuapps@mail.med.upenn.edu](mailto:ceuapps@mail.med.upenn.edu)) for additional information, if needed.

#### **3.1 Affirmative action**

The University of Pennsylvania values diversity and seeks talented students from diverse backgrounds, including individuals from underrepresented racial and ethnic groups, individuals with disabilities, and individuals from disadvantaged backgrounds. Further, the University of Pennsylvania does not discriminate on the basis of color, sex, sexual orientation, religion, national or ethnic origin, age, disability, or status as a disabled or Vietnam Era veteran in the administration of its educational policies, programs or activities, admissions policies and procedures, and scholarship programs. Women, minorities, individuals with disabilities, and individuals from disadvantaged backgrounds are especially encouraged to apply to the PhD program in Epidemiology.

#### **3.2 Previous training and experience**

Applicants must demonstrate prior training and experience in epidemiology, clinical sciences, or a public health-related field. Degreed clinicians (MD, VMD, DMD, PharmD, MSN or doctorate in nursing, etc.) meet this requirement automatically. For non-clinicians, this requirement can be satisfied by having at least a Master's degree in public health, epidemiology, biostatistics, or related field and at least one year of relevant work experience. It is anticipated that some non-clinicians will not possess strong clinical backgrounds. Individuals admitted without clinical or other biomedical training will, in general, be required to take biomedical science courses in addition to the courses required for the PhD in Epidemiology. These courses will not count as electives and must be taken in addition to the required courses and credits. The Admission Committee will determine the need for additional courses at the time of acceptance.

The content of the additional courses required for those admitted without prior clinical or other biomedical training will be determined by a committee consisting of the student's advisor and two additional epidemiologists who are members of the Graduate Group. The advisor will be responsible for identifying those two faculty members. At least one of the three members of this committee must hold a clinical doctorate and at least one member of the committee must hold a doctorate in epidemiology or a related field, without a clinical doctorate. This committee

will identify specific courses to be taken on the basis of a review of the candidate's academic record/transcripts and research interests, as well as interactions with the candidate. The candidate will be informed of the additional required courses prior to enrollment. It is likely that this additional coursework will increase the amount of time it takes for the candidate to successfully complete the PhD degree requirements.

Combined degree (MD-PhD, VMD-PhD, and DMD-PhD) applicants are exempt from this requirement since they will have had at least two years of relevant coursework in their professional degree program prior to starting coursework for the PhD.

### **3.3 Standardized aptitude tests**

Applicants must take the Graduate Record Exam (GRE) General Test. The GRE subject test is not required. GRE scores are valid for five years from the date taken. The official score report must be received from the Educational Testing Service (ETS) by the application deadline. *The University of Pennsylvania ETS institution code is 2900. Please do not enter a separate department code.*

Applicants who have completed graduate or professional degrees at other schools are not exempt from the GRE requirement. However, applicants who hold the MD, DMD, DDS, DVM, or VMD degree may request a waiver of the GRE, provided that his or her MCAT (or DAT) scores are no greater than five years old, or they have completed at least one year of coursework in epidemiology and biostatistics. MD-PhD applicants are exempt from this requirement since they will have submitted their MCAT scores as part of the application for the combined program. Other combined degree applicants will submit recent GRE scores as part of their application to their specific program.

#### **3.3.1 TOEFL**

All applicants whose native language is not English and have not completed a degree in an English-speaking university or do not have a currently valid TOEFL score must take the Test of English as a Foreign Language (TOEFL). TOEFL scores are valid for two years from the date taken. The official score must be received from ETS by the application deadline.

### **3.4 Application deadline and notification**

Students are admitted to the PhD program in Epidemiology for the beginning of the academic year only. Information and application materials are available by October of the preceding year with an application deadline of *December 1*. Applicants are usually notified of the decision of the Admissions Committee by the end of March.

### **3.5 Applicants from Penn's MSCE program**

Students in the Master of Science in Clinical Epidemiology (MSCE) program at the University of Pennsylvania who seek admission to the PhD program must submit a separate application; the MSCE application is not sufficient. Such students may apply at any time, but are officially admitted to the PhD program only for the beginning of the academic year. It is suggested that MSCE students wishing to pursue the PhD complete their MSCE degree first; typically, students apply in the fall preceding their projected graduation with the MSCE. *Students wishing to transfer into the PhD program during their first year will need to submit their application by December 1 of that year in order to be considered for transfer.* In both cases, performance in courses taken for the MSCE will be considered very strongly as part of the

application decision. MSCE students who have taken the Comprehensive Examination for that program will be required to take the full sequence of examinations for the PhD (see Section 4.9 in this Handbook).

### **3.6 *Initiating an application***

Those interested in applying for admission to the PhD in Epidemiology program should complete the online application that is available at <https://app.applyyourself.com/?id=upenn-gmed>

#### **3.6.1 Combined degree students**

Individuals who are interested in applying for one of the combined degree programs should visit the appropriate website listed below:

MD-PhD: <http://www.med.upenn.edu/mstp/applicant.shtml>

VMD-PhD: <http://www.vet.upenn.edu/>

DMD-PhD: <http://www.dental.upenn.edu/>

## **4 Financial obligations**

As of July 1, 2011, the full-time PhD tuition (plus fees) is \$30,060 per year. This does not include books, housing, or other expenses, which are the responsibility of the student. This rate is subject to change annually. Full-time students are charged at the full-time rate for a maximum of five (5) years, after which time the full-time tuition (plus fees) is reduced to \$4,098 per year. Tuition for part-time students is pro-rated by course; part-time students are charged accordingly, exclusive of books, fees, and housing, and are not charged at the high tuition rate unless their status is changed to full-time.

### **4.1 *Financial aid and funding sources***

All students are expected to have some form of financial aid available to them before they are accepted into the program. Financial aid for students in the PhD program in Epidemiology comes from several sources: individual fellowship grants, research grants, training grants, and the Faculty-Staff Tuition Benefit Program at the University of Pennsylvania. The University's Office of Student Financial Services provides information on student expenses and billing; processes financial aid applications, awards financial assistance; and administers the Penn Plan payment programs. Students may contact the Office directly at:

**Office of Student Financial Services  
University of Pennsylvania  
Room 100 Franklin Building  
3451 Walnut Street  
Philadelphia, PA 19104-6270  
215-898-1988  
Email: [sfsmail@SFS.upenn.edu](mailto:sfsmail@SFS.upenn.edu)**

#### **4.1.1 Fellowship grants**

Students are encouraged to explore a variety of individual fellowship awards. These include the Dissertation Research Award (Agency for Healthcare Research and Quality, AHRQ):

<http://grants.nih.gov/grants/guide/pa-files/PAR-09-212.html>), the career awards (usually restricted to post-doctoral training but applicable to the PhD) offered through AHRQ (<http://www.ahrq.gov/fund/training/rsrchtng.htm>) and the National Institutes of Health (<http://grants.nih.gov/training/careerdevelopmentawards.htm>). In addition, these organizations fund individual fellowship (F30 and F31 for predoctoral, and F32 and F38 for postdoctoral National Research Service Awards (NRSA)). Only citizens or permanent residents of the United States are eligible for these awards. The applications for these awards require a research plan that is usually developed during the coursework or pre-candidacy phases of the PhD program. At an early stage in the process of planning the NRSA submission, the student **must** communicate with the Director of the Doctoral Program and the CCEB Business Office to learn about the submission process, which should be done through that office. In addition to AHRQ and NIH, some clinical specialty organizations, such as the American Cancer Society and American Kidney Foundation, fund pre-doctoral studies, and students and advisors are urged to investigate these sources as appropriate to the student's research interests.

#### **4.1.2 Research Grants**

A second source is research grants, and like training grants, these funds are limited. To be eligible for such funding a student would need to identify a faculty member who can justify covering the student's costs from an existing grant. This implies that the student's interests and the goals of the faculty member's funded project are similar, and that the funding will extend for the same amount of time as the student's program. However, sometimes such funding can be arranged as a supplement to an existing funded grant. *the availability of student funding through a faculty member's research must be confirmed through an analysis of the faculty member's funding portfolio by the CCEB Business Office and approved by the Director of the Doctoral Program.*

#### **4.1.3 Pre-doctoral training Grants**

Pre-doctoral training funds are occasionally available from pharmacoepidemiology training funds. However, this program is highly competitive and open only to those who qualify academically and articulate a research program and ongoing career interest in pharmacoepidemiology. Additional pre-doctoral training grants are in development and will be announced as they are awarded.

#### **4.1.4 Faculty-Staff Tuition Assistance**

The third source is the University of Pennsylvania Faculty/Staff Assistance Program. This program is available to those with faculty or staff appointments at the University of Pennsylvania or the Hospital of the University of Pennsylvania provides support for full-time Penn employees who are also part-time PhD students. See this link for more information about the program: <http://www.hr.upenn.edu/policy/policies/406.aspx>

#### **4.1.5 Funding for combined degree students**

Students in the MD-PhD program are funded by the Medical Scientist Training Program for their medical school education plus one year of graduate study. The remaining years of graduate study are funded through one or more of several streams. These include an NIH-sponsored F30 individual fellowship award for MD-PhD students or grant funding obtained through the student's graduate advisor or other faculty. MD-PhD students are strongly urged to apply for the F30 as soon as a research program has been defined, especially if faculty funding will not be available. GGEB faculty and BGS administration will work with the student

to develop this application. At an early stage in the process of planning an application for an F30 or other extramural support, the student **must** communicate with the BGS Finance Office to learn about the submission process, which should be done through that office.

Students in the VMD-PhD program should consult with the combined degree program Director at the School of Veterinary Medicine and the Director of the Doctoral Program in Epidemiology to identify funding for the graduate school phase of the program.

## 5 Academic policies

Students in the PhD program are subject to academic policies of BGS ([http://www.med.upenn.edu/bgs/current\\_students\\_policies.shtml](http://www.med.upenn.edu/bgs/current_students_policies.shtml)) as well as the specific policies of the GGEB and PhD program as defined below.

### 5.1 Code of conduct and academic integrity

#### 5.1.1 Code of General Conduct

All students of Biomedical Graduate Studies (BGS) must conduct themselves at all times in a mature and responsible manner. The rights and property of all persons are to be respected regardless of time or place. For dual degree students (MD-PhD, VMD-PhD), or graduate students who conduct research in a clinical venue, this also includes compliance with rules, procedures and accepted practices in the clinical setting. In addition, BGS students must comply with the University's code of general conduct and other University policies related to student conduct that appear in The Penn Book: Policies and Procedures Handbook of the University of Pennsylvania (<http://www.vpul.upenn.edu/osl/pennbook.html>). These policies include, but are not limited to, policies on sexual harassment, acquaintance rape and sexual violence, open expression, drug and alcohol usage, and the drug-free workplace. The judicial charter contained within that document is not applicable to BGS students; rather, BGS students are subject to the Charter of Biomedical Graduate Studies Student Judicial System which can be found on the BGS website.

#### 5.1.2 Code of Academic Integrity

The most fundamental value of any academic community is intellectual honesty; accordingly, all academic communities rely upon the integrity of each and every member. Students are responsible not only for adhering to the highest standards of truth and honesty but also for upholding the principles and spirit of the following Code. Violations of this Code include but are not limited to the following acts:

- A. **Cheating:** using or attempting to use unauthorized assistance, material or study aids in examinations or any other academic work, or preventing, or attempting to prevent another from using authorized assistance, material, or study aids.
- B. **Plagiarism:** using the ideas, data or language of another without specific and proper acknowledgment.
- C. **Fabrication:** submitting contrived or altered information in any academic exercise.
- D. **Multiple Submission:** submitting, without prior permission, any work submitted to fulfill another academic requirement.
- E. **Misrepresentation of Academic Records:** misrepresenting or tampering with, or attempting to tamper with, any portion of one's own or any other person's

transcripts or academic record, either before or after coming to the University of Pennsylvania.

**F. *Facilitating Academic Dishonesty:*** knowingly helping or attempting to help another violate provisions of this Code.

**G. *Unfair Advantage:*** attempting to gain unauthorized advantage over fellow students in an academic exercise.

### **5.1.3 Code of Clinical Conduct**

The relationship of modern biomedical research to the clinical setting may place BGS students in direct contact with patients, patient medical records, or health care workers. BGS students must behave with paramount concern for patients' welfare and with respect for the rights of patients. The expectations of BGS students' conduct in the clinical setting include the following:

*A. adherence to appropriate standards of behavior in the presence of patients;*

*B. adherence to appropriate standards of confidentiality with respect to information about patients;*

*C. honesty in interactions with clinical colleagues and in recordkeeping;*

*D. respect for the limits of responsibility and activity set forth by supervisors;*

*E. appropriate interactions with colleagues and co-workers.*

## **5.2 Academic advisor**

At the time of application, noted in the personal statement, each incoming student will identify an academic advisor who serves as the student's primary mentor, advising in course selection and related academic matters. A student may change advisors by request to the Director of the Doctoral Program. A PhD student's dissertation advisor, once selected, normally assumes the role of academic advisor during the later years of study. At the beginning of the academic year, each student, in collaboration with his/her advisor, prepares a proposed academic program including courses to be taken, courses to be transferred, and timelines for examinations and dissertation preparation.

### **5.2.1 Policy on advisors**

Mentors for students pursuing a PhD in epidemiology will be expected to have extensive training and experience in epidemiologic research. Generally, they will have the background outlined in the following criteria, although faculty members who do not fulfill all of the criteria may be approved in individual cases by the Graduate Group Chair, in consultation with the Graduate Group Executive Committee. Advisors should expect to dedicate considerable time and effort to one-on-one student supervision.

#### **A. Training**

1. PhD (or equivalent) in epidemiology or other health-related field, *OR*
2. MD *and* Master's degree in epidemiology

*AND*

**B. Experience as a mentor to at least one student in epidemiology at the Master's level or beyond, including advising through all phases from protocol development to submission of thesis or dissertation.**

## AND

C. Experience as an independent investigator, as demonstrated through receipt of at least one R01 or equivalent as principal investigator *and* significant contributions to the epidemiologic literature

Mentors not holding the PhD are strongly urged to work closely with the Director of the Doctoral Program and other PhD faculty throughout the student's program in order to ensure sensitivity to the special and intensive demands of mentoring PhD students.

### **5.3 Academic standards**

#### **5.3.1 Course grades and Academic Probation**

Grades for all formal courses are assigned as follows: "A," distinguished; "B," good; "C," unsatisfactory; "D," poor; "F," failure. Course directors may award pluses and minuses at their discretion. Grades of B- or above are considered acceptable; grades of C+ or below are unacceptable. A student who receives an unacceptable grade (C+ or lower) in any course is automatically placed on academic probation, an enrollment status that indicates an unsatisfactory level of academic performance. A student who is on probation may take other courses and exams but may not graduate. The probation is automatically lifted when the student has made up the deficient work by receiving an acceptable grade. The student must arrange with the director of the course in question a program of study that will accomplish this end. One option is to redo the assignments or exams that led to the unsatisfactory grade. Another is to take the course again during the next semester in which it is offered. In any event, a student who fails to redress the deficiency within one year of being placed on academic probation will be dismissed and considered ineligible for re-admission. If a student receives a second unacceptable grade in another course while already on academic probation, the Graduate Group Chair will convene a committee to review the case. The committee, which will consist of the student's academic advisor and two other members of the Graduate Group faculty, is authorized to recommend either immediate dismissal or continuation of the probationary status, subject to approval by the Graduate Group Chair and BGS.

#### **5.3.2 Incompletes**

In order to graduate, students must satisfactorily complete their course work. There may be times when, for some reason, a student cannot complete the course work within the allotted time. In this case, the student must formally request, in writing, a grade of Incomplete (I) for the course. Requests for Incompletes are not automatically granted, and the course director must agree to enter the grade for that course. **Students and faculty should be aware that incompletes become permanent after a period of one year.** Thus, course requirements must be completed and a grade reported within one year or the student will not receive credit for the course even though tuition was paid. **If the incomplete is not completed within the one-year period, then the student will be required to take an additional course to complete the requirements of the curriculum. The student must obtain approvals for the replacement course from the advisor and the Director of the Doctoral Program prior to registering for it.**

## 5.4 Course requirements

The PhD in Epidemiology typically requires the equivalent of six semesters of coursework plus additional semesters devoted to dissertation research. This can be accomplished in the equivalent of four to five years of full-time study, although depending on the student's research program, as many as six or even seven years may be needed to complete the program. The current standard course sequence for PhD students consists of 12 core courses representing 11.5 course units. A minimum of an additional 8.5 course units are taken in electives (advanced epidemiology and/or biostatistics courses and courses outside the department and school, as needed to serve the student's specific interests). *However, the PhD curriculum is currently under review and these requirements may change; these changes will be reflected in a subsequent version of the Handbook, pending approval by the Graduate Group and Biomedical Graduate Studies. Students are subject to the course requirements in place at the time of admission.* Course descriptions are provided at <http://www.cceb.med.upenn.edu/education/epi-degree/epi-curr.php>

### 5.4.1 Core courses

The core courses required for all PhD students are:

- Introduction to Epidemiology (EPID 510), 1.0cu
- Advanced Topics in Epidemiology I (EPID 640), 1.0cu
- Applications of Clinical Research (EPID 805), 1.0cu
- Database Management for Clinical Epidemiology (EPID 532), 0.5cu
- Advanced Database Management (EPID 633), 1.0cu
- Measurement of Health in Epidemiology (EPID 542), 1.0cu
- Doctoral Seminar (EPID 700), 0.5cu for each semester, minimum of four semesters or 2.0cu
- Research Design Consultation (EPID 710), 1.0cu
- Biostatistics for Epidemiologic Methods I (EPID 526), 1.0cu
- Biostatistics for Epidemiologic Methods II (EPID 527), 1.0cu
- Empirical Bioethics (EPID 690), 1.0cu

### 5.4.2 Electives

PhD students are required to take additional elective courses, totaling at least 8.5 course units. At least two of these courses must be advanced courses in statistical applications, such as (but not limited to) EPID 621: Longitudinal and Clustered Data, EPID 622: Applied Regression Models for Categorical Data, EPID 623: Survival Data Analysis, and EPID 680: Causal Inference in Epidemiology. Students meeting additional prerequisites in biostatistics may satisfy this requirement through advanced courses in statistical methods, such as (but not limited to) BSTA 652: Categorical Data Analysis, BSTA 653: Survival Analysis, BSTA 656: Longitudinal Data Analysis, and BSTA 790: Causal Inference in Biomedical Research.

Elective courses include advanced courses in epidemiology and biostatistics, as well as advanced courses in related disciplines, such as biostatistics, statistics, demographics, sociology, anthropology, economics, and psychology. Students may also arrange to take independent study courses taught by members of the Graduate Group faculty or courses taught elsewhere in the University. However, it is important to select independent study courses carefully, since it is assumed that students will have completed the core at the time of the Qualifications Examination. The student and faculty member will design the activity and the

form of the evaluation for the independent study course. Any such proposed independent study course must be approved in advance by the PhD Program Executive Committee. Finally, all electives will be chosen in consultation with the trainee's faculty.

### **5.5 Minor areas of concentration**

PhD students have the option of declaring a minor in one or more of the following subjects: biostatistics, health services research, demographics, sociology, anthropology, clinical economics, or psychology. Additional subject areas may be approved as official minors by petition to the Curriculum Committee. Trainees must complete at least three course units of credit in any one of these subject areas in order to receive a minor designation on the PhD transcript. *The required courses may not be counted toward the minor.*

The minor area will be noted on the student's transcript; however, in accordance with University policy, no notation of the minor area will be provided on the doctoral diploma.

### **5.6 Doctoral seminar**

All PhD students will participate in the Doctoral Seminar (EPID 700). Advanced students will be expected to present their work and take a leadership role in organizing each session. Students who are in the early stage (coursework phase) of their program will be expected to participate and present selected literature for discussion. The goal of the Doctoral Seminar is to expose all students to a wide variety of epidemiologic research. The seminar meets weekly.

### **5.7 Consulting projects**

All PhD students must complete a series of consulting projects in epidemiology; this requirement is met by the successful completion of EPID 710. Students normally fulfill this requirement after they have passed the Qualifications Examination, but those with substantial prior experience in epidemiology may, with permission of the Director, complete the requirement during the first or second year of study. The consulting projects may take one or more forms, such as a one-on-one consultation with an MSCE student or clinician-researcher outside the department, or formal consultation work in industry. The goal of the course is to demonstrate skill in "on-the-fly" consulting; merely providing database or analytical assistance does not satisfy the requirements for EPID 710. A minimum of three different consulting projects are required for a total of at least 100 hours engaging with clients. Students are required to prepare a brief description of each consulting project that includes the name, departments, and titles of those with whom the student is consulting, a paragraph or more on the background of the project, and a detailed description of what the student will do while engaged on the project. This information is provided on the Consulting Project Prospectus Form (Form 6 in Appendix B). In order to complete the course, the student will submit a report of activities performed for the projects to the EPID 710 course director.

All activities associated with the consulting project(s) must have the approval of the University of Pennsylvania Institutional Review Board (IRB). This requirement is the responsibility of the client, if associated with Penn, but students should ensure that they have been added to the pertinent protocol. For clients outside the University, students will need to submit a protocol to the Penn IRB for approval. *No work on any consulting project may begin until Penn IRB approval has been obtained.* In addition, the confidentiality of all work and that of individuals associated with the project must be maintained. Project investigators may require a non-

disclosure agreement to be signed by the student. The student should review this agreement with his/her advisor prior to signing it, and keep a copy of this agreement for his/her records.

## **5.8 Course plans**

All students are expected to develop and maintain a current course plan with their advisor. This course plan must be approved by the advisor and the Director of the Doctoral Program and filed with the department's Office of Graduate Programs. The course plan will be reviewed semi-annually in order to monitor the student's progress and identify potential delays in completing the program. Typical course plans are provided in Appendix B.

## **5.9 PhD Examinations**

In addition to course-specific examinations, there are three PhD examinations required in order to ensure rigorous, appropriate evaluations during the phases of a student's program. These examinations are described below.

### **1. Written Qualifications Examination**

- a. The qualifications examination will be taken after the equivalent of two years of course work.
- b. The qualifications examination will be open-book and consist of three parts, administered over a one-week period:
  - i. General epidemiology
    1. A series of questions and problems to assess competency in basic and advanced epidemiologic concepts, critical appraisal, and measurement
  - ii. Research methods
    1. A series of questions and problems to assess competency in biostatistical and quantitative and qualitative epidemiologic methods.
  - iii. The student's content area of interest (e.g., genetic epidemiology, pharmacoepidemiology) and/or biostatistics minor
    1. This section will evaluate the student's ability to integrate biological and clinical principles with epidemiologic knowledge and skills by writing a short grant proposal that addresses a research question provided by the committee. The proposal will include Specific Aims, Background and Significance, and Research Plan, and be limited to no more than 10 pages, not including references.
- c. Questions for the qualifications examination will be written and graded by the PhD Program Executive Committee.
  - i. Questions for the general epidemiology and methods section will be written and graded by the committee.
  - ii. Questions for the area of interest section will be written and graded by either members of the committee with expertise in the student's area, or by faculty added to the committee as ad hoc members for this purpose.
- d. Students must pass all three parts of the qualifications examination in order to advance to the next phase of the PhD program. Those who fail one or more parts of the examination may re-take those parts once, but a passing grade on all three parts must be attained before the end of the second year of study. Given the highly subjective nature of the grant proposal component of the examination, the

- student and/or the qualifications examination committee automatically qualifies for one oral rebuttal and retake in the case of a failing grade on this component.
- e. Transfers from the MSCE program must take the PhD qualifications examination, even if the MSCE comprehensive examination was taken previously.
  - f. Grandfathering: MSCE students who have transferred to the PhD program before January 1, 2009 are exempt from this policy. These students will have taken the MSCE comprehensive examination as their qualifications exam, and will be required to take another written examination, comparable in difficulty to the PhD qualifications exam and in addition to the oral exam, prior to being admitted to candidacy status, as has been done historically in the PhD program.
  - g. Review of the examination
    - i. A student may request to review his exam paper in company with the Examination Committee Chair. The purpose of such a review is to help the student evaluate the types of mistakes made, identify areas where further study is needed, etc. The Examination Committee retains the graded exam papers and does not return them to the students.
  - h. Appeal process
    - i. A student may appeal the outcome of the qualifying examination to the Examination Committee Chair, who together with the full committee will evaluate the appeal and judge whether it has merit. A grade can only be changed in cases of a specific error in scoring. The Examination Committee refers any grade change that could affect the student's exam outcome to the full PhD Executive Committee, who decides whether to revise the exam outcome.
    - ii. Because a minor revision of the score is unlikely to change the exam outcome, a student should only initiate a formal appeal if there were one or more egregious errors in the problem or in its grading, the correction of which would likely lead to a substantial increase in the score. A student who seeks a formal review must request it, in writing, from the Examination Committee Chair within one week of the issuance of the letter notifying the student of the exam result.

## 2. Candidacy examination

- a. The candidacy examination must be passed within 18 months of the qualifications examination.
- b. The focus of the candidacy examination is on the student's proposed dissertation research, but other material may be included as desired by the student's committee.
- c. The candidacy examination will consist of two parts:
  - i. **Written:** dissertation proposal, submitted to the student's committee at least one month prior to oral proposal defense, and approved by the committee prior to the oral proposal defense
  - ii. **Oral:** Oral defense of proposal (non-public) before the committee with the inclusion of additional pertinent material at the discretion of committee
- d. Students must pass both parts of the candidacy examination in order to advance to the final phase of the PhD program. Those who fail the candidacy examination may re-take it once, at the discretion of the committee.

- e. The Candidacy Examination is administered by the Dissertation Committee (see Section 4.10)

### 3. Dissertation examination

- a. The final oral examination is the dissertation defense. The defense must be announced by public advertisement at least four weeks in advance using such venues as the CCEB website, posted announcements in Penn Medicine spaces (as allowed), and electronic mail.
- b. The defense should be scheduled when the candidate and the dissertation advisor agree that the research is near completion and the draft dissertation is in a format suitable for distribution to the committee. As soon as a date and time are fixed, the graduate program staff reserves a room (for at least two hours) and prepares the necessary public announcements.
- c. *All dissertation committee members should be present for the final defense. In emergencies, one member may participate in the defense by telephone. That member cannot be the committee chair, the student's advisor, or the biostatistics faculty (if there is only one biostatistics faculty member on the committee). If one or more committee members are absent (i.e., not present or not participating by telephone) from the final defense, it cannot proceed and must be rescheduled.*
- d. Format of the defense
  - i. At least two weeks prior to the exam, the student should provide each committee member with a copy of the full dissertation. The committee members review the dissertation and prepare exam questions based on it. The defense consists of two parts:
    1. Open session. The chair describes the process to all attendees and introduces the candidate. The candidate then presents his/her research in the style of a departmental colloquium. Typically, the candidate presents one chapter in depth, with a very brief overview of the others. *This presentation should not exceed 45 minutes.* At the close of the formal presentation the candidate takes questions from the audience. The chair has the right to terminate the open session if it goes beyond one hour.
    2. Closed session. In this part of the examination, attended only by the student and members of the committee, the student is asked specific questions pertaining to the dissertation. Because the committee members have read the entire dissertation, this is their opportunity to ask any questions about any part of it, including material not presented in the open session. Once the committee members are satisfied that the questioning is complete, the student is asked to leave the room and the committee deliberates in closed session. During this time, the committee reviews the student's work, draws up a list of recommendations, and votes an outcome. The student is then readmitted to the room, informed of the outcome, and is provided with any recommendations. The committee chair sees that necessary forms are signed and returned to the graduate program office.

- ii. The defense will be coordinated by the dissertation chair. This individual will be responsible for maintaining order and the sequence and timely completion of the examination.
- e. The dissertation exam has three potential outcomes:
  - i. **Pass.** The student has completed the dissertation requirements for a PhD in epidemiology. The student then works with the graduate program staff to ensure that all other requirements are met prior to deadlines for the proposed graduation date.
  - ii. **Conditional pass.** The defense was satisfactory but additional requirements, usually minor, must be satisfied. Commonly, the student is asked to address specific questions raised at the defense, or to incorporate edits proposed by committee members. The dissertation advisor typically oversees these changes, but other committee members may also review changes at their discretion. Once the additional requirements are met, the student is considered to have completed the dissertation. The student is not required to defend the dissertation again.
  - iii. **Fail.** The student must defend the dissertation again; only one additional attempt at the final defense is allowed.
- f. Dissertation acceptances must be unanimous, in writing, and signed by all members of the dissertation committee. Approved dissertations must be submitted to the Graduate Council of the Faculties in a format that meets the style standards established by the Vice Provost for Graduate Education.

## ***5.10 Preparing the dissertation***

### **5.10.1 Dissertation advisor**

PhD in Epidemiology students must carry out their dissertation research under the mentorship of a faculty member of the GGEB. The dissertation advisor is the most important individual the student will interact with in the course of their graduate training. For this reason students should carefully evaluate their interests and experiences in choosing the advisor. The student's dissertation advisor may not be the Dissertation Committee chair, but may be (and is usually) the student's mentor. See Section 5.2.1 for information about advisor qualifications.

### **5.10.2 Dissertation committee**

Each student will organize a Dissertation Committee according to the following constituency. The committee will consist of at least four members, the majority of whom will be members of the GGEB. A GGEB faculty member will be appointed as the Chair of the committee by the student's advisor. The role of the Chair is to run committee meetings and to oversee the candidacy examination and final defense. At least one member of the Dissertation Committee must be a member of the faculty in the Division of Epidemiology and ordinarily at least one other should be a member of the faculty in the Division of Biostatistics. These committee members will be collectively responsible for administering and evaluating the oral candidacy examination, reading the dissertation, and evaluating the final defense. Additional content experts from within or outside the GGEB may be added to the committee as needed. The initial constituency and any changes in the membership must be approved by the Director of the Doctoral Program and the Graduate Group Chair. This Committee will be in place at all times during the dissertation phase. If for some reason, a student changes to a different area of

research, a new Dissertation Committee must be appointed immediately and must meet within three months to discuss new plans for the dissertation research.

### **5.10.3 Additional biostatistics support**

The biostatistics faculty member(s) on the committee will provide advice and collaborate on the scientific design and statistical analyses required for the dissertation research, but it is the student's responsibility to perform such analyses. If appropriate, it may be possible to substitute the GGEB biostatistics faculty member with biostatistics faculty from another department at Penn or from outside the University, upon approval by the Director of the Doctoral Program and the GGEB Chair. If a student's dissertation research area requires additional statistical expertise, appropriate biostatistics faculty should formally be added to the dissertation committee.

### **5.10.4 Computing, programming, and database support**

The student is responsible for writing all parts of the dissertation, including any methodological sections, and for conducting or directing all analyses; this ordinarily includes obtaining, preparing, and maintaining data needed for the research. Depending on the student's research program, additional (non-faculty) assistance with computing, programming, and database development may be requested by the student. However, to ensure that the student gains the maximum possible experience with these critically important skills, this request must be approved by the dissertation advisor and the Director of the Doctoral Program. Upon approval, the student should make arrangements with the Biostatistics Analysis Center (BAC), the Clinical Research Computing Unit (CRCU), or other computing group or consultant as needed. The student and dissertation advisor are responsible for obtaining the necessary funding to defray non-faculty support costs.

### **5.10.5 Frequency of dissertation committee meetings**

Once a student has advanced to candidacy, his/her dissertation committee will review goals and progress twice each year. The committee chair should complete the Dissertation Committee Meeting Report form and submit this to the PhD Director on September 1 of each year.

### **5.10.6 Laboratory notebook**

BGS mandates that the student's dissertation committee, at each of its meetings, review the student's "lab notebook". The PhD Program in Epidemiology interprets this to mean that the student should make available for faculty review, upon request, primary documentation of any substantial element of the dissertation. Such a review takes place at the candidacy exam and any subsequent meetings of the committee prior to, but not including, the dissertation defense. Examples of materials subject to review include the statement and investigation of a research question; the code and results of a simulation study; or the data, code and results of a data analysis. Prior to the meeting, the student's advisor, in consultation with the dissertation committee, designates a short list of such items that the student makes available in electronic or hard-copy format. The committee chair sets aside time at the meeting for the review of this material. In keeping with the BGS policy, there is no expectation that the committee should scrutinize all such documents "in their entirety"; rather, the review should be sufficient to satisfy the committee that the student's research records are "complete and well managed".

## **5.10.7 Content and format of the dissertation**

The dissertation must be a scholarly work, providing a written account of an independent investigation of an epidemiologic question or series of related epidemiologic questions. It will be in the form of a monograph, containing one or more research questions about the epidemiology of a particular health topic or disease. Within this monograph, there will be at least three separate manuscripts of publishable quality, one of which must offer a novel methodologic approach to a question in epidemiologic research. It will include the formulation of one or more hypotheses, a review of the appropriate literature, a description of the project, data collection, data analysis, data interpretation, discussion of the findings, and limitations of the work. If the dissertation involves the investigation of more than one question, each question must focus on an epidemiologic or methodologic issue related to the health topic or disease under investigation. The dissertation project should demonstrate that the candidate has a command of the subject and a thorough knowledge of the research methodology used to investigate the question(s).

## **5.11 Non-credit requirements**

### **5.11.1 Research Ethics**

#### **5.11.1.1 Responsible conduct of research**

All BGS students participate annually in a training program in Responsible Conduct in Research (RCR). The RCR course is described in detail at [http://www.med.upenn.edu/bgs/faculty\\_ethics.shtml](http://www.med.upenn.edu/bgs/faculty_ethics.shtml).

#### **5.11.1.2 CITI training**

Students are required to take the online training in human subjects protections and clinical research, offered through the Collaborative Institutional Training Initiative (<http://www.citiprogram.org/>). This course must be completed during the first semester of the program.

#### **5.11.1.3 HIPAA training**

HIPAA (Health Insurance Portability and Accountability Act) is a federal law that provides for the protection of the confidentiality of patient health records. All students must complete a University-approved course in HIPAA compliance. HIPAA training is provided online at <http://www.uphs.upenn.edu/hr/training/>. This course must be completed during the first semester of the program.

### **5.11.2 Teaching practicum**

Students in the PhD program must spend one semester providing teaching support as a Teaching Assistant (TA) for an Epidemiology or Biostatistics course. In addition to being a degree requirement for all doctoral students, the teaching experience is an opportunity to work closely with a faculty member, to review and deepen understanding of the material being taught, and to acquire and sharpen teaching skills. TAs are usually assigned to core courses in the Master of Science in Clinical Epidemiology program, but students may find teaching in one of the elective courses, or other epidemiology-related courses in other departments to be of interest as well. The Director of the Doctoral Program assigns TAs to courses based on course needs and student qualifications, in consultation with the student, the course director, and his/her advisor. Upon assignment, students must prepare a teaching assistance plan in writing,

signed off by the instructor and approved by the director for TA activities related to the course. This plan must be completed at least four weeks prior to the start of the course. The form for this plan is found in Appendix B (Form 5).

TA duties typically include some or all of the following:

- Attending lectures
- Holding office hours
- Running lab sessions
- Assisting in the preparation of handouts, exams and solution sets
- Grading homework and recording the grades
- Helping to grade exams and recording the grades
- Coordinating access to computing facilities, online data sets, and web applications
- Attending regular meetings with the course instructor.

*Please note that merely serving as a grader in a course does not fulfill the TA requirement for the doctoral program. The student must make a substantive contribution to the course.*

Timeliness in the completion of these duties is essential. The course instructor and TA should communicate regularly to discuss duties, to share feedback from the students, and to ensure that the TA's time is being used efficiently.

Both instructors and TAs should recognize that time pressures can vary greatly over the course of a semester. For instance, TA duties usually are light at the start of the course, heavy in the middle, and then light again toward the end (unless assistance is required grading exams).

Experience shows that grading homework and preparing and directing lab or discussion sessions are the two items that occupy most of a TA's time, especially for first-time TAs. TAs should not hesitate to request specific direction on what to present in lab or discussion sessions. Although the success of a course is ultimately the instructor's responsibility, students should recognize that instructors cannot be expected to solve problems that they don't know exist. Open communication is the key to a successful teaching experience. In cases where TA duties include assisting in the grading of exams, course instructors should provide the TA with clear guidance on how to assign points. Instructors should also recognize that some students may feel awkward evaluating their peers.

The instructor may provide the opportunity for the TA to prepare and deliver at least one lecture. In this case, the instructor should allow the TA sufficient time to prepare the lecture and should offer any necessary guidance about what is to be covered. Whenever possible, the TA's lecture will be videotaped and reviewed with the instructor and his/her mentor in order to identify strengths and weaknesses.

To ease communication, TAs should share their e-mail addresses and mailbox locations with their students. TAs are not on call for their students; nevertheless, students should expect reasonable access to TAs, particularly in the days leading up to exams and project due dates.

### **5.11.3 Weekly seminar**

A fundamental component of the PhD program is attendance at the weekly Center for Clinical Epidemiology & Biostatistics Seminar, at which faculty and researchers within and outside of Penn present their work or discuss timely issues in epidemiology. All PhD students are required to attend this seminar series weekly, unless excused due to scheduling conflicts, illness, or other reason. Excuses should be made with the Academic Coordinator, either before or as soon as possible after a missed seminar. Advanced PhD students are also welcome to present at this seminar. However, slots fill up early in the academic year, so it is best to discuss any plans to present with the advisor and the Chair of the Seminar Committee. Students are also encouraged to suggest experts from the field as potential seminar speakers to the Seminar Committee.

### **5.11.4 Research rotations**

Students are encouraged to meet and work with a variety of the faculty in epidemiology and biostatistics, as well as those in other departments and schools of the University, in order to explore their interests. These “research rotations” can take several forms: a formal course, an independent study, or a more informal approach that may include sitting in on research project meetings.

## **6 General program policies**

### **6.1 Exemptions and modifications**

Trainees may place out of the following courses only, upon passing an examination administered by the course instructor: Introductory Epidemiology, Introductory Biostatistics, and Database Management for Clinical Epidemiology. Electives should be taken so that the total number of course units still equals 20. Such requests are made in writing as a letter to the Academic Review Committee. The student should justify the request to place out of a course, and the request should be accompanied by reprints, abstracts from meetings, course syllabus, or other appropriate material. **These requests should be made before the end of the first semester in the program.**

### **6.2 Part-time students**

The PhD Program in Epidemiology welcomes part-time students. Because the training program requires certain courses to be taken in sequence, and most courses are offered only once per academic year, completing a degree part-time without substantial delays requires careful planning. Part-time students should therefore work closely with their advisors to devise an efficient course of study.

### **6.3 Leave of absence**

The University allows graduate students to take leaves of absence with the permission of the PhD program and BGS only during the period prior to dissertation status. Exceptions may be made for dissertation level students, most notably for medical reasons and for parental leave in association with the birth of a child (of up to one year). Student stipends are suspended during a medical leave period and are guaranteed upon return from leave under the conditions of the original award guarantee. A student who wishes to take a leave of absence must submit a written request to the Director of the Doctoral Program and the Graduate Group Chair at least one month prior to the beginning of the first semester of the proposed leave. If the leave is for

medical reasons, the request should include a note from the student's doctor. Leaves of absence are granted for no more than one year. The university's leave of absence policy is provided in the Graduate Catalog Rules and Regulations: <http://www.upenn.edu/VPGE/rules.html>

## **6.4 Transfer of credit**

At least twelve course units must be completed while enrolled in a degree program at Penn; thus for the PhD degree, a maximum of eight units may be transferred from graduate work done at other institutions. Transfer of credit must be approved by the Director of the Doctoral Program and the Graduate Group Chair.

### **6.4.1 Transfer from other graduate groups**

Students who are currently enrolled in another graduate group within BGS may apply for transfer into the Graduate Group in Epidemiology and Biostatistics (GGEB) by submitting an application for admission to the GGEB. Students should clearly express their interest in joining the PhD Program in Epidemiology in their personal statement. If determined to meet the admission standards for the PhD Program in Epidemiology, the student will then meet individually with the Director of the Doctoral Program to discuss any issues related to fulfilling the program course requirements. The Director, in consultation with the PhD Executive Committee and the Graduate Group Chair, will provide the student with a written statement of required course work. The student should have the chair of the former program sign a "Transfer of Graduate Group Form" to release the student from the former graduate group and then have the chair of the new program sign the same form to accept the student into the new graduate group. The GGEB will request that the student's academic file be transferred from the former graduate group office.

## **6.5 Residency, time limits, and fees**

A student seeking a PhD in Epidemiology must spend at least one year in residence as a graduate student at the University of Pennsylvania. This means completing, within two successive terms, a program of at least four units in courses approved for graduate credit.

Students must complete all course requirements, pass the required examinations, and complete the dissertation within 10 (ten) years of matriculation. A student who fails to complete the dissertation within the time limit must petition a committee — composed of his academic advisor, the Director of the Doctoral Program, and a third member of the faculty designated by the GGEB Chair — to remain a PhD candidate. Students are strongly encouraged, but not required, to pursue the degree on a full-time basis for the entire course of the program. A candidate who withdraws from the PhD program after reaching dissertation status and subsequently applies for re-admission must pay the dissertation fees that would otherwise have been due during the withdrawal period.

## **6.6 Terminal master's degree**

The PhD Program in Epidemiology does not admit students for study towards a Master's degree.

## **6.7 Student recertification**

Students who have not successfully defended the dissertation within five years of completion of the Candidacy Examination must petition for recertification. The new deadline for completion of all requirements for the PhD including recertification shall be within one year of recertification. The petition should describe a detailed plan of study and remediation so that this time limit will be observed, and submitted to the Director of the Doctoral Program and the Graduate Group Chair. They will consult with the student's advisor and upon approval, they will forward the petition to Biomedical Graduate Studies and the Graduate Council of Faculties for final approval.

## **6.8 Student memberships**

All PhD students in Epidemiology are encouraged to join one or more professional societies, but especially the American College of Epidemiology as an Associate or the Society for Epidemiologic Research as a Student Member.

## **6.9 Student travel**

Ordinarily, travel funds will be supplied through a student's fellowship award, or through a grant or other funds provided by the advisor or other faculty, or by the student using his or her own resources,

## **6.10 Facilities**

### **6.10.1 Program web-resource**

The PhD Program will use Blackboard to provide student-related forms, resources and web links. These pages can be accessed by logging in to <https://courseweb.library.upenn.edu/>

### **6.10.2 Student Space**

The PhD program has space for students on the first floor of Blockley Hall. It includes a group meeting room equipped with two conference tables, whiteboards, and computer projection capability; a room with 30 study carrels; and lockers. There is also wireless connectivity throughout the first floor of Blockley Hall. Administration of the carrels and locker assignments is managed through the Office of Graduate Training (918 Blockley Hall).

### **6.10.3 PennCard**

PennCard is the official identification card of the University of Pennsylvania and is required for all students. The PennCard gives students access to many University facilities and services including PennCash, the Graduate Student Center, libraries, recreation centers, campus transit, residence halls, and more. The PennCard Center is located on the 1st floor of the Franklin Building at 3451 Walnut Street. A valid, government-issued photo I.D. will be required in order to pick up PennCards. The first PennCard is free. Lost or stolen cards can be replaced for a fee of \$15. Damaged cards can be replaced for a fee of \$5. The Office can be reached via e-mail at [penncard@pobox.upenn.edu](mailto:penncard@pobox.upenn.edu) and online at <http://www.upenn.edu/penncard/>.

### **6.10.4 PennKey**

The PennKey name and password provides access to PennNet, a Penn e-mail account, and many other essential services managed through the PhD Program. All students are required to

have a current, active PennKey and password. Students are issued a PennKey Setup Code when they pick up their PennCard.

### **6.10.5 The PennPortal**

The PennPortal webpage bundles together links to important information for students. To access the PennPortal ([http://www.upenn.edu/penn\\_portal](http://www.upenn.edu/penn_portal)), students should log in with their PennKey name and password. If the “Graduate Students” tab does not automatically appear, students should click on the “My Tabs” button to add the “Graduate Students” tab from the available tabs.

### **6.10.6 Black Key**

Blockley Hall and most of the floors in Blockley Hall are restricted to holders of the building-specific black key. Therefore, all PhD students are required to get a black key. Please contact the Office of Graduate Training (918 Blockley Hall) for the necessary form. Keys can be picked up at the security office in the lobby of Stellar-Chance. *Please note:* The security office is only open for black key pickup from 11:00 a.m.-1:00 p.m.

### **6.10.7 Health Care Coverage**

Penn students are automatically eligible for Penn Student Health Services and Chickering Health Insurance. Once a student is matriculated, the University will assume that this health coverage is needed and they will bill for the service. Students who wish to waive the Penn sponsored insurance should log onto PennPortal at [http://medley.isc-seo.upenn.edu/penn\\_portal/portal.php](http://medley.isc-seo.upenn.edu/penn_portal/portal.php) to do so. It is necessary that students watch their bill to ensure that no health insurance fee is incurred. If one is charged to the student account, the Office of Education Programs in the CEU should be notified.

# **Appendix A**

## **Typical Course Plans**

**Sample course plan for an entering PhD student**

<b>Year</b>	<b>Term</b>	<b>Course</b>	<b>c.u.</b>
<b>Year 1</b>	<b>Summer II</b>	EPID 510: Introduction to Epidemiology	1.0
		EPID 526: Biostatistics for Epidemiology I	1.0
	<b>Fall</b>	EPID 542: Measurements of Health	1.0
		EPID 526/7: Biostatistics for Epidemiology I (cont'd.)/II	1.0
		EPID/Other: Epidemiology or other elective	1.0
		EPID 700: Doctoral Seminar	0.5
	<b>Spring</b>	EPID 527: Biostatistics for Epidemiology II (cont'd.)	0
		EPID 532: Database Management	0.5
		EPID/Other: Epidemiology or other elective	1.0
		EPID 700: Doctoral Seminar	0.5
	<b>Summer I</b>	EPID 633: Advanced Database Management	1.0
EPID 640: Advanced Topics in Epidemiology I		1.0	
<b>Year 2</b>	<b>Fall</b>	EPID/BSTA: Advanced Biostatistics course or elective	0.5/1.0
		EPID/Other: Epidemiology or other elective	1.0
		EPID 805: Applications of Clinical Research	1.0
		EPID 700: Doctoral Seminar	0.5
	<b>Spring</b>	EPID/BSTA: Advanced Biostatistics course or elective	0.5/1.0
		EPID 690: Empirical Bioethics	1.0
		EPID/Other: Epidemiology or other elective	1.0
		EPID 700 Doctoral Seminar	0.5
	<b>Summer</b>	<b>Qualifications Examination</b>	
	<b>Year 3</b>	<b>Fall</b>	EPID/Other: Epidemiology or other elective
EPID 710: Consultation in Epidemiology			1.0
EPID 700: Doctoral Seminar (non-credit)			0
<b>Spring</b>		EPID/Other: Epidemiology or other elective	1.0
		EPID 700: Doctoral Seminar (non-credit)	0
<b>Summer</b>		<b>Candidacy Examination</b>	
<b>Year 4</b>		Dissertation Research	0
		EPID 700: Doctoral Seminar (non-credit)	0
	<b>Dissertation Defense</b>		

Sample course plan for an entering MD-PhD student			
		MEDICAL SCHOOL	GRADUATE SCHOOL
Year 1	Fall Spring Summer	Module 1, Module 3, Module 6 Module 2, Module 3, Module 6	Epi lab rotation, Epidemiology seminar Epi lab rotation, Epidemiology seminar 1-2 Epidemiology course units (EPID510, EPID 526)
Year 2	Fall Spring Summer	Module 2, Module 3, Module 6 Clerkships - Module 4, Module 6 Clerkships - Module 4, Module 6	Begin EPID527, Epidemiology seminar
Year 3	Fall Spring Summer	Clerkships - Module 4, Module 6 Add'l clinical courses - Modules 5, 6 Add'l clinical courses; STEP 1	Finish EPID 527
Year 4	Fall	Clinical Connections	4-5 Epidemiology course units; work on selecting advisor <i>Detailed PhD curric to be drawn up at this time</i>
	Spring Summer		4-5 Epidemiology course units; work on selecting advisor Finalize advisor choice*; 1 Epidemiology course unit
Year 5	Fall	Clinical Connections	2-3 Epidemiology course units
	Spring Summer		2-3 Epidemiology course units 1 Epidemiology course unit / qual exam in Aug
Year 6	Fall	Clinical Connections	1-2 Epidemiology course units
	Spring Summer		1-2 Epidemiology course units TA one course; Candidacy exam
Year 7	Fall	Clinical Connections	Full-time thesis
	Spring Summer		Full-time thesis and defense Electives**
Year 8	Fall	Residency interviews Clerkships and/or electives and/or research (Modules 5, 6) GRADUATION	Additional research if needed
	Spring		

\*goal is to have thesis advisor identified by end of first PhD year; but may happen sooner for some

\*\*advising to be sought on amount of clinical time needed just prior to applying for residency

# **Appendix B**

## **BGS and Graduate Group Forms**

- 1. Transfer of Credits Form (BGS)**
- 2. Course Plan Form (GGEB)**
- 3. Qualifications Examination Form (GGEB)**
- 4. Examination Report (BGS150)**
- 5. Teaching Assistance Plan (GGEB)**
- 6. Consulting Project Prospectus Form (GGEB)**
- 7. Dissertation Committee Approval Form (GGEB)**
- 8. Dissertation Committee Report Form (GGEB)**
- 9. Candidacy Examination Form (GGEB)**
- 10. Acceptance of Dissertation Form (BGS 152)**
- 11. Certification of Dissertation (BGS 153)**
- 12. Post-Graduate Information (BGS 154)**

**TRANSFER OF CREDIT**

Biomedical Graduate Studies  
160 BRB II/III/6064

\_\_\_\_\_ has applied for transfer of credit for  
(Name of Student - Graduate Group)

graduate work completed at the \_\_\_\_\_  
(Name of School)

I recommend that \_\_\_\_\_ course units be transferred.

The courses noted below are recommended for transfer and appear on the attached transcript:  
Course Dept. and Number Term Taken

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

Signature of Graduate Group Chair Date

Signature of Director of BGS Date

\*\*\*\*\* **Transfer of Credit Guidelines:** \*\*\*\*\*

**7 Doctor of Philosophy**

Up to 8 course units may be transferred from an outside graduate institution toward the Ph.D. degree at Penn. As many as 4 course units may be transferred from CGS. Upon the recommendation of the graduate group, credit can be granted for 8 course units from an outside institution as well as 4 course units from CGS as long as the student fulfills the graduate group's course requirements.

**8 Master of Science**

As least 8 course units of the total course units required for the M.S. degree must be completed in a graduate program at Penn or the cooperative schools. Of these, up to 4 course units may be transferred from CGS. If a graduate group requires more than 8 course units for a M.S. degree, graduate work completed at other universities may be accepted for the balance of the course requirements.

8.1 Please note: One course unit at Penn is equivalent to three semester credits elsewhere.



**Graduate Group in Epidemiology & Biostatistics  
Doctoral Program in Epidemiology  
Qualifications Examination Approval Form**

Student Name: \_\_\_\_\_

Date of Examination: \_\_\_\_\_

This is to certify that the above named student has successfully passed the Qualifications Examination for the PhD in Epidemiology.

\_\_\_\_\_  
Signature, Chair of Qualifications  
Examination Committee

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

***Please submit this form to the Office of Graduate Training in Epidemiology, 918 Blockley Hall.***



**Graduate Group in Epidemiology & Biostatistics  
Doctoral Program in Epidemiology  
Teaching Assistance Plan**

**Student:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Course title:** \_\_\_\_\_

**Course Director:** \_\_\_\_\_

**Department:** \_\_\_\_\_

**Brief description of course**

**Description of teaching assistance duties to be performed by student**

**Approvals:**

\_\_\_\_\_  
Course Director Name

\_\_\_\_\_  
Course Director signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
John H. Holmes, PhD  
Director, Doctoral Program in Epidemiology

\_\_\_\_\_  
Date

**Graduate Group in Epidemiology & Biostatistics  
Doctoral Program in Epidemiology  
Consulting Project Prospectus Form**

**Student:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Project title:** \_\_\_\_\_

**Project PI:** \_\_\_\_\_ **PI title:** \_\_\_\_\_

**Department:** \_\_\_\_\_

**Brief description of project**

**Description of consulting duties to be performed by student**

**Approvals:**

\_\_\_\_\_  
Project PI Name

\_\_\_\_\_  
Project PI signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
John Holmes, PhD  
Director, Doctoral Program in Epidemiology

\_\_\_\_\_  
Date

**Graduate Group in Epidemiology & Biostatistics**  
**Doctoral Program in Epidemiology**  
**Dissertation Committee Approval Form**

The following people have agreed to serve on \_\_\_\_\_ 's PhD Committee.

Committee Chair:

Title:

Department:

---

Committee Co-Chair (if applicable):

Title:

Department:

---

Committee Member 3:

Title:

Department:

---

Committee Member 4:

Title:

Department:

---

Committee Member 5:

Title:

Department:

---

Committee Member 6:

Title:

Department:

---

Committee Member 7:

Title:

Department:

---

Committee Member 8:

Title:

Department:

Approvals:

\_\_\_\_\_  
John Holmes, PhD  
Director, Doctoral Program in Epidemiology

\_\_\_\_\_  
Date

\_\_\_\_\_  
Daniel Heitjan, PhD  
Chair, Graduate Group in Epidemiology & Biostatistics

\_\_\_\_\_  
Date

**Graduate Group in Epidemiology & Biostatistics  
Doctoral Program in Epidemiology**

**Dissertation Committee Meeting Report**

Name of student:

Title of dissertation:

Semester/year started dissertation work:

Date of meeting:

Committee Members:

1. \_\_\_\_\_ (Advisor)

2. \_\_\_\_\_ (Committee chair)

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

Progress (check one):

\_\_\_\_\_ satisfactory \_\_\_\_\_ some concerns \_\_\_\_\_ unsatisfactory

Recommendations:

Lab Notebook materials reviewed:

Status of lab notebook: \_\_\_\_\_ satisfactory \_\_\_\_\_ unsatisfactory

Comments on Lab Notebook:

Anticipated date of next meeting:

Instructions for Student: Please give this form to the Dissertation Committee Chair prior to the meeting.

Instructions for Committee Chair: Please return the completed form to the Office of Graduate Training in Epidemiology, 918 Blockley *as soon as possible after the meeting.*

**Graduate Group in Epidemiology & Biostatistics  
Doctoral Program in Epidemiology**

**Candidacy Examination Approval Form**

Student Name: \_\_\_\_\_

Date of Examination: \_\_\_\_\_

This is to certify that the above named student has successfully passed the Candidacy Examination for the PhD in Epidemiology.

\_\_\_\_\_  
Signature, Chair of Committee

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature, Committee Member

\_\_\_\_\_  
Print Name

***Please submit this form to the Office of Graduate Training in Epidemiology, 918 Blockley Hall.***

*University of Pennsylvania*  
*Office of Graduate Education*

**ACCEPTANCE OF DISSERTATION**

**Instructions for Coordinator:** The original of this form, signed by the Graduate Group Chair and all members of the Dissertation Committee, must be submitted to the BGS Office, BRB II/III/6064.

Student's Name: \_\_\_\_\_ Penn ID: \_\_\_\_\_

This is to certify that the doctoral dissertation of the student named above was accepted on

\_\_\_\_\_  
(Month, day and year)

The title of the dissertation is: \_\_\_\_\_

\_\_\_\_\_

The dissertation committee and vote:

Signature, <b>Chair of Committee</b>	Print Name	YES or NO
--------------------------------------	------------	-----------

Signature, <b>Dissertation Supervisor</b> (if different from Chair)	Print Name	YES or NO
--	------------	-----------

Signature, Committee Member	Print Name	YES or NO
-----------------------------	------------	-----------

Signature, Committee Member	Print Name	YES or NO
-----------------------------	------------	-----------

Signature, Committee Member	Print Name	YES or NO
-----------------------------	------------	-----------

Signature, Committee Member	Print Name	YES or NO
-----------------------------	------------	-----------

Signature, Committee Member	Print Name	YES or NO
-----------------------------	------------	-----------

Signature, Graduate Group Chair	Print Name	Date
---------------------------------	------------	------



*University of Pennsylvania*  
*Biomedical Graduate Studies*

**POST-GRADUATE INFORMATION**

Please submit this form to the **BGS Office, BRB II/III/6064.**

Student's Name: \_\_\_\_\_

**Post-Graduate Appointment:**                      **Effective Date:** \_\_\_\_\_

Job Title: \_\_\_\_\_

Mentor's Name: \_\_\_\_\_  
(if applicable)

Institution: \_\_\_\_\_

Department: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Work Phone No.: \_\_\_\_\_

Email Address: \_\_\_\_\_

**Forwarding Home Address:**                      **Effective Date:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Home Phone No.: \_\_\_\_\_

Cell Phone No.: \_\_\_\_\_

Personal Email Address: \_\_\_\_\_