

# **Epidemiology**

PhD Degree Program

Division of Epidemiology and Community Health

## 2007-2008 Student Guidebook



Welcome to the University of Minnesota School of Public Health!

All students are responsible for knowing the rules and policies that govern their academic program. To this end, we are providing you with this guidebook which covers your specific academic program requirements. Please keep it with you and refer to it often.

In addition, you are responsible for knowing University of Minnesota and School of Public Health policies and procedures that pertain to all students. Links to these policies/procedures can be found by clicking on the "Current Students" link at [www.sph.umn.edu](http://www.sph.umn.edu) <<http://www.sph.umn.edu/>> .

*The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.*

This publication can be made available in alternative formats for people with disabilities. Direct requests to Students Services Center, School of Public Health, MMC 819 Mayo, 420 Delaware St SE, Minneapolis, MN 55455; 612-626-3500 or 800-774-8636; [sph-ssc@umn.edu](mailto:sph-ssc@umn.edu).

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## School of Public Health Directory

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**Note:** All phone numbers are in area code “612”.

**Dean’s Office** ..... **624-6669**  
John Finnegan Jr., PhD, Dean ..... 625-1179 ..... finne001@umn.edu  
Judith Garrard, PhD, Sr. Associate Dean for Academic Affairs and Research ..... 625-8772 ..... jgarrard@umn.edu  
William Riley, PhD, Associate Dean for Student Affairs ..... 625-6750 ..... riley001@umn.edu  
Debra Olson, MPH, RN, Associate Dean for Public Health Practice Education. .... 625-0476 ..... olson002@umn.edu

**Student Affairs Office** ..... **626-3500** ..... **sph-ssc@umn.edu**  
Jen Burns-Arntzen, Principal Office and Administrative Specialist ..... 626-8908 ..... arntz007@umn.edu  
Carol Francis, Dir of Applications and Asst Director of Student & Acad Services ... 624-6952 ..... franc004@umn.edu  
Carol Kampa, Student Support Services Assistant ..... 624-2494 ..... kampa003@umn.edu  
Barbara Laporte, Assistant Director and Counselor, Career Services ..... 626-5443 ..... lapor006@umn.edu  
Melvin Monette, Director of Student Recruitment ..... 624-0601 ..... pasiu001@umn.edu  
Guy Piotrowski, Student Support Services Associate ..... 624-1991 ..... piotr005@umn.edu  
Sarah Springer, Principal Office and Administrative Specialist ..... 624-7660 ..... spri0078@umn.edu

### **Division of Epidemiology and Community Health**

Division Head – Bernard Harlow, PhD, MPH ..... 626-6527 ..... harlow@epi.umn.edu  
Director of Graduate Studies, Clinical Research – Russell Luepker, MD ..... 624-6362 ..... luepker@epi.umn.edu  
Director of Graduate Studies, Epidemiology – Pamela Schreiner, PhD ..... 626-9079 ..... schreiner@epi.umn.edu  
Major Chair, Community Health Education – Deborah Hennrikus, PhD ..... 626-8646 ... hennrikus@epi.umn.edu  
Major Chair, Epidemiology – James Pankow, PhD, MPH ..... 624-2883 ..... pankow@epi.umn.edu  
Major Chair, Maternal & Child Health – Wendy Hellerstedt, PhD, MPH ..... 626-2077 .. hellerstedt@epi.umn.edu  
Major Chair, Public Health Nutrition – Jamie Stang, PhD ..... 626-0315 ..... stang@epi.umn.edu

### **Major Coordinators (general)** ..... **626-8802gradstudies@epi.umn.edu**

Andrea Kish – Senior Coordinator (Clinical Research and Epi PhD) ..... 626-9989 ..... kish@epi.umn.edu  
Shelley Cooksey – Major Coordinator (Epi MPH and PubH Nutrition) ..... 626-8803 ..... cooksey@epi.umn.edu  
Kathryn Schwartz – Major Coordinator (CHE and MCH) ..... 626-2247 ..... schwartz@epi.umn.edu

# 1. DIVISION OF EPIDEMIOLOGY AND COMMUNITY HEALTH

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## 1.1 Welcome

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Epidemiology and Community Health is one of four Divisions that make up the School of Public Health at the University of Minnesota. The Division of Epidemiology and Community Health is home to six majors in the School of Public Health:

- Clinical Research MS
- Community Health Education MPH
- Epidemiology MPH
- Epidemiology PhD
- Maternal and Child Health MPH
- Public Health Nutrition MPH

The Division Head is Bernard Harlow, PhD.

The Major Coordinators are here to assist students in the Division. Students are invited to contact any one of them with questions or concerns.

**Shelley Cooksey**

**Andrea Kish**

**Kathryn Schwartz**

E-Mail.....gradstudies@epi.umn.edu

Phone.....612-626-8802

Fax .....612-624-0315

Campus Mail ....WBOB, #300, Delivery Code 7525

US Mail ..... 1300 South Second Street, Suite 300, Minneapolis, MN 55454

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## 1.2 The West Bank Office Building (WBOB)

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The offices are located in the West Bank Office Building (WBOB) at 1300 South 2<sup>nd</sup> Street in Minneapolis. Students can find directions to WBOB at <http://www.epi.umn.edu/about/directions.shtm>.

### Epi Shuttle

Students can travel back and forth between the East Bank campus and WBOB by using the Epi Shuttle. The shuttle route starts on the hour and half- hour at WBOB and travels to the main entrance of the Mayo Building on the East Bank and leaves for the return trip to WBOB at quarter past, and quarter to, the hour. The schedule will be emailed to students, staff and faculty. The Summer schedule is usually a bit shorter and less frequent.

### Parking Options for WBOB

- Park on the East Bank and use the EpiCH shuttle.
- Affordable ramp parking (\$4-\$5 day) is available across from Guthrie Theatre located just blocks from WBOB.
- Meter parking is available on South 2nd St for \$.50 - \$.75 per hour with a limit of 8 hours. These meters are enforced from 8:00 a.m. until 10:00 p.m.
- Parking is also available in the public parking lot attached to WBOB at \$2.50 per hour or portion thereof. This lot is also available after hours, on weekends, and holidays free of charge. The booth is staffed between the hours of 7:00 a.m. – 7:00 p.m. Students who will be in WBOB after dark are encouraged to move their car to this lot for security purposes.

### Student Mailboxes

Students who have RA and/or TA positions will have mailboxes located near the receptionist on the third floor. Students who do not have RA or TA positions will be able to receive mail in the folders located next to Shelley Cooksey's cubicle (398E). Students who work on campus and have trouble getting to WBOB should email gradstudies@epi.umn.edu for alternative ways to get their mail. Student mail can be sent to a campus mail address, but cannot be sent via regular U.S. Mail. Most information is distributed via e-mail using your U of M student e-mail account.

## Forms

We have PDF versions of forms at [www.epi.umn.edu/academic/handbook.shtm](http://www.epi.umn.edu/academic/handbook.shtm). All forms needed for student degree programs are also available on the wall rack outside of cubicle 398B on the third floor of WBOB. Microsoft Word documents of all the forms are also available upon request. Contact the Major Coordinators at [gradstudies@epi.umn.edu](mailto:gradstudies@epi.umn.edu) to obtain the Word documents via e-mail.

## Evening and Weekend Access

Division graduate students who do not have a paid appointment in the Division can have access to the student computer lab and student mailboxes after work hours and on weekends. Students obtain access by filling out a form to have their UCard programmed for access to the third and fourth floors of WBOB. Students are given the option to sign up for building access at Orientation. After orientation, contact a Major Coordinator for information.

**NOTE:** There is approximately a one-week turnaround time to get a student's UCard programmed, so please plan accordingly.

## Computer Lab

The Division computer lab in WBOB includes four PC's available for student use. The computer lab is located in cubicle 397F, at the north end of WBOB. The general policy for use of these computers is that they are for Division graduate students for work pertaining to their degree program. All four of the PC's have SAS. Printers are available.

## Copier and Fax Access

The Division does not allow copy machines or fax machines to be used for personal use. Personal copies can be made for a cost at various locations throughout campus. Unfortunately, there is not a copier for use in WBOB.

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# 1.3 Division Communication with Students

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The Division communicates information to students in the following ways:

- **E-mail:** Students should read their e-mail daily or at a minimum twice a week. We cannot stress enough how important e-mail has become. Communication between the Major Coordinators and students regarding changes in programmatic requirements or announcements, as well as advisor, faculty, and student-to-student contacts is usually through e-mail. Further, the University of Minnesota has expanded technological capacity to allow free lifetime access to University of Minnesota e-mail. This allows you to use your U of MN e-mail address for personal or professional purposes even after you graduate. To keep the account active, you must access it at least every six months. If you let it go dormant, you can reactivate it through the Alumni Association for a fee. Service includes full access to Portfolio <https://portfolio.umn.edu/portfolio/index.jsp>.
- **My U Portal:** This is a form of communication and information exchange within the University. Students are expected to check their portal regularly. Access to the portal is available at <https://www.myu.umn.edu/>.
- **Weekly SPHere:** A weekly electronic publication for students. This publication contains important deadline reminders as well as updates on students and faculty research and activities.
- **Division Newsletter:** The Division administrative staff produces a more extensive monthly newsletter titled EpiCHNews. EpiCHNews is available on the Epi web site at <http://www.epi.umn.edu/about/epichnews-2/index.shtm>.
- **Student Mailbox:** All students have access to a mail folder where print materials are distributed; see *section 1.2* for mailbox locations in WBOB.
- **Bulletin Boards:** There is a student bulletin board to the right of the reception desk on the third floor of WBOB.
- **School/University News:** The School of Public Health distributes a monthly electronic newsletter. The University of Minnesota student newspaper is called The Daily and is available campus-wide.

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# 1.4 Seminars

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The Division of Epidemiology and Community Health sponsors weekly scientific seminars between September and June to exchange ideas and research findings pertinent to the field. Because the Division has a large faculty, staff and student body, the seminar provides a forum for exchange of information among people who may not otherwise meet or work together. All faculty and students are strongly encouraged to attend regularly.

Division faculty members and other scientific staff are asked to present at least one seminar every two years. Each year, the seminar brings in about 10 scientists from outside the Division.

Weekly notices are posted in the Division's third floor reception area as well as sent out electronically. Most seminars are held 10:00-11:00 a.m., Fridays, in Room 364 of WBOB. Seminars by visiting scientists may be at other times.

Students having questions or comments about the seminar series should contact David Jacobs, Seminar Director, at 612-624-4196. Students can also check the EpiCH Web site for seminar information by going to <http://www.epi.umn.edu/about/index.asp>.

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## 1.5 Academic Credit for Independent or Directed Coursework

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Independent and directed coursework can be taken to fulfill elective credits and can take many forms depending upon the student's interests and needs. All independent/directed coursework needs the support of a faculty member who agrees to serve as an "instructor/advisor" for the independent or directed course. The expectation is that the student has something specific to propose prior to approaching a faculty member.

To fulfill the course requirements, the student and instructor should agree on the type, scope, and length of a final academic "product" whether it is a paper(s), an annotated bibliography, curriculum, training modules, media piece(s), etc. It is expected that the faculty member and student will meet regularly during the term.

It is very unusual for students to take more than four credits total of independent or directed coursework (over and above any credits earned for the field experience or master's project/thesis requirement). Students are expected to fulfill the majority of their elective credits through regularly-scheduled courses.

### Examples of Independent and Directed Coursework

1. Students interested in a theory, an evaluation method, or a skill not covered in depth in a specific course could arrange for an independent study course with a faculty member knowledgeable in that area and/or willing to work with the student.
2. The student wants to attend a conference, workshop, or mini-course, but there is no academic credit involved. The student must find a faculty member willing to work with the student to develop academic work over and above the actual event to fulfill some elective credits. This must be arranged ahead of time, not after the event has occurred.

### Additional comments

Arranging an independent/directed course depends upon the student putting together an academically rigorous proposal and finding a faculty member to serve as an instructor. The faculty instructor does not have to be the student's academic advisor or master's project advisor. The instructor must be a member of the major associated with the course number; see below.

The student should also receive prior approval from their academic advisor to count the independent/directed work as an elective course.

### Choosing Course Numbers

Independent study, directed study, and readings courses are available within the Division of Epidemiology and Community Health. The student and instructor should agree on the course number/title that most closely matches the work being proposed. Course options are:

- PubH 7091 Independent Study: Community Health Education (only CHE faculty can serve as instructor)
- PubH 7391 Independent Study: Epidemiology (only Epi MPH or Epi graduate faculty can serve as instructor)
- PubH 7392 Readings in Epidemiology (only Epi MPH or Epi graduate faculty can serve as instructor)
- PubH 7691 Independent Study: Maternal and Child Health (only MCH faculty can serve as instructor)
- PubH 7991 Independent Study: Public Health Nutrition (only PubH Nutr faculty can serve as instructor)
- PubH 8392 Readings in Clinical Research (only Clinical Res. graduate faculty can serve as instructor)
- PubH 8393 Directed Study: Clinical Research (only Clinical Res. graduate faculty can serve as instructor)

**NOTE:** Other majors in the School of Public Health may have independent/directed coursework opportunities in their areas. Check with the Divisions of Environmental Health Sciences, Health Policy Management, and/or Biostatistics. You could also do an independent/directed course with another graduate-level program. Remember that your academic advisor has to approve it as an elective.

## Procedures

1. Student meets with the faculty member to discuss the requirements for the independent/directed course.
2. Student fills out an *Independent/Directed Study Contract* form outlining the requirements for the course and has the form signed by their academic advisor and Independent/Directed Study instructor. This information is vital to receive proper credit for this course (i.e., a grade). The instructor needs to agree to work with the student and both need to agree on the requirements. The form can be downloaded from the web at [www.epi.umn.edu/academic/handbook.shtm](http://www.epi.umn.edu/academic/handbook.shtm).
3. Student gives the completed/signed *Independent/Directed Study Contract* to a Major Coordinator. She then enters in electronic permission enabling students to register for the course.
4. At the end of the semester, the instructor assigns a final grade. The grade will then be entered on the official transcript. It is the student's responsibility to make sure that all requirements are completed so a grade can be submitted.

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## 1.6 Division Resources and Policies

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### Incomplete Grades

Effective Summer Session 2005, MPH and MS students: All required courses (with the exception of field experience, internship, or master's project/thesis credits) must be completed during the term of registration. Students must complete all course requirements by the end of the registered term so that faculty can submit a grade by the appropriate due date. A grade of incomplete "I" shall be assigned at the discretion of the instructor when, due to extraordinary circumstances, the student was prevented from completing the work of the course on time. The assignment of an incomplete grade requires a written contract between the instructor and student specifying a deadline by which the student will complete the course requirements. The student must contact a Major Coordinator to receive the required contract. In no event may the written agreement allow a period of longer than one year to complete the course requirements. If the instructor submits an "I" without a written contract a hold will be placed on the student record, barring the student from registering. If the requirements of the contract are not met by the contract deadline, a hold will be placed on the student's record unless a new deadline has been renegotiated. Field experience, internship, and master's projects that are not completed by the end of the term of graduation will receive a grade of "K" indicating "work in progress."

PhD Students only: The symbol "I" may be assigned by an instructor to indicate "incomplete," in accordance with the provisions announced in class at the beginning of the semester, when in the instructor's opinion there is a reasonable expectation that the student can successfully complete the work of the course. An "I" remains on the transcript until the instructor replaces it with a final A-F or S-N grade. Course instructors are encouraged to establish a time limit for the removal of incomplete grades.

### Six Credit Minimum Exemption

The University of Minnesota has a policy that students must register for a minimum of six credits in order to hold a graduate assistant position. The policy states that "exemption from [this requirement] is determined on a semester by semester basis" and that "eligibility criteria are to be determined by each graduate program...these criteria will be well publicized and administered equitably among all Graduate Assistants in the program."

The Division Training Committee (DTC) approved the following policy: "Students will almost always be granted a one semester exemption so they can finish their work toward the end of their degree program, but must petition the DTC for more than one semester's exemption and this would be given under only extraordinary, extenuating circumstances. Extending coursework in order to remain a graduate assistant will not be sufficient reason." Students who wish to request an exemption should contact Andrea Kish. It may take several weeks for this request to be reviewed so please submit your request at least one month prior to the start of the term.

Graduate Assistants who wish to be exempt from FICA withholding must register for at least three credits per term (one credit for PhD candidates working on a dissertation).

### Support for Student Travel

The current Division policy is as follows:

1. The Division will provide up to \$500 per student in a 12 month period [a maximum of \$2,000 available for all students during the academic year] for travel to a scientific meeting under the following conditions:
  - The student is currently enrolled in the Epi PhD/MS/MPH, CHE MPH, MCH MPH, PubH Nutr MPH, or Clinical Research MS program and must be the presenter of the paper or poster.
  - The meeting is at a national or international level and has scientific relevance to the student's field of study.
  - There are no other sources of support specifically allocated for such travel. For example, whenever a training grant provides funds for travel for its fellows, those fellows will not be eligible for travel support under this policy. However, students whose work was supported by a research grant with no funds specifically for student travel will be eligible for travel support under this policy. Principal Investigators are encouraged to provide support for student travel from their grants since their grants benefit as well as the students.
2. All requests for travel support must be in writing. The request should be addressed to the Chair of the Division Training Committee and given to a Major Coordinator, who will process the request. The request should include:
  - The dates, location and purpose of the meeting and describe the student's role.
  - A copy of the abstract and letter of acceptance must be attached to the request. In addition, a letter from a member of the Division's faculty indicating that he/she is familiar with the student's work, judges it to be of good quality, and supports the student's request.
  - The request must be made in advance of the scientific meeting. Since the DTC only meets once per month, it is suggested that complete requests be submitted at least six weeks prior to the scientific meeting.
3. Allocations under this policy will of course be subject to the availability of funds for this purpose.

### **Payment for TA English Program**

If a nonnative English-speaking Division student is required by their degree program to fulfill a teaching assistantship position (i.e. Epidemiology PhD students), the Division will pay one-half the cost of instruction the first time the student takes the course (the University's Office of Academic Affairs pays the other half). Students not passing the exam must pay the costs of any additional instruction.

### **SAS Access**

Students can purchase the SAS program for \$120 if it is necessary for them to complete research. Additional information on ordering the software is available at [www1.umn.edu/adcs/site/sasWinMac.html](http://www1.umn.edu/adcs/site/sasWinMac.html) . Please note that all 4 of the computers in the student computer lab (397F WBOB) have SAS.

One computer (the one furthest to the East) has the SAS Learning Edition 4.1 (an easy to use personal learning tool). The book, *The Little SAS Book for Enterprise Guide 4.1* is a guide to a point-and-click interface that is part of the Learning Edition. Using Enterprise, you generate SAS code without writing it. It is available for checkout from Laurie Zurbey, in cube 398C.

For additional help with SAS, you can schedule an appointment with Judy Baxter, an experienced SAS programmer. Judy is available a few days a month and sends out a monthly schedule of the exact days. Please email Ann Lavalley at [lavalley@epi.umn.edu](mailto:lavalley@epi.umn.edu) to set up an appointment.

### **Data Collection and Support Services (DCSS)**

DCSS will work with you to help identify your research study needs and help you meet those needs. DCSS will assist students with designing questionnaires, tracking study participants, conduct surveys, editing and coding data, data entry, and many other services. Please contact Susan Rose (room 82 WBOB) at 612-626-8824 or [rose\\_s@epi.umn.edu](mailto:rose_s@epi.umn.edu) for more information.

### **J.B. Hawley Student Research Award**

The Division has established the J.B. Hawley Student Research Award, a small grant mechanism to support research projects. This is a wonderful opportunity for students and post-doctoral fellows to obtain funds for their research, gain experience in grant proposal writing, and receive faculty feedback on their ideas. During the academic year, we will have two separate award categories. The standard award is open to all students and post-doctoral fellows; we anticipate two rounds of requests for proposals (one per semester). The doctoral award is only open to doctoral students in Epidemiology; we anticipate one request for proposals in the fall semester. The chair of the Research Awards Committee will distribute an e-mail announcement with further details.



## **STANDARD AWARD**

### **Who May Apply?**

Students currently enrolled in degree programs in Epidemiology, Community Health Education, Maternal and Child Health, Clinical Research, or Public Health Nutrition or post-doctoral fellows in Epidemiology. Proposed projects do not have to be thesis or masters projects, and may be for any research that involves the applicant (e.g., evaluation of a program for a field experience). Those who have received previous funding from a Hawley Award will not be eligible for further support until they have submitted the required one-page report for their prior award (see below).

### **How Much?**

\$3,500 maximum, including fringe benefits when applicable.

### **How Can It Be Used?**

The award may be used to support research activities including supplies and equipment. It cannot be used for stipends or salary support for the applicant.

Please note that before making any expenditure with the award (i.e., ordering, purchasing, hiring, or contracting for services) the applicant must meet with accounting personnel in the Division to ensure that procedures are followed.

### **How Long?**

Normally projects are funded for one year.

### **What is the Format for the Proposal?**

1. Cover Letter  
Please indicate in the letter whether the project will help support a master's project, master's thesis, PhD thesis, or field experience.
2. Face Page (1 page)
  - a. Title
  - b. Investigator information, including name, address, telephone, and e-mail address
  - c. Collaborating investigators (faculty, staff, students), if any
3. Research Proposal (4 pages maximum; font: 12-point Times or larger)
  - a. Background and Significance (1 page maximum):  
Describe the background and justification for the study and state the research questions/hypotheses.
  - b. Research Methods (2 pages maximum):  
Describe the study design and detailed methods. Be sure to include information on each of the following issues (and others, as appropriate):
    - Study population
    - Sample selection and recruitment
    - Measurements
    - Data analysis plan (required for both quantitative and qualitative research)
    - Timeline
    - Sample size (justified by formal statistical calculations or other means)
  - c. Human Subjects (no page limit):  
All proposals must address protection of human subjects and have the project approved by the University of Minnesota's Institutional Review Board (IRB) prior to receiving funds. However, a project will be reviewed by the Research Awards Committee prior to receiving final IRB approval.
4. Detailed Budget (1 page maximum):  
The proposed budget should include precise amounts requested in various categories (e.g., postage, supplies, printing, personnel, etc.). Provide a brief justification for the amount requested in each category and state why these funds are needed to conduct the proposed research. The budget should clearly itemize and justify expenditures. If the request is part of a larger project, the proportion to be supported by this award and the rationale and need for this funding mechanism, should be specified clearly.  
  
The following items are NOT allowed: computer purchase, publication costs (e.g., page charges, reprints), and presentation costs (e.g., travel to a conference, conference fee).
5. Letter of Support from Faculty Advisor (1 page):  
A primary or adjunct faculty member in the Division of Epidemiology and Community Health must provide a brief letter to accompany the proposal, specifically endorsing the applicant's request. Applicants are strongly

encouraged to discuss their proposals with a faculty advisor, who should review the proposal before it is submitted.

6. Appendices, if needed (no page limit)

### **Submission**

Submit your proposal to the Chair of the Research Awards Committee (TBA), Division of Epidemiology and Community Health, Suite 300, 1300 South Second Street, Minneapolis, MN 55454-1015

### **Review Process**

All applications will be reviewed by the Division of Epidemiology and Community Health Research Awards Committee, which includes faculty members representing the major fields. Each proposal will be evaluated according to its scientific and technical merits and public health implications.

If you have questions regarding preparation of a proposal, please contact the Chair of the Research Awards Committee Chair. Information regarding the status of human subjects (IRB) applications must be provided to the Committee. Award funds will not be released until Division of Epidemiology and Community Health Accounts Administration has received notification of Human Subjects Committee approval.

### **Final Report**

A one-page report to the Research Awards Committee on progress and outcome is due on the one-year anniversary date of the award.

## **DOCTORAL AWARD**

### **Who May Apply?**

Students currently enrolled in the doctoral program in Epidemiology. Proposed projects do not have to be thesis projects, and may be for any research that involves the applicant. Those who have received previous funding from a Hawley award will not be eligible for further support until they have submitted the required one-page report for their prior award (see below).

### **How Much?**

\$7,000 maximum, including fringe benefits when applicable. There will be one award available in 2007-08.

### **How Can It Be Used?**

The award may be used to support research activities including supplies and equipment. It cannot be used for stipends or salary support for the applicant.

Please note that before making any expenditure with the award (i.e., ordering, purchasing, hiring, or contracting for services) the applicant must meet with accounting personnel in the Division to ensure that procedures are followed.

### **How Long?**

Normally projects are funded for one year.

### **What is the Format for the Proposal?**

The Chair of the Research Awards Committee will distribute an e-mail announcement with detailed instructions.

### **Submission**

Submit your proposal to the Chair of the Research Awards Committee (TBA), Division of Epidemiology and Community Health, Suite 300, 1300 South Second Street, Minneapolis, MN 55454-1015

### **Review Process**

All applications will be reviewed by the Division of Epidemiology and Community Health Research Awards Committee, which includes members of the graduate faculty. Each proposal will be evaluated according to its scientific and technical merits and public health implications.

If you have questions regarding preparation of a proposal, please contact the chair of the Research Awards Committee Chair. Information regarding the status of human subjects (IRB) applications must be provided to the Committee. Award funds will not be released until Division of Epidemiology and Community Health Accounts Administration has received notification of Human Subjects Committee approval.

### **Final Report**

A one-page report to the Research Awards Committee on progress and outcome is due on the one-year anniversary date of the award.

## **Other Division Awards and Scholarships**

The Division of Epidemiology and Community Health also has several other awards that are granted each year:

- The **Colleen Berney Scholarship** is given to an incoming first-year student in the Maternal and Child Health major who has demonstrated a strong academic background and an interest in child welfare. The scholarship consists of a \$2,000 award.
- The **Henry Blackburn Award** recognizes the writing and presentation of scholarly work among students in the Master's programs within the Division. The recipient of the award will receive a certificate and a check for \$1,000.
- The **Lester Breslow Award** is awarded to a public health student(s) pursuing a graduate degree in the Division of Epidemiology and Community Health who has demonstrated academic excellence in the area of health promotion and disease prevention. The recipient of the award will receive a plaque and a check for \$1,000.
- The **Betty J. Hallstrom Award** is awarded to a graduating nurse in the Maternal and Child Health major who had demonstrated research competence by completing a project in an MCH area and has displayed innovative and creative planning for MCH care. The recipient of the award will receive a certificate and check.
- The **Marguerite J. Queneau Research Assistantship** (25% appointment for one year) is awarded to incoming public health nutrition students who portray the characteristics of Marguerite Queneau, a nationally and internationally accomplished nutritionist.
- The **Ruth Stief Award** recognizes a current Public Health Nutrition student for her/his leadership qualities, academic excellence and potential for an exemplary career in public health. The recipient of the award will receive a certificate and a \$500 check.
- The **Ruth Stief Research Assistantship** (25% appointment for one year) is awarded to incoming public health nutrition students.
- The **Henry Taylor Scholarship** is awarded to help support the expenses of students who are attending the American Heart Association Council on Epidemiology. Students presenting papers at this conference are encouraged to apply for this financial support. One student will be selected to receive a \$400 stipend to attend this meeting.
- The **Robert ten Bensel Scholarship** is awarded to a full-time incoming Maternal and Child Health student that has demonstrated leadership, human equity, and social justice in MCH.

## Research Grants

An up-to-date listing of current and pending grants is available upon request, or at <http://www.epi.umn.edu/research/index.shtm> .

## Division of Epidemiology and Community Health Student Support Policies

### Doctoral Student Support Policy, for those matriculating Fall 2003 or later

1. Students can be accepted to the program with varying levels of support including no guaranteed support, guaranteed support for the initial year, or support for multiple years.
2. Support levels will be set at the level of an NIH Pre-Doctoral Fellow or, if not an NIH Fellow, not more than 50% RA/TA position. This means that those who accept a pre-doctoral fellowship may not also accept an RA or TA position in the Division. Scholarship or block grant awards are not included.
3. Students on fellowships perform their TA requirement as part of the fellowship, with terms to be negotiated with the training director.
4. Requests may be made to the DGS for levels of RA/TA support up to 75% for students who have passed their preliminary examinations and are working on their thesis. These requests are required to show that such additional work does not delay the thesis defense and graduation.
5. Physicians who are licensed to practice medicine in the United States will have an RA/TA stipend set at the doctoral level. Those who are not licensed to practice will be paid at the Masters level RA/TA position stipend.
6. There is no limit on the number of years of support; however, adequate progress toward degree completion is required for continued support.
7. Students may increase support to 75% during the Summer term.

Approved 7/1/03, revised 05/07

**Doctoral students matriculating prior to Fall 2003 should see a Major Coordinator to discuss their student support policy.**

### **Master's Student Support Policy**

No one may hold a graduate assistantship of more than 50% (75% in the Summer) in the Division of Epidemiology and Community Health. Adopted 12/17/03, and applies to students matriculating Fall 2004 and after. This policy only applies to positions held within the Division. For example, a student with a 50% research assistantship in the Division would also be able to hold a 25% position in Medical School because that is not in the Division.

### **Policy for Graduate Assistant Pay Scale for Post-Baccalaureate Professional Students**

Post-baccalaureate professional students in doctoral-level programs (e.g. dental, medical, law, veterinary students) who have completed two years of their professional studies will be paid at the rate of those who have completed a master's degree. Those who have not completed the first two years will be paid at the rate of those whose highest degree is a bachelor's degree. This policy is effective beginning Spring semester, 2004. Adopted 12/17/03.

### **Division of Epidemiology Websites**

EpiCH website.....	<a href="http://www.epi.umn.edu">www.epi.umn.edu</a>
EpiCH Student Handbook and Forms.....	<a href="http://www.epi.umn.edu/academic/handbook.shtm">www.epi.umn.edu/academic/handbook.shtm</a>
EpiCH course grid.....	<a href="http://www.epi.umn.edu/academic/coursgrd.shtm">www.epi.umn.edu/academic/coursgrd.shtm</a>
Course syllabi.....	<a href="http://www.epi.umn.edu/academic/syllabi.shtm">www.epi.umn.edu/academic/syllabi.shtm</a>
Job Tip Sheet.....	<a href="http://www.epi.umn.edu/academic/pdf/jobtipsheet.pdf">http://www.epi.umn.edu/academic/pdf/jobtipsheet.pdf</a>
Master's Project List.....	<a href="http://www.epi.umn.edu/academic/mstrproj.shtm">www.epi.umn.edu/academic/mstrproj.shtm</a>
EpiCH faculty information.....	<a href="http://www.epi.umn.edu/people/index.asp">www.epi.umn.edu/people/index.asp</a>
EpiCH seminar.....	<a href="http://www.epi.umn.edu">http://www.epi.umn.edu</a>
EpiCH telephone directory.....	<a href="http://www.epi.umn.edu/people/searchphone.shtm">www.epi.umn.edu/people/searchphone.shtm</a>
Grant writing information.....	<a href="http://www.epi.umn.edu/admin/grants.shtm">www.epi.umn.edu/admin/grants.shtm</a>

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## **1.7 Division Advising Information**

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### **Guidelines for Faculty/Student Interactions**

Faculty members often develop close working relationships with students, especially advisees. Often a relationship is formed that provides benefits to both the faculty member and the student. Faculty should be cognizant of the power differential in these types of relationships and set appropriate boundaries. Although faculty members may not intend that a request of a student be an obligation, they should be aware that such requests might place a student in a difficult position. Some students are intimidated by faculty members and may not feel free to decline such requests. Since faculty/student interactions often are situations that are ambiguous, included below are examples to help you think through a variety of situations that you may encounter:

- **Asking a student to drive you somewhere, including the airport, home, or main campus.** Such a request does not fall under a student's duties. A situation when this may be acceptable is when the student has the same destination.
- **Asking student to work extra hours or late hours.** Students should be expected to work the hours for which they are paid. Students may volunteer to work extra hours to gain more experience (e.g. grant writing), gain authorship on a paper or help meet a deadline – but you should not expect a student to work these extra hours.
- **Asking an advisee to housesit, take care of your children or pets, or help you move.** While some students may not mind house sitting, taking care of children or pets, or helping someone move, others may only agree to do these jobs because they feel obligated or worry that saying no will somehow affect their relationships with faculty members. To avoid problematic situations, a faculty member may post a flyer requesting a sitter or mover for pay without the faculty member's name attached to the request – ensuring that respondents really want the job.

Faculty members who are uncertain about the appropriateness of requests they have for students should consult with the DTC Chair. Students should talk with their Major Chair, DGS, or Major Coordinator if they have concerns about the appropriateness of requests from faculty members.

The University of Minnesota's Board of Regents policy on Nepotism and Consensual Relationships (including student and faculty relationships) can be found at [www1.umn.edu/regents/policies/humanresources/Nepotism&Personal.html](http://www1.umn.edu/regents/policies/humanresources/Nepotism&Personal.html).

## **Confidentiality**

Student records—including materials related to advisees—are protected under Federal Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99; 1974) and the Student Data Privacy Act. Student information should be secure – not left in an unlocked location. If advisors have a concern about a particular student, only student support staff, appropriate Major Chair/DGS, or DTC Chair should discuss the situation and have access to records. Any confidential information shared by a student with a faculty member must remain confidential – whether the student approaches you as an advisor, instructor, Major Chair, DGS, or DTC Chair. Talking about individual students in hallways and other public areas should be avoided.

If a faculty member feels he/she must consult with another faculty member about a student, consider talking about the issue without providing the name of the individual student. If the student's name must be shared, tell the student ahead of time that you intend to talk with the Major Chair (or other appropriate person) about the issue in question. Some issues, such as sexual harassment, are governed by law and require faculty members to report the problem to the Division Head. In these situations, explain to the student that you are required to report the incident/problem.

## **Guidelines for Changing Advisors**

### **Master's Students**

At the master's level, students may change academic advisors if they have serious personality or other conflicts with their assigned advisor. In that case, they should discuss their reasons and their preferences for a different advisor with the program chair. The program chair will then consult with both faculty members (new and old advisors) to obtain agreement before approving the change. The program chair will notify the Division Major Coordinators of the change.

### **PhD Students**

Many PhD students shift their courses of study and focus over their graduate careers, but doing so does not necessarily require a change in advisors. Faculty advisors can facilitate students' academic development, by working directly with them or by encouraging them to gain experience with other faculty members (e.g., through research or teaching assistantships or grant-writing opportunities). Sometimes students work more closely with one (or more) members of their committees than with their advisors. Faculty advisors can also suggest changes in committee membership to accommodate a change in dissertation focus.

Once PhD students have begun work on their dissertation, changing advisors should be rare, and limited to circumstances of personality conflicts, major ethical problems, or substantial shifts in areas of interest. Students wishing to change graduate advisors should consult with the Director of Graduate Studies (DGS). Likewise, faculty who are considering a change in their role as an advisor should consult with the DGS. Changes in graduate advisors should be approved by the DGS and forwarded to the Division's Major Coordinators who will file the change with the Graduate School.

## **Expectations for MPH/MS Academic Advising**

1. All faculty members will serve as academic advisors and will accept advisees from all majors in which they participate.
2. Meet with advisees at least once per semester.
3. Respond in a timely manner to requests from advisees for meetings or responses by telephone or e-mail.
4. Provide general guidance to Masters students about coursework, fieldwork, project selection, and career planning.
5. Make students feel welcome to the Division.
6. Act as a contact person for the student and help direct the student to the appropriate resources in the Division given particular issues or problems the student may have.
7. Act as a resource for the student when bureaucratic or political problems in the University, School, or Division may be interfering with the student's effective progress toward his or her degree.
8. While some students find project advisors who are not also serving as their academic advisor, academic advisors should serve as the project advisor if a student cannot easily find another faculty member with expertise in his/her interest area who is willing to work with the student.

## Expectations for PhD Academic Advising

1. Make students feel welcome to the Division.
2. Act as a contact person for the student and help direct them to the appropriate resources in the Division given whatever issues or problems the students may have.
3. Stay in regular contact with advisee. Meetings may be less frequent while student is taking classes and then become more frequent as the student begins working on his/her dissertation. Expectations about meeting regularly should be discussed with advisee. Current PhD students recommend at least monthly meetings to discuss their progress and how they are meeting their goals.
4. Respond in a timely manner to requests from advisees for meetings or inquiries by telephone or e-mail.
5. Provide general guidance to PhD students about coursework, fieldwork, project selection, and career planning.
6. Act as a resource for the student when bureaucratic or political problems in the University, School, or Division may be interfering with the student's effective progress toward his or her degree.

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## 1.8 Division Courses 2007-2008

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Number	Title	Credits	Offered	Instructor(s)
6000	Topics: HIV/AIDS Epidemiology & Public Health Interventions	2.0	Fall	Lifson/Rosser
6000	Topics: E-Public Health: On-line Interventions	3.0	Fall	Rosser and Others
6000	Topics: Obesity & Eating Disorders	2.0	Spring	Pereira/French
6000	Topics: Policy Skills	1.0	May '08	Toomey
6020	Fundamentals of Social and Behavioral Science	3.0	Fall	Oberg
6020	Fundamentals of Social and Behavioral Science (web course)	3.0	Fall/Spring /Summer	Multiple Instructors
6034	Program Evaluation For Public Health Practice	3.0	Spring	Harwood
6035	Applied Research Methods	3.0	Fall	Hennrikus
6040	Dying and Death in Contemporary Society	2.0	Spring	Rothenberger
6049	Legislative Advocacy Skills for Public Health	3.0	Spring	Toomey
6050	Community Health Theory and Practice I	3.0	Fall	Pasch
6051	Community Health Theory and Practice II	3.0	Spring	Toomey
6055	Social Inequalities in Health	3.0	Spring	Jones-Webb
6060	Motivational Interviewing	1.0	May '08	Patterson
6061	Community Health Education in Health Care Settings	2.0	May '08	Hennrikus
6066	Building Communities, Increasing Health: Preparing for Community Health Work	2.0	Fall	Axtell
6074	Mass Communication and Public Health	3.0	Spring	Ijzer
6078	Public Health Policy as a Prevention Strategy	2.0	Fall	Forster
6080	Seminar: Policy/Politics/Ethics of PubH Decision Making	2.0	Spring	Humphrey
6085	Prevention and Control of Tobacco and Alcohol Problems	3.0	Fall	Jones-Webb/Lando
6301	Fundamentals of Clinical Research	3.0	Fall	Luepker/Hirsch
6303	Clinical Research Project Seminar	2.0	Spring	Luepker/Thomas
6305	CR: Introductory Seminar for Health Professionals	2.0	Spring	Luepker
6309	Clinical Research Career Development	1.0	Fall	Luepker
6309	Clinical Research Career Development	1.0	Spring	Luepker
6320	Fundamentals of Epidemiology (web course)	3.0	Summer	Anderson
6320	Fundamentals of Epidemiology	3.0	Fall/Spring	Lazovich
6320	Fundamentals of Epidemiology (web course)	3.0	Fall/Spring	Punyko
6325	SAS Programming for Data Management	1.0	Fall/Spring (January)	Oakes

6336	Adv. Seminar in Infectious Disease Epidemiology	1.0	Fall	Ehresmann
6341	Epidemiologic Methods I	3.0	Fall	Flood/Spector
6342	Epidemiologic Methods II	3.0	Spring	Pankow
6343	Epidemiologic Methods III	4.0	Fall	Duval/Schreiner
6344	Epidemiologic Methods IV	2.0	Fall	Steffen/Yuan
6348	Writing Research Grants	2.0	Fall	Luepker/Harlow
6355	Pathophysiology of Human Disease	4.0	Fall	Crow/Berger
6381	Genetics in Public Health	2.0	Fall	Miller
6385	Epidemiology and Control of Infectious Diseases	2.0	Spring	Lifson
6386	Public Health Aspects of Cardiovascular Disease	2.0	Fall	Folsom
6387	Cancer Epidemiology	2.0	Spring	Anderson
6389	Nutritional Epidemiology	2.0	Fall	Harnack
6390	Topics: International Infectious Disease Epidemiology	2.0	Fall	Pappaioanou
6390	Topics: Obesity & Eating Disorders: Etiology/Epidemiology	2.0	Fall	French/Pereira
6390	Topics: Social Epidemiology	2.0	Spring	Oakes
6600	Topics: Community-Based Participatory Research	1.0	May	Hellerstedt/Call
6600	Topics: Principles & Programs in MCH	2.0	Summer '07	Patterson
6606	Children's Health: Issues, Programs & Policies	2.0	Summer	Oberg
6613	Chronic Illness and Disability in Childhood: Principles, Programs and Policies	2.0	Spring	Patterson
6617	Practical Methods – Secondary Data Analysis	3.0	Fall	Oakes
6627	Sexuality Education: Criteria, Curricula, & Controversy	1.0	Fall/Spring	Bretl/Turnham
6630	Foundations of Maternal and Child Health Leadership	3.0	Fall	Patterson
6634	Advocacy and Children's Rights	2.0	Spring	Oberg
6673	Grant Writing for Public Health	1.0	May	Toomey
6675	Women's Health	2.0	Fall	Hellerstedt
6901	Public Health Nutrition: Principles & Programs	2.0	Fall	Stang/Story
6902	Maternal and Infant Nutrition	2.0	Fall	Stang
6903	Child and Adolescent Nutrition	2.0	Fall	Story
6904	Nutrition and Aging	2.0	Sum	Krinke
6905	Human Nutrition and Health	2.0	Fall	Nelson, M.
6906	Global Nutrition	2.0	Spring	Himes
6910	Critical Review of Research in Public Health Nutrition	1.0	May	Pereira
6914	Community Nutrition Intervention	3.0	Spring	Neumark-Sztainer
6915	Nutrition Assessment	2.0	Spring	Himes/Harnack/Gross
6933	Nutrition and Chronic Diseases	2.0	Spring	Robien
6945	Child/Adolescent Obesity	1.0	May	Stang/Nelson, M.
8300	Topics and Issues in Epidemiology	1.0	May	TBA
8377	Seminar: Chronic Disease and Behavioral Epi	1.0	Fall/Spring	Jacobs/Harlow

## 2. EPIDEMIOLOGY PHD DEGREE PROGRAM

### 2.1 Fall 2007 Program Curriculum

#### 68 Credit Minimum

Required Core Courses				
Course	Notes	Title	Offered	Credits
PubH 6341		Epidemiologic Methods I	Fall	3
PubH 6342		Epidemiologic Methods II	Spring	3
PubH 6343		Epidemiologic Methods III	Fall	4
PubH 6348		Writing Research Grants (S/N only)	Fall	2
PubH 6450		Biostatistics I	Fall	4
PubH 6451		Biostatistics II	Spring	4
PubH 8377		Seminar in Chronic Disease and Behavioral Epidemiology (S/N only). Students need to take two offerings of PubH 8377 sometime during their doctoral studies for a total of 2 credits.	Fall/Spring	1 [Total 2]
PubH 8300		Special Topics and Issues in Epidemiology (S/N only) Note: must be taken May 08 because it is the last time the course will be offered.	May Session	1
TBA		Methods course to substitute for PubH 8350, Advanced Epi Methods. Substitute course must be a minimum of 2 credits, and approved in advance by advisor and DGS.		Min. 2
GRAD 8101		Teaching in Higher Education (must be taken for A grade option)	All terms	3
PubH 6742		Ethics in Public Health: Research and Policy	All terms	1
<b>Three courses from the following lists (at least one from each list)</b>				
<b>List A</b>				
PubH 6381		Genetics in Public Health	Fall	2
PubH 6385		Epidemiology and Control of Infectious Diseases	Spring	2
PubH 6386		Public Health Aspects of Cardiovascular Diseases	Fall	2
PubH 6387		Cancer Epidemiology	Spring	2
<b>List B</b>				
PubH 6390 and 6000		Obesity courses: please see below for information		
PubH 6078		Public Health Policy As a Preventive Strategy	Fall	2
PubH 6074		Mass Communication and Public Health	Spring	3
PubH 6390		Tobacco and Alcohol Problems	Fall	2
<b>Required for Biologic Concentration</b>				
PubH 7420 or PubH 6363	①	Clinical Trials: Design, Implementation, and Analysis or Design & Analysis of Group-Randomized Trials in Epidemiology	Spring Spring	3 3
Other courses		Two grad-level courses with biologic content; advisor must approve		4-6
<b>Required for Behavioral Concentration</b>				
PubH 6333	①	Principles of Human Behavior I (A/F only)	Fall 07	2
PubH 6334	①	Human Behavior II (A/F only)	Spring 08	3
PubH 6363	①	Design & Analysis of Group-Randomized Trials in Epidemiology	Spring 08	3
<b>PhD-Specific Supporting Program Credits and Dissertation Credits</b>				
PubH 8888		Dissertation Credits		24



Supporting Program Credits		Must be taken after matriculation into the PhD program		4-6
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① These courses are offered in alternate years: they are not offered in 2007-08, but are offered in 2008-09. Please plan accordingly.

Note: PubH 6390 Obesity and Eating Disorders: Etiology/Epidemiology (Fall, 2 cr); PubH 6000 Obesity and Eating Disorders: Treatment, Prevention, Policy (Spring, 2 cr): These courses have not yet been approved by the Epidemiology Graduate Faculty for inclusion in List B. If you want to take either or both as a List B course, please see major coordinator regarding petition process. To count as elective, only advisor's approval is required.

## MD/PhD Student Program Requirements

Requirements for MD/PhD students differ slightly from the standard curriculum. The following are **not** required of MD/PhD students only:

- PubH 8300 Topics: Epidemiology
- The teaching assistant experience (however Grad 8101, Teaching in Higher Education,, is required)
- PhD specific supporting program credits [4-6 credits]
- Two graduate-level supporting program courses in Biologic area [4-6 credits], if in the Biologic Emphasis
- In addition, only two courses, not three, from Lists A and B (combined) are required. To illustrate, students can take two courses from List A, or two from List B, or one from List A and one from List B.

## Sample Elective Areas

The following are departments or colleges from which PhD students have taken elective courses—the list is not exhaustive. Exemplary courses are listed to reflect recent course offerings that PhD students have recommended as excellent electives.

- Public Health [PubH] (e.g., 7405 Biostatistics: Regression; 7406 Biostatistics: Anova and Design; 7407 Analysis of Categorical Data; 7430, Statistical Methods for Correlated Data; 7440 Introduction to Bayesian Analysis; 7450 Survival Analysis; 7445 Statistics for Human Genetics and Molecular Biology; 7455 Modern Nonparametrics; 7460 Advanced Statistical Computing; 8100, Epidemiologic Uncertainty Analysis; 8140, Validity Concepts in Epidemiologic Research; 8141, Doctoral Seminar in Observational Inference; 7435 or 8400, Latent Variable Models; 8432 Probability Models for Biostatistics; 8442 Bayesian Decision Theory and Data Analysis; 8452 Advanced Longitudinal Data Analysis; 8462 Advanced Survival Analysis)
- Biostatistics is offering a new two-course sequence intended for PhD students in the School of Public Health who need a rigorous approach to probability and statistics and statistical inference with applications to research in public health. PubH 7401 is offered in Fall term as Fundamentals of Biostatistical Inference (4 cr); PubH 7402, Spring term, is Biostatistical Modeling and Methods (4 cr).
- Veterinary Medicine, Graduate [VMed] (e.g., 8090 Epidemiology of Zoonoses and Diseases Common to Animals and Humans)
- Health Informatics [Hinf]
- Educational Psychology [Epsy] (e.g., 8264, Advanced Multiple Regression Analysis; 8266, Statistical Analysis Using Structural Equation Methods; 8267, Applied Multivariate Analysis; 8268 Hierarchical Linear Modeling in Educational Research)
- Statistics [Stat]
- Philosophy [Phil] (e.g., philosophy of science courses)
- Rhetoric [Rhet] Science writing
- English: Writing, Rhetoric and Language (EngC) (highly recommended: 5051 and 5052 Graduate Research Writing Practice for Non-native Speakers of English)
- Biochemistry (BioC)
- Cell Biology and Neuroanatomy [CBN]
- Molecular, Cellular, Dev Biology and Genetics [MCDG]
- Genetics, Cellular and Developmental Biology [GCD]
- Microbiology [MicB]
- Microbiology, Immunology and Cancer Biology [MICa]

## PhD Competencies

Competency Area		
Descriptive Epidemiology		
Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Produce descriptive epidemiology of a given condition</li> <li>• Calculate measures of incidence, morbidity and mortality</li> <li>• Calculate measures of excess risk</li> <li>• Make appropriate comparison by person, place and time</li> <li>• List strengths and limitations</li> <li>• Identify data from existing national and international sources</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiologic Methods II (PubH 6342) Epidemiologic Methods I (Pub H 6341)</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> <li>• Written preliminary exams</li> </ul>

Competency Area		
Biology		
Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Describe models of disease etiology and control</li> <li>• Complete coursework or equivalent in human physiology and pathophysiology</li> <li>• Develop competence in specific content area</li> </ul>	<ul style="list-style-type: none"> <li>• Epi Methods I (PubH 6341)</li> <li>• Epi Methods II (PubH 6342)</li> <li>• Research Assistantship</li> <li>• Teaching Assistantship</li> <li>• Thesis credits</li> <li>• Electives</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> <li>• Written preliminary exams</li> <li>• Dissertation</li> </ul>

## Competency Area

### History of the discipline

Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Describe general history of development of epidemiology</li> <li>• Recognize major epidemiologic studies of selected diseases</li> <li>• Identify major chronic and infectious diseases, leading causes of death</li> <li>• Recognize importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiologic Methods I (PubH 6341)</li> <li>• Epidemiologic Methods II (PubH 6342)</li> <li>• Cancer Epidemiology (PubH 6387)</li> <li>• Epidemiology and Control of Infectious Disease (PubH 6385)</li> <li>• Public Health Aspects of Cardiovascular disease (PubH 6386)</li> <li>• Genetics of Public Health (PubH 6381)</li> <li>• Seminar in Chronic Disease and Behavioral Epidemiology (PubH 8377)</li> <li>• Public Health Policy (PubH 6078)</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> </ul>

## Competency Area

### Principles of screening and surveillance

Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Recognize conditions suitable for population screening</li> <li>• Evaluate validity and reliability of screening tests</li> <li>• Describe types of bias that affect validity of screening evaluations</li> <li>• Evaluate effectiveness of screening</li> <li>• Categorize types of surveillance systems and approaches used in disease surveillance</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiologic Methods I (PubH 6341)</li> <li>• Epidemiologic Methods II (PubH 6342)</li> <li>• Epidemiologic Methods III (PubH 6343)</li> <li>• Design and Analysis of Group RCT (PubH 6363)</li> <li>• Clinical Trials (PubH 7420)</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> <li>• Written preliminary exams</li> </ul>

## Competency Area

### Problem conceptualization

Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Search the literature</li> <li>• Review and critically evaluate the literature</li> <li>• Synthesize available information</li> <li>• Make appropriate causal inference</li> <li>• Identify meaningful gaps in knowledge</li> <li>• Formulate an original and key hypothesis or statement of research problem</li> <li>• Draw causal diagrams</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiologic Methods I (PubH 6341)</li> <li>• Epidemiologic Methods II (PubH 6342)</li> <li>• Electives in subject concentration</li> <li>• Writing Research Grants (PubH 6348)</li> <li>• Seminar in Chronic Disease and Behavioral Epidemiology (PubH 8377)</li> <li>• Principles of Human Behavior I &amp; II (PubH 6333, 6334)</li> <li>• Research Assistantship</li> <li>• Thesis credits</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> <li>• Dissertation</li> </ul>

## Competency Area

### Study design

Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Describe each study design</li> <li>• Understand the advantages and limitations of each study design, including practical aspects of their use and trade-offs</li> <li>• Select the most appropriate and efficient design for a specific problem</li> <li>• Calculate sample size</li> <li>• Identify and minimize sources of bias</li> <li>• Describe the direction and magnitude of bias and effect on measures of association</li> <li>• Design a study using any of the main study designs</li> <li>• Use basic population sampling methods</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiologic Methods I (PubH 6341)</li> <li>• Epidemiologic Methods II (PubH 6342)</li> <li>• Epidemiologic Methods III (PubH 6343)</li> <li>• Writing Research Grants (PubH 6348)</li> <li>• Seminar in Chronic Disease and Behavioral Epidemiology (PubH 8377)</li> <li>• Clinical Trials (PubH 7420)</li> <li>• Design and Analysis of Group RCT (PubH 6363)</li> <li>• Thesis credits</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> <li>• Written preliminary exams</li> <li>• Dissertation</li> </ul>

## Competency Area

### Data collection and monitoring

Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Identify instruments appropriate for the research question</li> <li>• Identify presence and magnitude of measurement error</li> <li>• Monitor the conduct of data collection</li> <li>• Assess quality control measures</li> <li>• Design data collection instruments</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiologic Methods II (PubH 6342)</li> <li>• Writing Research Grants (PubH 6348)</li> <li>• Seminar in Chronic Disease and Behavioral Epidemiology (PubH 8377)</li> <li>• Research Assistantship</li> <li>• Participation in grant activities</li> <li>• Electives</li> <li>• Thesis credits</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> <li>• Dissertation</li> </ul>

## Competency Area

### Data analysis

Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Use statistical computer packages to calculate and display describe statistics</li> <li>• Analyze categorical data</li> <li>• Perform multivariate regression, survival analysis and longitudinal analysis</li> <li>• Examine data for confounding and effect modification, and handle appropriately</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiologic Methods III (PubH 6343)</li> <li>• Epidemiologic Methods IV (PubH 6344)</li> <li>• Biostatistics I (PubH 6450)</li> <li>• Biostatistics II (PubH 6451)</li> <li>• Fundamentals of Biostatistical Inference I &amp; II (PubH 7400)</li> <li>• Clinical Trials (PubH 7420)</li> <li>• Design and Analysis of Group RCT (PubH 6363)</li> <li>• Thesis credits</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> <li>• Dissertation</li> </ul>

## Competency Area

### Interpretation

Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Interpret research results</li> <li>• Make appropriate inferences based on results</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiologic Methods I (PubH 6341)</li> <li>• Epidemiologic Methods II (PubH 6342)</li> <li>• Epidemiologic Methods III (PubH 6343)</li> <li>• Epidemiologic Methods IV (PubH 6344)</li> <li>• Biostatistics I (PubH 6450)</li> <li>• Biostatistics II (PubH 6451)</li> <li>• Seminar in Chronic Disease and Behavioral Epidemiology (PubH 8377)</li> <li>• Clinical Trials (PubH 7420)</li> <li>• Design and Analysis of Group RCT (PubH 6363)</li> <li>• Thesis credits</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> <li>• Dissertation</li> </ul>

## Competency Area

### Substantive Area

Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Demonstrate mastery of substantive area</li> <li>• Conduct original research related to specific topic</li> </ul>	<ul style="list-style-type: none"> <li>• Electives</li> <li>• Teaching assistantship</li> <li>• Research assistantship</li> <li>• Thesis credits</li> </ul>	<ul style="list-style-type: none"> <li>• Dissertation</li> <li>• Participation in professional meetings through RA or grant work</li> <li>• Publication in peer-reviewed journals as part of dissertation format</li> </ul>

Competency Area		
<b>Communication</b>		
Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Communicate research results orally and in writing to scientists and non-scientists</li> <li>• Present data in tabular and figure formats</li> <li>• Prepare manuscript suitable for publication in scientific journal</li> <li>• Prepare professional presentations (oral and poster format)</li> </ul>	<ul style="list-style-type: none"> <li>• Epidemiologic Methods III (PubH 6343)</li> <li>• Seminar in Chronic Disease and Behavioral Epidemiology (PubH 8377)</li> <li>• Teaching Practicum (PubH 8355)</li> <li>• Epidemiologic Methods IV (PubH 6344)</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers)</li> <li>• Dissertation</li> <li>• Participation in professional meetings through RA or grant work</li> <li>• Publication in peer-reviewed journals as part of dissertation format</li> </ul>

Competency Area		
<b>Ethics</b>		
Specific Competencies	Learning Opportunities	Evaluation Opportunities
<ul style="list-style-type: none"> <li>• Understand concepts of human subjects protections and confidentiality</li> <li>• Apply this understanding as evidenced in design and conduct of research</li> </ul>	<ul style="list-style-type: none"> <li>• Ethics in Public Health (PubH 6742)</li> <li>• Seminar in Chronic Disease and Behavioral Epidemiology (PubH 8377)</li> <li>• Thesis credits</li> </ul>	<ul style="list-style-type: none"> <li>• Examinations</li> <li>• Assignments (exercises and papers), particularly as part of grant writing coursework</li> <li>• IRB application for dissertation project or as part of grant activities</li> <li>• Dissertation</li> </ul>

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## 2.2 Program Requirements

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The following is a summary of program requirements in Epidemiology as approved by the Graduate Faculty in Epidemiology.

### Registration Requirements

All graduate students are required to register in the Graduate School in Fall and Spring terms to keep active status. Registration in May and Summer terms are not required by the Graduate School to keep active status. See *section 8.3* for more information.

### Core Curriculum/Grade Point Average Requirements

The core curriculum for the PhD (either biological or behavioral concentration) is required for all epidemiology PhD students. The student's advisor and the Epidemiology MPH/PhD Credentials Committee must approve any course substitutions or waivers as early as possible. Any substitutions/waivers must be approved before submission of the Degree Program form to the Graduate School. The Degree Program form is submitted to the Graduate School after students have successfully passed the preliminary written exams; see A. Kish for assistance with completing the form. The Graduate School must approve the form before the preliminary oral examination can be scheduled.

## Summary of credits

The credit minimum for the PhD will be a total of 68-76 credits:

- Required Core Courses ..... 30-32 credits
- Three courses from List A or List B (at least one from each list) ..... 6-8 credits
- PhD-specific dissertation credits, PubH 8888 ..... 24
- PhD Concentration credits ..... 8-12
- Biological concentration: PubH 7420 or 6363 ..... 4-6 credits  
(Two graduate level courses with biological content; advisor must approve) ..... 7-9 credits
- Behavioral concentration: PubH 6363, PubH 6333, and PubH 6334 ..... 8 credits

## Grade point average (GPA) requirements

1. Doctoral students are required to complete their coursework with a minimum GPA of 3.25.
2. Doctoral students are required to earn grades of B- or higher in each of their core courses. Courses included are: (a) the Epi core sequence (either PubH 6330, 6331 or 6341, 6342, 6343); (b) Biostatistics courses (PubH 6450 and 6451 or PubH 7401 and 7402) ; (c) Clinical Trials or Group-Randomized Trials). Students who earn a grade below B- in a core course are required to repeat that course. Students who cannot earn a B- in two attempts will be terminated from the program.

## Transfer of Credits

Doctoral students who have earned graduate degrees at other institutions may have taken courses that are similar to the courses required for the PhD. If students want to pursue this option, they should discuss this with their advisor, the major coordinator and the Director of Graduate Studies (DGS). If there is agreement to pursue this option, the student should prepare a petition. The petition form is available at <http://www.epi.umn.edu/academic/handbook.shtm>; please contact the major coordinator prior to filling out the request to discuss the process. The completed petition will be reviewed by the Epidemiology MPH/PhD Credentials Committee and either approved or disapproved.

## S-N Credits

Epidemiology PhD students can take up to one-third of course credits S-N (satisfactory/non-satisfactory). Note that the one-third limit **does** include courses that are available only S-N, but does **not** include dissertation credits. This is a Graduate School rule and cannot be petitioned for an exception.

## Role of the Advisor

Requirements are specified to ensure that PhD graduates in Epidemiology have all of the basic skills necessary to move into an academic or research career. The final shape of the program, the nature of additional courses, readings, and the focus on particular subspecialties, are a matter for the student and advisor. Both are expected to work as a team throughout the degree program.

## Guidelines for Changing an Advisor

Many PhD students shift their course of study and focus over their graduate career, but this does not necessarily require a change in advisors. Faculty advisors can facilitate students' academic development by working directly with the student or by encouraging them to gain experience with other faculty members (e.g., research or teaching assistantships, grant writing opportunities). Sometimes students work more closely with one (or more) members of their committee than with their advisor. Faculty advisors can also suggest changes in committee membership to accommodate a change in dissertation focus.

Once PhD students have begun work on their dissertation, changing advisors should be limited to circumstances such as personality conflicts, ethical problems, substantial shifts in areas of interest, or if the advisor resigns from the University. Students wishing to change graduate advisors should consult with the DGS. Likewise, faculty who are considering a change in their role as an advisor should consult with the DGS. Changes in graduate advisors need to be approved by the DGS, and one of the Major Coordinators must be notified of the change so that the Graduate School has the change on file.

## Grant Writing Skills

In addition to completing PubH 6348: Writing Research Grants, it is recommended that students participate as a member of a grant writing team for an NIH or comparable grant.



## Teaching

During their PhD studies, students must serve at least one semester as a teaching assistant (TA), which includes being available as a general resource for student learning. Students are encouraged to consider serving as a TA for one of the Epi courses (i.e., Fundamentals of Epidemiology, Epidemiologic Methods I, II, III or IV). Teaching in these courses can help students review core concepts prior to taking the written preliminary exam.

Note that the Center for Writing's Teaching with Writing Program offers a two-session seminar focused on strategies for commenting and grading student writing (in all disciplines). This is offered in August prior to the start of Fall term. For more information, and to register, go to <http://writing.umn.edu> and click on "Announcements, Events and Workshops."

Students can also fulfill the requirement by being a TA in other courses. Any course that is assigned a paid TA by the Division of Epidemiology and Community Health will automatically fulfill the requirement. Students will be emailed the TA assignment list for the next academic year when it is officially approved, usually in mid-June to early July. Students can also request the list from the major coordinator at any time once it is approved. Students can submit a written request to the major coordinator, addressed to the DGS, for all other TA opportunities outside the Division. Supporting materials should include a copy of the course's syllabus and an outline of the TA's responsibilities and should be submitted prior to the term when the TA occurs.

Students also are required to prepare and give a course lecture to a class either as part of their teaching assistantship or separately. This course lecture must be critiqued by at least one Epi Graduate Faculty member, and be at least 50 minutes in length. This requirement is separate from any Teaching Seminar course assignments. Non-native English speaking students should note that they are responsible for passing the SPEAK TEST for non-native English Speaking Teaching Assistants. Please see the major coordinator for this information. The Division's policy regarding payment for the TA English Program's course in Classroom Communication Skills for TAs can be found in *Section 7.6* of this guidebook.

## Examinations

### Preliminary Written Examination

Students who have taken Epidemiology I and II are encouraged to write the examination within 18 months of matriculation into the PhD program. Students who take Epidemiology Methods I, II, and III are encouraged to take the examination within 24 months of matriculation. See the following section on *Milestones and the Role of the Student's Committee*. The examination consists of two parts: an epidemiology and biostatistics exam (Part A), and a grant-writing exercise (Part B). Students must pass both parts. Preliminary written examinations are given in fall and spring semesters. The PhD Examinations Committee prepares the examination, which is graded by Epi Graduate Faculty members. See *section 2.4* for guidelines.

### Preliminary Oral Examination

Students should take the preliminary oral examination within six months of successfully completing the Preliminary Written Examination (Parts A and B). See the following section on *Milestones and the Role of the Student's Committee*. The oral examination, administered by the student's committee, focuses on the dissertation design and analysis. Typically, the exam covers practical aspects of the proposal including epidemiologic principles. See *section 8.5* for expectations, guidelines, and other details. Note that no dissertation credits may be taken before passing the Preliminary Oral Examination. Students have a maximum of five years to complete the PhD after passing the Preliminary Oral Examination.

### Final Oral Examination (Dissertation Defense)

Students make a public presentation of their dissertation followed by a closed exam with their committee. It is required that the public exam be publicized widely and offered in a space large enough to accommodate a seminar audience. It is the student's responsibility to contact the major coordinator at least two weeks prior to the defense so that an e-mail announcement can be sent to the Epi Graduate Faculty and students.

The final oral examining committee is designated on the dissertation title form. The committee chair must be a senior member of a graduate faculty and cannot be the student's academic advisor or co-advisor; senior members from other graduate faculty who are "outside" members can be the final oral committee chair. Students are encouraged to consult and share their progress on the dissertation with all members of the committee well in advance of the final oral examination.

## Research

### First-Authored Manuscript for Publication

During their PhD studies, students must prepare a first-authored manuscript for publication in a peer-reviewed journal. This manuscript should be prepared under the supervision of a member of the Epi Graduate Faculty, the student's committee must agree that the paper is publishable, and it must be submitted for publication. Note: it does not need to be accepted or in press to fulfill graduation requirements.

### Research Ethics Training

All Graduate School students in the Health Sciences are required to have research ethics training during their doctoral studies. To fulfill that requirement, Epidemiology doctoral students will take PubH 6742 – Ethics in Public Health: Research and Policy.

### PhD Dissertation

The process to complete a dissertation is two-fold: students must pass a preliminary oral exam (see *section 2.5*) and a final oral exam. Students have two options for the dissertation:

- (1) a traditional dissertation, which is an in-depth volume describing (a) theoretical background and literature to date, (b) the methods and results of a research project, and (c) a detailed discussion of the strengths, limitations, interpretation and significance of the findings; or
- (2) a series of publishable papers, with appropriate introductory and concluding sections (see *section 2.7*). See *section 2.8* regarding important Human Subjects Research information.

### Research Administration Experience

Students should develop experience in research administration during their program. Such experience may be gained through regular participation in project-staff or steering committee meetings, helping to prepare or administer a grant budget, taking an operational role in a sponsored research project, etc.

### Milestones

The following progress expectations are for students who have completed the coursework for students with an MPH in Epidemiology:

- Take written prelims within 24 months of completing coursework (for those who take the Epi Methods I, II, III coursework);
- Establish, minimally, the three internal members of their committee and begin meeting with them within one semester of completing written prelims;
- Take prelim orals within six months of successfully completing Parts A and B of the Written Prelim Examination; and
- Undertake grant writing, research, teaching, training in teaching techniques, and seminar presentation requirements on a schedule agreed upon with their advisor and committee.

### Annual Review of Graduate Student Progress

The Graduate School constitution requires that each graduate student be provided with, minimally, an annual written evaluation of his or her academic progress. To address this requirement, the Epi Graduate Faculty approved a specific process for Epidemiology doctoral students. Each year, every student will complete a form summarizing overall progress towards his or her degree. The form includes a list of classes taken thus far, progress made on the milestone checklist, and comments on progress over the past year, including main accomplishments and/or difficulties encountered, and a brief plan for continued progress for the following year. A review process and a review form have been developed; the form is e-mailed to doctoral students and their advisors/co-advisors every year.

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## 2.3 Graduate School Registration Requirements

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All Graduate School students are required to register in the Graduate School **every fall and spring term** to maintain their active status. Active status is required for students to be able to register for courses, take exams, submit milestone forms, file for graduation, or otherwise participate in the University community as a Graduate School student. Students who do not register for a term in the Graduate School must fill out a *Change of Status/Readmission Application* form. This form is available in the Graduate School office at 316 Johnston Hall; 612.625.3490; and online at [www.grad.umn.edu/current\\_students/forms/](http://www.grad.umn.edu/current_students/forms/). The form needs to be completed and a re-admission fee paid. Re-

admitted students are required to register during the semester in which they are re-admitted and every subsequent fall and spring semester until they graduate.

### **Grad 999**

Grad 999 is a free, zero-credit, non-graded registration mechanism for Graduate School students who must register solely to meet the Graduate School's registration requirement. Grad 999 cannot be used to meet registration requirements established by departments/agencies within or outside the University (which include, but are not restricted to, registration required to hold an assistantship, maintain legal visa status, obtain financial aid, or defer loans).

All Graduate School students with active student status are eligible to register for Grad 999. The Epi PhD program does not have any current restrictions on Grad 999 registration.

### **PubH 8666: Doctoral Pre-Thesis Credits**

These credits are available for doctoral students who have not yet passed their preliminary oral examination but need to be registered in the Graduate School to meet requirements of agencies or departments outside of the Graduate School (e.g., loan agencies). The main difference between Grad 999 and PubH 8666 is the latter can be used to meet requirements of agencies and departments outside of the Graduate School. However, international students should also check with the ISSS office, [www.issss.umn.edu/](http://www.issss.umn.edu/). Doctoral pre-thesis credits are not graded.

Note: Registration for doctoral pre-thesis credits cannot be used to meet any Graduate School degree requirements. These credits are not the same as the required PhD doctoral thesis credits. Effective Summer 2007, registration is limited to a maximum of six credits per term. Also, registration for 8666 is limited to two times (12 credits) without program consent. With program consent, students may register for 8666 up to four times, for a total of 24 credits.

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## **2.4 Preliminary Written Examination Guidelines**

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### **Introduction**

The Epidemiology Preliminary Written Examination is a requirement of the Epidemiology PhD degree program. It consists of two parts, "A" and "B," protocols, described in detail.

### **Purpose**

The Preliminary Written Examination is a diagnostic tool intended to: (1) indicate to the Epi Graduate Faculty whether the student is ready to engage in doctoral research, and (2) provide feedback to the student on his/her knowledge of epidemiologic methods and analysis.

### **Content and Structure**

There are two parts to the written examination. Both parts must be passed independently to successfully pass the Preliminary Written Examination.

Part A is an open-note, open-book proctored exam that covers basic epidemiologic and biostatistical methods. It is given in two sections. The entire exam consists of 11 questions. In Section One, students must select and answer three of five theoretical epidemiology questions. In Section Two, students select and answer three of six questions. Section Two has five questions covering applied epidemiology and biostatistics, and one question covering community trials. The sections are given on two separate, non-consecutive days; the exams start at 9 a.m. and end at 3:30 p.m.

Part B is an original research proposal as described, below.

### **Timing**

The Preliminary Written Examination is taken after completion of most of the required core coursework. Before taking Part A, students must complete Epidemiology I and II, or Epidemiology Methods I, II and III, and Biostatistics I and II; students in the behavioral emphasis may want to take Design and Analysis of Group-Randomized Trials. Before taking Part B, students must complete Writing Research Grants. Prior to registering for each part, students are required to consult with their advisor to discuss their readiness to take the exam. Parts A and B must both be passed before the student can schedule his/her Preliminary Oral Examination.

Part A is offered twice a year in January and June; Part B is available throughout the year. Part B is usually taken after Part A, but Part B can be taken first with the consent of the student's advisor and the Exam Chair.

## **Report of Outcome**

The outcomes of Parts A and B are reported to the student (and copied to their advisor and DGS) through a personal letter from the PhD Exam Committee Chair ("Exam Chair"). Please be aware of the following:

- A student who fails to pass either part of the Preliminary Written Examination on the first attempt is allowed the opportunity to take it one more time.
- The Exam Committee decisions regarding the pass/fail status of the student are final.
- A student who fails either part of the Preliminary Written Examination on the second attempt is expelled from the program.

## **Protocol for PART A of the Preliminary Written Exam**

The Part A Exam Chair is responsible for preparing the exam, along with the members of the Exam Committee and the Epidemiology Graduate Faculty. The Exam Chair and the major coordinator are responsible for organizing and proctoring the exam. The major coordinator is responsible for the distribution of exam answers to faculty graders, and for reporting the grades back to the Exam Chair. The Exam Chair and major coordinator are responsible for notifying the DGS, the student, and the student's advisor regarding the student's results on the exam.

### **Grading**

The Exam Chair assigns at least three Epi Graduate Faculty members to grade questions from Section One; at least two members grade questions from Section Two. Graders usually have two weeks (10 working days) to grade the exam answers and return the exam answers to the Coordinator.

If the scores assigned by the two graders for any of the Section Two questions differ by more than 10 points, the Exam Chair will assign a third grader for that question. If the scores assigned by three graders for any question differ by more than 15 points, the Exam Chair will direct the graders to discuss the discrepancy and re-score the question. If the scores still differ by more than 15 points, the median (middle) score will be taken as the grade for that question, rather than the mean.

An average will be calculated for each question answered in Part A, by the Exam Chair and Coordinator.

In order to pass Part A, a student must receive an overall grade of at least 80, and an average grade of at least 80 on at least four of the six questions they answered. In other words, a student who gets less than 80 on more than two of the six questions cannot pass the exam. The student cannot re-write an individual exam question. If a student gets less than 80 on one or two questions and receives a "pass" overall, the faculty advisors are strongly encouraged to discuss these questions with the student.

The Exam Committee meets to review and approve the results of Part A as soon as they are available. The review is blinded as to both the identity of the student and whether the student is taking the exam for the first or second time. This review provides feedback to the Exam Committee on how the student performed on the exam and ensures that the procedures for grading are followed.

Each student receives a special identification code prior to the start of Part A. No identifying information, with the exception of the code number, is used in the answers. Confidentiality of the student's identity is important to the process of taking the Preliminary Written Examination and no one except the Major Coordinator will know the identity of individual students until the grading is complete and the review process has been completed.

### **Study Assistance**

There are several study materials available to doctoral students during the time they are studying for the Preliminary Written Examination. There is a list of core principles for the epidemiology and biostatistics courses, there are one or two sample exams, and there are sample questions with exemplary answers. All the materials are available at any time to doctoral students, but the Exam Committee strongly encourages students to work through their own answers to the sample questions prior to reading the exemplary answers. These materials are available from the major coordinator. In addition, Epi Graduate Faculty are available to review answers that students write for the sample questions. The Exam Committee asks that all members of the Epi Graduate Faculty make themselves available for such review, especially those involved in the core courses.

## **Protocol for PART B of the Preliminary Written Exam**

### **Purpose**

The examination is open-book and take-home. Part B not only indirectly tests required coursework, but also the ability to draw on coursework and other experiences to ask and answer relevant epidemiologic research hypotheses. It may also help students develop a depth of knowledge in one or more substantive areas.

Students are advised to carefully choose an appropriate research question and focus on the epidemiologic methods. The student should not get bogged down in unnecessary detail (e.g., the specifics of an established laboratory assay). The student should identify the problem, outline possible solutions, and justify choice of a solution. It is important that the student demonstrate ability to identify problems and think about them critically.

### **Overview**

Examination topics must be current and drawn from diverse substantive and methodological areas of epidemiologic practice, addressing unanswered and rigorous questions.

Although Part B is modeled after a research proposal, it is intended as an examination rather than as a formal grant proposal. Students are expected to demonstrate their competence and understanding through their approach, choice of hypothetical or exact study populations, methods, etc., justifying these decisions through the proposal.

Part B is an examination to determine whether students are prepared to proceed with their dissertation rather than NIH proposals. The Exam Committee focuses on the methodology proposed while bearing in mind the restrictions under which the exam has been prepared, including that certain kinds of deficiencies in the proposal could have been improved if collaboration was allowed, and if time and page constraints were different.

There are no sample Part B exams available for review, but grants written by Epi Graduate Faculty members can be good preparation for the exam. Students can approach faculty they know and ask if they have a grant they can read.

### **Skills to Be Demonstrated**

1. Conceptual
  - a. Select a research question to be developed into a proposal.
  - b. Review the literature and provide an epidemiologic perspective of the problem.
  - c. Provide a rationale for choice of specific research hypothesis or hypotheses.
2. Problem-Solving
  - a. Propose an appropriate and feasible study design for the research question.
  - b. Outline an analysis plan suitable to the study design being proposed and in sufficient detail to permit a judgment on its methodological adequacy.
  - c. Clarify any other epidemiologic methods pertinent to your selected design.
  - d. Address any issues related to feasibility and ethics of your proposed design.
  - e. Discuss hypothetical outcomes, limitations, their interpretation and public health significance.
3. Writing skills will be considered among the evaluation criteria.

### **Selection of a Topic**

Although the advisor does not play a formal role in the Part B examination, the student is advised to talk with the advisor and others in the general preparation for the exam and the selection of three potential topics. Specifically, the student will talk with the PhD Exam Chair about the selection of a topic and to be sure the examination rules are clear. The PhD Exam Chair is charged with setting the exam topic, based on potential topics submitted by the student. The student is under no restrictions prior to turning in her/his list of three topic areas. Thus, the student can talk to anyone and can complete the planning and preparation process in any period of time, e.g. two weeks or two months. The topics should be partly known to the student, but not directly related to prior work. They should advance the student's studies and may serve as a basis of a PhD dissertation. The topics are essentially a list of key words, which could cover, for example, areas such as disease, risk predictors, populations.

Students **may not** use previously written papers or grants for this exam, including those written in PubH 6348, Writing Research Grants.

### **Scheduling and Taking the Examination**

The student must work with the major coordinator to select and coordinate the start date for Part B. Timing of topic selection is important, and students are encouraged to thoroughly familiarize themselves with the topics they are considering. Students need to be able to "hit the ground running" when they get their specific topic. Students are given 17 calendar days to complete the proposal (usually starting on a Friday and therefore including three weekends) after receiving their specific topic from the Exam Chair. Students may start the exam on other days, as long as the start and end days fall on a work day, and not a University holiday.

The student and the major coordinator will work together to find a start date. The Exam Chair and the student's advisor both need to be available to communicate with each other during the seven days after the student turns in the three topics in order to generate a specific topic. Therefore, students need to get their proposed start date approved **at least** three weeks in advance of their start date.

Exactly seven calendar days prior to the agreed-upon start date, the student will give the major coordinator his/her list of three broad topic areas of interest. (Note: once the student has turned in the three topics, s/he can only discuss the exam with the Exam Chair or the major coordinator; s/he can no longer discuss the exam with anyone else including the advisor.) During the following week, the Exam Chair and the student's advisor will consult regarding the selection of a specific topic. The Exam Chair will then generate a specific topic for the student and give it to the major coordinator. On the start date, the major coordinator will get the specific topic to the student (usually via an email) and the student can begin the exam.

Students have 17 days to write the original proposal. The variables that contribute to whether a start date will work include how much time the student needs to prepare, the availability of the student's advisor and the Exam Chair the week after the student turns in his/her topics, and whether the student will be available to write a revision, if necessary.

The student will receive an identification code when the topic is assigned. No identifying information, except the code number, will be used in the body of the paper. While the student is taking the exam, the only people who should know the identity of the student are the major coordinator, the Exam Chair, and the student's advisor. Other faculty may be included at the discretion of the Exam Chair. Maintaining student confidentiality is necessary for the Preliminary Written Examination.

During the 17 days of the exam, only written materials may be consulted. Two exceptions are: (1) a reference librarian – this is a legitimate way of facilitating a focused search of the literature on the topic of choice. It is not permissible to ask an expert in the subject matter area to identify key papers or particular references; and (2) brief questions, directed to individuals, involving factual material may be allowed with permission of the Exam Chair. Questions germane to the main hypothesis, study design, or of a similar nature, are not permissible. Proposed questions must be submitted to the Exam Chair, in writing, with the name of the person to be consulted. Any information obtained from the outside source should be appropriately cited in the bibliography (e.g., Personal Communication, Dr. L. Smith, May 21, 1999, National Laboratory for Primate Research, Austin, TX).

Assistance with editing is not permitted. Students whose first language is not English and are concerned about this may choose to note that in the exam. Clarity of expression is a part of the testing process and all PhD students are expected to be able to write well enough to complete the proposal.

The paper must be submitted to the major coordinator by 12:00 p.m. (noon) on the due date. Students are required to register their completed papers in two ways: a one-sided, unbound printed copy, and an electronic word version, e-mailed to the major coordinator. Late papers will receive an automatic incomplete.

#### **Withdraw Exception**

It is recognized that because the length of time to complete the exam is 17 days, an illness or other significant emergency during the exam could have a great impact on the student's ability to pass the exam. Therefore, a student taking Part B will have one (and only one) opportunity during their PhD career to withdraw at any point during the 17 days of writing the exam.

The following summarizes the major steps associated with the Exam.

<b>STEPS</b>	<b>TIMELINE</b>	<b>ALLOWABLE CONSULTATION</b>
Step 1: The student should begin thinking about potential topics; eventually three topics are selected.	No time limit.	The student will consult his/her advisor and the Exam Chair, but may consult with anyone else. The student works with the major coordinator to set a specific start date; the major coordinator ensures that the Exam Chair is available and confirms the dates of the exam.
Step 2: The student gives three potential topics to the major coordinator.	Exactly one week prior to the scheduled start date of the exam.	After the three potential topics are turned in, the student can only discuss the topics or exam with the Exam Chair or the major coordinator.
Step 3: The student is assigned a specific topic and begins	The student is given the specific topic exactly one week after turning in the three potential topics. The student	The student can only consult/talk with the Exam Chair or the major coordinator while writing the exam.

working on the exam.	has exactly 17 days to write and complete the exam	
Step 4: The exam is turned in.	The exam must be turned in by noon on the 18 <sup>th</sup> day of the exam period.	The student can only consult/talk with the Exam Chair or the major coordinator while writing the exam.
Step 5: The exam is graded.		90 and above: Pass with no revision. 80-89: Pass with revision. 79 and below: No pass, either rewrite or second attempt.

### Structure and Organization of the Proposal

The format of the paper should follow the conventional guidelines of an NIH research proposal suitable for peer review. As such it should contain, at a minimum, the following sections. Each section should not exceed the indicated number of pages:

SECTION	REQUIREMENTS	NOTES
I. Cover Page	1 page	Exam ID number, topic as given to student, title of Part B, and month/year.
II. Table of Contents	1-2 pages, double-spaced	
III. Abstract	1-2 pages, double-spaced	
IV. Specific Aims	1-2 pages, double-spaced	List the broad, long-term objectives and describe concisely and realistically what the specific research described in this application is intended to accomplish and any hypotheses to be tested.
V. Background (including focused literature review) and Significance	4-8 pages, double-spaced	<ul style="list-style-type: none"> <li>▪ Describe the essence of knowledge related to this specific topic. Briefly sketch the background to the present proposal, critically evaluate existing knowledge, and specifically identify the gaps that the project is intended to fill.</li> <li>▪ State concisely the importance of the research described in this application by relating the specific aims to the broad long-term objectives and to health relevance.</li> </ul>
VI. Research Design and Methods	12-24 pages, double-spaced	<ul style="list-style-type: none"> <li>▪ Describe the research design and the procedures to be used to accomplish the specific aims of the project.</li> <li>▪ Include the means by which the data will be collected, analyzed, and interpreted.</li> <li>▪ Describe any new methodology and its advantage over existing methodologies.</li> <li>▪ Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims.</li> <li>▪ Provide a tentative sequence or timetable for the investigation.</li> <li>▪ Point out any procedures, situations, or materials that may be hazardous to personnel and the precautions to be exercised.</li> </ul>
VII. Human Subjects	No page limit, double-spaced	
VIII. Selected References	4 pages, single-spaced; exceptions may be granted	Author, title, journal, year, volume, and pages numbers must be cited in the references. Any unpublished and/or grant applications used as a resource must be referenced.
IX. Appendices	No page limit, but should be brief	Optional. Tabular or graphic material only.

Page limitations are based on typed, double-spaced text (except for the Selected References section).

The proposal must be prepared in 14-point Times or Times New Roman, or a similarly sized typeface, with one-inch margins on all four sides, excluding the headers and page numbers. This will be strictly enforced for fairness and consistency.

The ability to meet the page limitations is one of the skills evaluated. Page limits are taken seriously by graders and papers that do not meet the page limits will be returned without a grade. To assure they meet the required page limits, students should allow extra time for editing and possible re-writing. Students should make use of appendices (limited to non-essential content) and tabular summaries where appropriate in order to save space for prose. If the written material exceeds the page limits, students must weigh the relative importance of the contents and make choices.

Within this framework, the organization and format of the exam paper is left to the student's discretion. The inclusion of tables and/or free-hand schematics and graphs is encouraged; these can be attached as an appendix.

## Review

The Exam Committee explicitly uses the following criteria during their evaluation. Students are encouraged to keep this in mind.

1. Significance
  - a. Is there a strong rationale for addressing the question based on the existing literature?
  - b. If the aims of the study are achieved, will scientific knowledge be advanced?
  - c. Is the study sound and logical?
2. Approach
  - a. Are the conceptual framework, design, methods, and analysis adequately developed, and appropriate to the aims of the project? While there is no restriction on the selection of the design, the graders will evaluate the appropriateness of the design to the project.
  - b. Does the proposal describe potential problem areas and consider alternative tactics?
3. Writing
  - a. Is the proposal written clearly and is it reasonably organized?
  - b. Are the questions and methods clearly described? The aims should flow clearly and logically from the background and the design should flow from the aims.
4. The ethics and feasibility of the research question and the study design are also considered.

Innovation and originality are considered in all evaluations. However, in many cases, an original presentation independent of existing grant material will be reviewed more favorably than ancillary hypotheses to an existing grant. If a student's proposal draws upon existing grants within the Division of Epidemiology and Community Health to address a research hypothesis, then appropriate adaptation to the particular hypothesis and additional innovation are needed to make the proposal adequate. In addition, appropriate citation is required.

A committee consisting of at least five members will be formed to evaluate each proposal. The committee will include Exam Committee members and *ad hoc* members drawn from the Epi Graduate Faculty, as needed, for expertise in particular content areas. [Students are not involved in putting together the committee that reviews their proposal; there is also no correlation between this committee and the committee eventually formed around the student's dissertation, the Preliminary and Final Oral Exam Committee.] The Exam Chair will select the *ad hoc* members after the research topic has been identified. Each proposal will be assigned one primary and two secondary reviewers, but each member of the Exam Committee will read each proposal. Primary and secondary reviewers will address the review criteria in their written critiques.

The Exam Committee, including *ad hoc* members, will schedule a meeting no more than three weeks after submission (two weeks will be the aim) to score the proposal. After the Exam Committee has scored the proposal, the student will receive a summative letter and written critiques from the Exam Chair.

## Evaluation

Each committee member will assess how well the student has met the criteria and assign a single, global score to the proposal. They should do so with the clear understanding that these proposals are from doctoral students who have been asked to develop a proposal on a topic that the student has had, at most, minimal exposure to, and without help from other students or faculty. The committee will evaluate the proposal based solely on the stated criteria (significance, approach, writing, ethics and feasibility). The Exam Chair informs the committee of the student's proposed topic, the given specific topic, and any contacts/questions by the student during the exam period. Also, the importance of keeping the student's identity blinded is reiterated to the committee.

A score of 90-100 (Pass with no revision) will be assigned to proposals that have no important weaknesses and are judged especially strong on all of the criteria. A score of 80-89 (Pass with revision) will be assigned to proposals that have no important weaknesses and are judged satisfactory on all of the criteria and to acceptable proposals that have important but no fatal weaknesses and are judged satisfactory on two of the criteria. A score of 70-79 (Not pass) will be assigned to proposals that have important but no fatal weaknesses and are judged satisfactory on only one of the criteria. A score below 70 (Not pass) will be assigned to a proposal that has one or more fatal weaknesses such that it could not provide a valid answer to the proposed research question even if it were carried out exactly as proposed.

Every effort will be made to reach sufficient consensus so that the range of scores from individual committee members is no more than 15 points. If the range of scores is greater than 15 points, the range will be announced and



the Exam Committee will re-score the proposal once. To pass the exam, a student must receive a score of 80 or above from a majority of the committee members. If a student does not pass Part B on the first vote, that result will be announced and the committee will have additional discussion and will re-score the proposal. The final result will be based on the second set of scores.

On occasion, a committee member might perceive a significant conflict of interest in being a grader. The Exam Chair will work with the committee member to resolve the conflict.

The following provide more detail about grading:

**Pass With No Revision: 90 and above**

Students who receive a score of 90 or above will have passed with no requirement for revisions. Students will be notified of the grade in a letter and will receive the written critiques with the letter, or shortly afterwards. Students are encouraged to review the written critiques and the proposal with their advisor.

**Pass with Revision: 80 - 89**

Students with a score from 80 - 89 from a majority of the committee on their original submission are required to complete a revision before officially passing the exam. This is the most commonly encountered scenario.

Students are expected to begin the revision within two to three weeks of receiving their grade on the original proposal. Students will have 17 days for the revision. Exceptions (e.g., because of such as illness) to the start date of the revision will be considered in special circumstances. Students will consult with the major coordinator, who will consult with the Exam Chair, to select the specific revision start date.

The purpose of the revision for a student who has passed the exam is to further the learning experience, not to do further testing of the student. Therefore, during the revision, the Exam Chair will choose, in consultation with the student, the faculty with whom the student can consult. For example, such consultants may include the reviewers from whom critiques were received, as well as the academic advisor and the Exam Chair. The student may receive substantive advice concerning the revision. The revision will consist of a point-by-point response to the criticisms and clear issues raised in the critiques (no page limit). If the student chooses to disagree with a reviewer's suggestion, a rationale must be provided.

*Evaluation of the revision*

The Exam Chair and the initial reviewers will review the point-by-point response. For students with an initial score of 80 - 89 points, re-scoring the proposal is not necessary, i.e., students will not receive a score lower than 80 points after the revision. The response needs to be deemed acceptable by the Exam Chair, who will inform the Major Coordinator that the student has officially passed. Thus, students with a score of 80 - 89 will pass the exam, but before their pass is officially registered, they must complete the revision process.

**Not Pass: 79 and below**

Students with a score below 80 from a majority of the committee on their original submission will not pass and must either revise their original proposal or undertake a second attempt (from the start) in a subsequent Part B exam cycle. If they choose a second attempt, they will write on a different topic. Students should consider the advice of the committee regarding these choices. Students will be notified of the grade in a letter.

If the student chooses to revise, they will have 17 days for revision. Students are expected to begin the revision within two to three weeks of receiving their grade on the original proposal. Exceptions (e.g., because of illness) to the start date of the revision will be considered in special circumstances. Students will consult with the major coordinator, who will consult with the Exam Chair, to select the specific start date.

The rules for the revision are similar to those for writing the original proposal. During the revision period, the student may discuss the revision with the reviewers from whom comments were received, as well as the Exam Chair. The student may NOT receive substantive advice concerning the revision, nor discuss the revision with his/her academic advisor nor anyone else. Thus, the student must work alone on the revision. Contacts with designated faculty are restricted to clarifications of the written critiques received. The student is expected to use his or her own resources to complete the revised exam.

In addition to changes to the main body of the proposal, the revision must include an introduction of not more than three pages (single-spaced) that summarizes the substantial additions, deletions, and changes. The introduction must also include responses to the criticisms and issues raised in the critiques. If the student chooses not to incorporate a reviewer's suggestion, a rationale must be provided. The substantive changes in the revised proposal must be clearly marked by appropriate redlining, bracketing, indenting, or changing of typography. If the changes are so extensive as to include most of the text, the Exam Chair should approve this exception. The student should not underline, shade, or italicize changes. Tracked changes would be OK if they are readable.

### *Evaluation of the revision or new proposal*

The Exam Committee and the initial reviewers will review the revised or new proposals. The proposals will be re-scored using the same guidelines used for scoring new proposals. Students who receive a score of 80 or above after the revision will pass the exam. Those who do not receive at least 80 points after the revision will fail this attempt of the exam. If the student fails the revision of the first topic, s/he may retake the exam one more time with a second topic. A student who fails the exam on the second attempt, including a revision process, will be expelled from the program. To illustrate, the most extreme example prior to expulsion would be failure of: the first topic, revision of first topic, second topic, and revision of second topic.

### **Summary and recommendations**

1. Students should allow time to think and gain perspective before committing themselves to the proposal.
2. The background should be a very concise review of the key epidemiologic factors, and of the most relevant research. Students should not spend too much time on the background. This section should summarize the literature that is relevant to the proposal.
3. Students should budget the time spent on various sections of the paper so that an appropriate balance is reflected in the final product. The background should summarize both the current state of knowledge as well as the pending questions, using these to formulate research questions.
4. A proposed study should not deviate substantially from the research question as stated. A shift in focus may be appropriate for certain questions, but this decision must be supported in the proposal.
5. The topic selected cannot be his/her current research area prior to the exam; but, if the student chooses it, research in this area could continue, even to form the topic of the PhD dissertation. Thus the PhD exam chair and the advisor jointly try to find a topic not entirely unfamiliar to the student, but that will take much research to flesh out into something innovative. Sometimes the idea is to give a question in a direction the advisor would like the student to go, or that the student has expressed an interest in. This should make the Part B exam process more pertinent to the total scheme of studies for the PhD.
6. Students should not prepare a budget nor be overly concerned about cost issues pertaining to the proposed research. Instead, they should consider the overall feasibility of the proposed research, not just fiscal feasibility, within reason. A generally unrealistic proposal will be scored poorly.
7. Typically, there is no pre-determined "right or wrong" response in this type of examination since it tests a combination of substantive and methodological skills, as well as personal choice and decision. Student should share the thinking and criteria that led to their choices of study design, protocol, and/or analysis. This should include the pros and cons of the research question, methodology, sample selection, etc., as well as alternatives considered and why they were not the final choice.
8. Students may refer to a hypothetical population that has characteristics (e.g., exposure levels, number of cases that accrue) similar to populations described in the literature. If desired, the proposed study may be conducted outside the United States, with justification for whatever study population is chosen.
9. Students should document their reasoning in the choice of the hypothesis (es), study design, and measurements. Similarly, the reviewer should be able to see what criteria they used in reviewing the literature and establishing their satisfaction with what is known and with what is not yet sufficiently well known in the field.
10. Measurement instruments should be discussed in the proposal. For example, it may be necessary to state that a measure has been previously validated or to note that the investigator will need to validate it, as well as how this is to be done, if pertinent.
11. Research applied to human subjects must consider privacy, informed consent, and ethical safeguards.

**In summary**, graders look for an awareness and critical understanding of the literature, a grasp of the key theoretical issues, a defensible idea of what to do next, the appropriate methodology for the proposed research, and recognition of the limitations of what is proposed. Throughout the proposal, students should be sure to convey their reasoning and knowledge of epidemiologic concepts above and beyond generic use of terms. Note that a logical, simple question is often the best approach.

## 2.5 Graduate Faculty

### Primary Faculty

CBE is Clinical and Biological EPI

SBE is Social and Behavioral Epi

Name	Phone	E-Mail	Track	Research Expertise
Kristin Anderson, PhD, MPH	626-8568	andeson_k@epi.umn.edu	CBE	Cancer etiology; Laboratory-based cancer epidemiology; Pancreatic cancer; Adult solid tumors
Henry Blackburn, MD, MS	626-9396	blackburn@epi.umn.edu	CBE	Cardiovascular disease epidemiology and prevention and its history; Nutrition and chronic disease; Evolution and culture in mass disease; Epidemiology and prevention in public policy
Richard Crow, MD	626-9678	crow@epi.umn.edu	CBE	Preventive cardiology programs, trials and methods; Cardiac rehabilitation and work psychology; Ambulatory ECG recording; Computer applications
Susan Duval, PhD	624-3392	duval@epi.umn.edu	CBE	Cardiovascular and diabetes epidemiology; Biostatistical methods; Meta-analysis; Publication bias; Statistical consulting
Darin Erickson, PhD	626-0516	erickson_d@epi.umn.edu	SBE	Alcohol prevention and etiology; Latent variable analysis; Longitudinal and time series analysis
John Finnegan, Jr., PhD	624-5544	finne001@umn.edu	SBE	Media communication and public health; Community campaigns; Media agenda building; Digital information technology and its impact on public health
Andrew Flood, PhD	624-2891	flood@epi.umn.edu	CBE	Nutritional epidemiology; Cancer epidemiology with emphasis on colorectal cancer; Insulin resistance; IGFs and their binding proteins
Aaron Folsom, MD, MPH	626-8862	folsom@epi.umn.edu	CBE	Cardiovascular disease epidemiology; Heart disease surveillance and risk factors
Jean Forster, PHD, MPH (on sabbatical Jan 08 to Jan 09)	626-8864	forster@epi.umn.edu	SBE	Public health policy as a prevention strategy; Community-based strategies for chronic disease prevention; Tobacco policy
Simone French, PhD	626-8594	french@epi.umn.edu	SBE	Social and environmental influences on eating and physical activity Behaviors; Community-based strategies for eating behavior change; Adolescent nutrition and physical activity
Peter Hannan, MStat	624-6542	hannan@epi.umn.edu	SBE	Statistical: Group randomized trials, and hierarchical statistical models in general; generalized regression; imputation procedures for missing values; ROC curves, sensitivity and specificity; classification and regression tree methodology; bayesian statistical methods (I am not *practiced* in this area); structural equation models, latent

				variable models; directed acyclic graphs (DAGs). Substantive: accelerometry, energy balance, healthy diet, overweight risks
Bernard Harlow, PhD, MPH	626-6527	harlow@epi.umn.edu	CBE/SBE	Clinical and population-based reproductive epidemiology; the epidemiology of reproductive cancers; data collection methods; and influence of psychiatric disorders on reproductive function
Lisa Harnack, DrPH, RD	626-9398	harnack@epi.umn.edu	CBE/SBE	Nutritional epidemiology; Nutritional assessment
Eileen Harwood, PhD	626-1824	harwood@epi.umn.edu	SBE	Social epidemiology; Policy evaluation of alcohol, tobacco and illicit drugs
Wendy Hellerstedt, PhD	626-2077	hellerstedt@epi.umn.edu	CBE/SBE	Birth outcomes for underserved women; adolescent reproductive health and pregnancy prevention; pregnancy intention; relationship of parity to chronic disease and birth outcomes, women's health, perinatal and reproductive health, socioeconomic status and health disparities
Deborah Hennrikus, PhD	626-8646	hennrikus@epi.umn.edu	SBE	Smoking cessation; Reducing environmental tobacco smoke exposure; Health education in clinical settings
John Himes, PhD	624-8210	himes@epi.umn.edu	CBE/SBE	Child growth and nutrition; Anthropometric assessment of nutritional status; Dietary assessment; Obesity and body composition
David Jacobs, Jr., PhD	624-4196	jacobs@epi.umn.edu	CBE/SBE	Cardiovascular disease epidemiology; Nutritional epidemiology
Robert Jeffery, PhD	626-8580	jeffe001@umn.edu	SBE	Health behavior change; Dietary intervention; Obesity epidemiology, treatment, and prevention
Rhonda Jones-Webb, DrPH	626-8866	jones@epi.umn.edu	SBE	Alcohol studies; Alcohol policy as a prevention strategy; Minority health issues; behavioral epidemiology
Harry Lando, PhD	624-1877	lando@epi.umn.edu	SBE	Global issues in tobacco reduction; Smoking cessation; Treatment of medically compromised smokers
DeAnn Lazovich, PhD	626-9099	lazovich@epi.umn.edu	CBE/SBE	Cancer prevention and control; Cancer epidemiology
Alan Lifson, MD, MPH	626-9697	lifson@umn.edu	CBE	HIV/AIDS; International health; Infectious disease epidemiology
Jennifer Linde, PhD	624-0065	linde@epi.umn.edu	SBE	Obesity prevention and intervention, Weight control behaviors, Weight loss goals, Public health messages
Russell Luepker, MD, MS	624-6362	luepker@epi.umn.edu	CBE/SBE	Cardiovascular disease epidemiology and prevention; Health behavior; Community trials; Clinical trials
Leslie Lytle, PhD, RD (on sabbatical 07-08)	624-3518	lytle@epi.umn.edu	SBE	Planning and evaluating eating behavior change interventions in children; Youth

academic year)				health promotion research; Theories of health behavior
Michael Miller, PhD, MS, MPE	625-7836	miller_mb@umn.edu	CBE	Statistical analysis; Genetic and epidemiological processes
Claudia Munoz-Zanzi, MV, MPVM, PhD	626-2849	munoz@epi.umn.edu	CBE	Infectious disease
Melissa Nelson, PhD	624-8832	nelson@epi.umn.edu	SBE	Environmental and behavioral determinants of excess weight gain and obesity during childhood, adolescence and young adulthood
Dianne Neumark-Sztainer, PhD, MPH	624-0880	neumark@epi.umn.edu	SBE	Adolescent health and nutrition, Obesity and eating disorder prevention, Health behavior change, Nutrition education program design and evaluation
J. Michael Oakes, PhD	624-6855	oakes@epi.umn.edu	CBE/SBE	Quantitative methods; Social epidemiology; Research ethics
Charles Oberg, MD, MPH	625-6616	oberg@epi.umn.edu	CBE/SBE	Health disparities; Childhood poverty; Health care access and finance
James Pankow, PhD, MPH	624-2883	pankow@epi.umn.edu	CBE	Cardiovascular disease epidemiology; Genetic epidemiology; Diabetes epidemiology
Marguerite Pappaioanou, DVM, MPVM	624-7554	pappa@epi.umn.edu	CBE	Infectious diseases with an emphasis on emerging zoonotic infectious diseases
Mark Pereira, MPH, PhD	624-4173	pereira@epi.umn.edu	CBE/SBE	Nutrition and physical activity in the prevention of obesity; Type 2 diabetes and cardiovascular disease
Kim Robien, PhD, RD	625-8279	robien@epi.umn.edu	CBE	Nutrition, molecular epidemiology, cancer survivorship, pharmacogenetics, evidence-based nutrition practice, medical nutrition therapy, parenteral nutrition, hematopoietic cell transplantation
Simon Rosser, PhD, MPH	624-0358	rosser@epi.umn.edu	SBE	HIV prevention research; Human sexuality; Sex offending and religious identity; Internet-based research; e-Public Health
Pamela Schreiner, PhD	626-9097	schreiner@epi.umn.edu	CBE	Etiology of cardiovascular disease particularly as it relates to lipids, obesity, visceral fat accumulation and the perimenopausal transition; Osteoporosis
John Sirard, PhD	626-1733	sirard@epi.umn.edu	SBE	Assessment of physical activity; the role of physical activity in the prevention and treatment of obesity in children and adolescents
Lyn Steffen, PhD, MPH, RD	625-9307	steffen@epi.umn.edu	CBE	Cardiovascular disease epidemiology; nutritional epidemiology; surveillance of cardiovascular disease risk factors
Mary Story, PhD, MS	626-8801	story@epi.umn.edu	SBE	Child and adolescent nutrition, Obesity prevention, Eating behaviors, Environmental and policy change related to healthy eating

Traci Toomey, PhD, MPH	626-9070	toomey@epi.umn.edu	SBE	Policy research; Community organizing; Prevention of alcohol and tobacco-related problems; Intentional and unintentional injury prevention
Jian-Min Yuan, PhD, MD	625-8056	yuan@epi.umn.edu	CBE	Environmental and genetic factors in the etiology of cancer

### Adjunct Faculty

Name	Phone	E-Mail	Track	Research Expertise
Bruce Alexander, PhD, MS	625-7934	balex@umn.edu	CBE	Occupational and environmental epidemiology; environmental determinants of injury, cancer, respiratory health, reproductive health; global health; application of biological markers in epidemiological research; exposure models for occupational and environmental epidemiology
Alan Bender, PhD, DVM	651-201-5882	Alan.Bender@state.mn.us	CBE	Occupational epidemiology, public health surveillance; public health policy
Jeff Bender, DVM	625-6203	bende002@umn.edu	CBE	Antimicrobial resistance; food safety; zoonoses and emerging diseases
Sally Bushhouse, DVM, MPH, PhD	676-5374	sally.bushhouse@state.mn.us	CBE	Cancer epidemiology and surveillance
Timothy Church, MS, PhD	626-1494	churc001@umn.edu	CBE	Cancer screening, prevention, and causes; Epidemiologic study design; Cardiac disease and medical devices
Richard Danila, PhD	676-5116	richard.danila@state.mn.us	CBE	Emerging infectious diseases including foodborne and bacterial diseases; Preparedness for bioterrorism
Marla Eisenberg, ScD, MPH	626-2942	eisen012@umn.edu	SBE	Influences on adolescent sexual behaviors; health issues of gay, lesbian and bisexual youth; body image and weight control behaviors; teasing and bullying
Lael Gatewood, PhD	625-4909	lael@umn.edu	CBE	Health Informatics; Micropopulation; Simulation Health Services Research
Richard Grimm, PhD, MD	347-7756	grimm001@umn.edu	CBE	Clinical trials on hypertension, lipids, CV risk; Women's health; Complementary and alternative medicine
Myron Gross, PhD	624-5417	gross@umn.edu	CBE	Antioxidants, oxidative stress and genetic susceptibility in coronary heart disease; Genetic susceptibility and DNA repair in breast and pancreatic cancer; role of micronutrients and flavonoids in aging and disease; Bio-markers of dietary intakes.
Craig Hedberg, PhD	626-4757	hedbe005@umn.edu	CBE	Food safety and infectious diseases
Robert Kane, MD	624-1185	kanex001@umn.edu	CBE	Outcomes of acute and long-term care, especially the effects of hospital and post-hospital care; epidemiology of aging; managed care; assessment; long-term care policy

Arthur Leon, MD	624-8271	leonx002@umn.edu	CBE	Exercise science; Exercise physiology
George Maldonado, PhD, MSPH	626-2104	GMPHD@umn.edu	CBE	Epidemiologic methodology
Marshall McBean, MD, Msc	625-6175	mcbea002@umn.edu	CBE	Use of HCFA data for health policy research; access to care and quality of care, particularly among elderly Americans; cancer surveillance, treatment and outcomes; diabetes epidemiology and treatment; immunization of adolescents; use of health services among the elderly and among different racial groups
Joseph Neglia, MD, MPH	626-2778	jneglia@umn.edu	CBE	Pediatric Hematology/Oncology
Michael Osterholm, PhD, MPH	626-6770	mto@umn.edu	CBE	national leader detailing the growing concern regarding the use of biological agents as catastrophic weapons targeting civilian populations. After 9/11, served as Special Advisor to Secretary Tommy G. Thompson on issues related to bioterrorism and public health preparedness
John Oswald, PhD, MPH	676-5187	john.oswald@state.mn.us	SBE	Health statistics; behavioral Health Survey-Based Surveillance
Julie Ross, PhD, MPH	625-5437	ross@epi.umn.edu	CBE	Molecular epidemiology; Childhood cancer; Adult leukemia
Randall Singer, DVM, MPVM, PhD	625-6271	singe024@umn.edu	CBE	Infectious disease epidemiology; Ecologic approach to disease systems
Logan Spector, PhD	624-3192	spector@epi.umn.edu	CBE	Etiology of childhood cancer; Design, conduct; Analysis of epidemiologic studies.
Michelle van Ryn, PhD, MPH	625-9105	vanryn001@umn.edu	SBE	Characteristics of formal and informal social relationships as they influence the quality and success of health interventions, health behaviors, and health outcomes; provider behavior; race/ethnicity disparities in treatments received; quality of cancer care
Beth Virnig, PhD, MPH	624-4426	virni001@umn.edu	CBE	Administrative data for cancer surveillance and studies of treatment patterns

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## 2.6 Preliminary Oral Examination Guidelines

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### Introduction

A student should take the preliminary oral examination after successful completion of the written examination (Parts A and B) and, optimally, within 24 months of finishing coursework (see the section on *Milestones*). The purpose of the preliminary oral examination is to confirm that the student is ready to begin work on her/his dissertation. It involves two phases: (1) the development of a written proposal of the dissertation; and (2) its oral defense by the student. It is the responsibility of the student to schedule the examination with his/her dissertation committee and notify the Graduate School at least one week before the examination. This written notification is made with a form provided by



the Graduate School. To get the process started, the student contacts the Graduate School Student Services office, specifically the “Doctoral Exam Scheduling: Preliminary Exam” office, at 612-625-4019. Also, please see *section 2.8* “Human Subjects Research” before starting any dissertation work.

### **The dissertation committee**

The dissertation committee is selected by the student and the academic advisor (and co-advisor, if applicable), and will be the student’s committee throughout the dissertation development and completion. The committee is composed of at least four members, one of who must be outside of the Epi graduate faculty. All members must have Graduate School appointments. The Preliminary Oral Chair can be the student’s dissertation advisor if the advisor is a Senior Member. If the advisor is not a Senior Member, the Chair will be the co-advisor. This is in contrast to the Final Oral Examination Committee, where neither the advisor nor co-advisor can be the Chair. For that committee, another Senior Member, either an inside or outside member, must be the Chair. It is typical for the student to meet with individual committee members, as well as with her/his advisor, for advice throughout the dissertation process. Typically, the committee meets as a whole only twice: once for the preliminary oral examination and once for the final oral examination. However, the committee can meet as often as the student or the committee requires to guide the dissertation process.

### **The written proposal**

The student is required to write a proposal that describes the aims and methods of her/his dissertation. The purpose of the written proposal is to provide the student and the committee members with a clear understanding of the nature of the proposed dissertation, its feasibility, and its relevance to the field. The preparation of the written proposal is an important process for the student as it creates the opportunity to design the dissertation work and to identify possible problems early in the process. The written proposal is also an efficient way to engage committee members as they assist the student in articulating and meeting the dissertation goals. By preparing a written document—and by conducting a defense of it—the student and her/his committee have a process through which they can agree upon the scope of the final product (i.e., the final dissertation). The written proposal thus can insure that the student and the committee members know what product to expect at the final dissertation defense. In many cases the dissertation will resemble the preliminary written proposal quite closely. However, due to unforeseen circumstances or the natural progression of the analyses, it is possible that the dissertation may differ in scope or content. It is important that the student apprise the committee if s/he believes the dissertation will differ significantly from the written proposal presented at the preliminary oral examination.

The exact format of the proposal is at the discretion of the dissertation advisor and the committee with input from the student. See *section 2.7*. Typically, the following content should be covered:

- The research objectives, typically described as primary and secondary aims.
- A literature review of related research, which will provide a rationale to support the proposed choice of variables, study design, population, etc.
- The theoretical model that will guide variable selection and analysis.
- A description of the proposed design and analytic methods, including a discussion of potential shortcomings and how they will be addressed.
- A description of the anticipated major results, reflecting the scientific merit of the proposed research. This description may include “mock tables” (i.e., no data, but rather a list of variables and row/column headings). Data may be presented if they are available when the student is preparing the written proposal.
- Possible limitations of the proposed research.
- References. A conventional citation style should be used consistently throughout the text.

The length of the proposal has varied historically, but a range of 30-100 double-spaced pages is typical. Because this is an important document, the student normally will write several drafts and review them with her/his advisor, as well as other committee members as needed, before submitting the proposal to the full committee. The student’s advisor should give guidance as to when the proposal is sufficiently strong and is ready to defend. The program strongly encourages students to follow the guidance of the advisor at this stage.

**The student should submit the final written dissertation proposal to the full committee at least two weeks before the preliminary oral examination unless other arrangements have been made.**

### **The preliminary oral examination**

The preliminary oral examination, administered by the student’s committee, is not a comprehensive exam. Its purpose is to evaluate the student’s ability to conduct a feasible, cohesive and rigorous dissertation and thus focuses



on plans for dissertation design and analysis. The exam varies in terms of its length, but is usually one and a half to two hours. Typically, the student will formally present an outline of her/his proposal and will be asked questions about its purpose, rationale, study design, and potential to advance knowledge. Committee members will examine the practical aspects of the proposed plan and its application of epidemiologic principles in design, analysis, and interpretation. The committee members will vote to pass, pass with reservations, or fail, based on the quality of both the written proposal and the oral defense. Upon successful defense of the written proposal, the student will have agreement from his/her committee regarding the direction and focus of the dissertation, and a clear blueprint from which to continue the dissertation work.

Please note there are very specific guidelines in the Graduate School catalog regarding the Preliminary Oral Exam, and these can be found at <http://www.catalogs.umn.edu/download/TCgrad/gradintro07.pdf>, starting on page 21.

The Graduate School has some guidelines regarding “Failure of the Preliminary Oral Examination” which are: “Students who fail the examination may be excluded from candidacy for the degree or may be allowed, on unanimous recommendation of the examining committee, to retake the examination, *providing the reexamination is conducted by the original preliminary oral examining committee*. In no case may the reexamination take place before 10 weeks have passed. No more than one reexamination is allowed.” There are also specific guidelines regarding the circumstance wherein a committee recesses without having determined whether a student has passed the examination.

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## 2.7 Graduate School Forms and Procedures

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The following are available on-line at [www.grad.umn.edu/current\\_students/forms/](http://www.grad.umn.edu/current_students/forms/). Please see the Major Coordinators or download from the web the following forms and/or documents (these links will be on the Epi Graduate Student’s Homepage accessible by going to [www.epi.umn.edu](http://www.epi.umn.edu)):

- **Degree Program form (GS 89)**

This form needs to be turned in approximately one semester (at least 8 – 10 weeks) prior to scheduling the Preliminary Oral Examination. Delay in completing and submitting this form may result in a delay in the scheduling of the exam.

After successfully passing the Preliminary Written Examination, students should work on completing this form with the major coordinator.

- **Petition form (GS 59)**

For transferring courses (not included on the student’s Degree Program Plan), requesting dropping a course from the Degree Program form, etc.

- **Thesis /Project Proposal form (GS 63)**

This form is completed and submitted after the Preliminary Oral Examination and before the Final Oral Examination. The form should be completed at least two months prior to the Final Oral Examination; please see the major coordinator with assistance with the form.

- **Preparation of the Doctoral Thesis/Project(GS 16)**

A document with detailed specifications for the PhD Thesis

- **Graduation Packet Request form**

Graduation packets will be mailed to students in three working days. If there are questions or concerns about the request, the student will be contacted in a few working days. (The Graduate School no longer requires submission of the thesis title page in order for doctoral students to obtain the graduation packet.)

The Major Coordinators can assist in getting any additional forms or information about procedures and policies for PhD students.

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## 2.8 Published Work and the PhD Dissertation

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An acceptable alternative to the traditional dissertation is to publish a series of papers on a related theme and combine these with a summary paper reviewing the studies to form the basis of the dissertation. Several issues are involved, including the basic structure of this alternative format, the number of papers, authorship, acceptable journals, and the role of the committee. Such issues are resolved between the advisor, the student, and the committee.

Numerous PhD dissertation committees in the Division have considered three first-authored papers to be sufficient. Individuals seeking this alternative approach to the traditional dissertation should present their program plan to their committee members as part of the Preliminary Oral, and the committee members will decide the number of manuscripts and authorship necessary to satisfy requirements.

If all or part of the dissertation is initially in a form appropriate for submission to a professional journal, the following apply:

1. The research must have been carried out under the direction of the Epi graduate faculty and approved by the student's advisor for incorporation into the dissertation.
2. The advisor should notify the Graduate School in writing of the intention to publish a part of the dissertation material, but the Graduate School's approval is not required.
3. Students must be listed as the sole author of their dissertation (editorial or substantive contributions with general significance made by others should be acknowledged in the prefatory materials; more specific contribution should be acknowledged by footnotes where appropriate).
4. Manuscripts that include research other than the student's should make the student's contribution clear to the committee.
5. A suitable introduction is required, as are transition sections that might not ordinarily be included in the published manuscript. The manuscripts should be followed by a global conclusion section.
6. Where appropriate, a comprehensive literature review, not usually permitted by journals, should be part of the submitted dissertation.
7. The manuscripts should form a cohesive package of related topics, building depth in a substantive area.
8. The Graduate School stipulates that a PhD dissertation may include materials that an individual has published while a University of Minnesota graduate student. In this case, students must obtain from the publisher a letter authorizing their use of this material; a copy of this letter must be bound as part of the dissertation.
9. Appendices should be added to the manuscript as necessary to provide the comprehensiveness not ordinarily permitted by scholarly journals.
10. Binding of reprints of the manuscripts or the published articles is acceptable if they are satisfactorily (and legally) reproduced on thesis-quality paper and conform to all the format specifications described in this information sheet.

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## 2.9 Other Information

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### Human Subjects Research

All students at the University of Minnesota who conduct any research using human subjects **are required to submit their research proposal to the University of Minnesota Institutional Review Board, for approval prior to conducting their study.** This procedure is necessary even for students who are doing secondary data analysis.

### Criminal Background Check

Certain facilities are required by Minnesota law to submit paperwork for a criminal background check for all personnel with direct, unsupervised client contact. Students who have fieldwork, master's project, or dissertation is in such a facility, may be asked by the institution to submit paperwork.

### Assistance with Writing

There are helpful resources for writing skills at the University. The primary resource is the Center for Writing; their email is <http://writing.umn.edu>; and phone number is 612.626.7579.