Epidemiology

PhD Degree Program

Division of Epidemiology and Community Health

2008-2009 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/> .

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.

School of Public Health Directory

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**
Carol Francis, Asst Director of Student & Acad Services	624-6952	franc004@umn.edu
Lori Herzong, Assistant for Student Recruitment	624-2494	herzo086@umn.edu
Micaela Kucinski, Principal Office and Administrative Specialist	624-7660	kuci0005@@umn.edu
Barbara Laporte, Assistant Director and Counselor, Career Services	626-5443	lapor006@umn.edu
Melvin Monette, Director of Student Recruitment	624-0601	monet008@umn.edu
Kristina Pearson, Principle Operations & Student Services Specialist	626-8908	pearson@umn.edu
Guy Piotrowski, Coordinator of Applications and Admissions	624-1991	piotr005@umn.edu
Division of Epidemiology and Community Health		
Division Head – Bernard Harlow, PhD, MPH	626-6527	harlow@umn.edu
Director of Graduate Studies, Clinical Research – Russell Luepker, MD	624-6362	luepk001@umn.edu
Director of Graduate Studies, Epidemiology – Pamela Schreiner, PhD	626-9097	schre012@umn.edu
Major Chair, Community Health Education – Deborah Hennrikus, PhD	626-8646	hennr001@umn.edu
Major Chair, Epidemiology – James Pankow, PhD, MPH	624-2883	panko001@umn.edu
Major Chair, Maternal & Child Health – Wendy Hellerstedt, PhD, MPH	626-2077	helle023@umn.edu
Major Chair, Public Health Nutrition – Jamie Stang, PhD	626-0315	stang002@umn.edu
Major Coordinators (general)	**626-8802**	**epichstu@umn.edu**
Andrea Kish – Senior Coordinator (Clinical Research MS and Epi PhD)	626-9989	kish@umn.edu
Shelley Cooksey – Major Coordinator (Epi MPH and PubH Nutrition MPH)	626-8803	cooks001@umn.edu
Kathryn Schwartz – Major Coordinator (CHE MPH and MCH MPH)	626-2247	schwa139@umn.edu

1. DIVISION OF EPIDEMIOLOGY AND COMMUNITY HEALTH

1.1 Welcome

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.....epichstu@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

1.2 The West Bank Office Building (WBOB)

The offices are located in the West Bank Office Building (WBOB) at 1300 South 2nd 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. Once each morning and afternoon the shuttle does take a trip to the Minnesota Department of Health (MDH). Please check the schedule to see when those trips occur. The schedule will be emailed to students, staff and faculty. The Summer schedule is usually less frequent.

Parking Options for WBOB

- Park on the East Bank and use the EpiCH shuttle.
- Affordable ramp parking (approximately $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 epichstu@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 http://www.epi.umn.edu/students/guidebook.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 epichstu@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 forth 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 computers have SAS and two of them have STATA. 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.

1.3 Division Communication with Students

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 access to your account for up to five years after your 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.
- **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/news/epichnews.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.

1.4 Seminars

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/news/seminars.asp,

1.5 Academic Credit for Independent or Directed Coursework

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 http://www.epi.umn.edu/students/guidebook.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.

1.6 Division Resources and Policies

Incomplete Grades

For MPH 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).

Sitting in on a Class

Students are not permitted to attend a class for which they are not registered. This means that if you are unable to register for a class before it begins for any reason you may not attend the class.

Support for Student Travel

The current Division policy is as follows:

1. The Division will provide up to $800 per student in a 12 month period [a maximum of $3,200 available for all students during the fiscal 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.
   - A summary of the travel expenses (cost of air fare, hotel price, registration fees, etc).
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 a fee if it is necessary for them to complete research. Additional information on ordering the software is available 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 via email to all current students with instructions on how to schedule an appointment. You may contact Judy at baxte003@umn.edu.

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.asp.

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.
8. 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% research assistantship in the Medical School.

Approved 7/1/03, revised 06/08

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 and Community Health Websites

EpiCH website ..... http://www.epi.umn.edu

EpiCH Student Guidebook and Forms ..... http://www.epi.umn.edu/students/guidebook.shtm

EpiCH course grid ..... http://www.epi.umn.edu/students/coursegrid.shtm

Course syllabi ..... http://www.epi.umn.edu/students/syllabi.shtm

Job Tip Sheet ..... http://www.epi.umn.edu/students/pdf/jobtipsheet.pdf

EpiCH faculty information ..... www.epi.umn.edu/people/index.asp

EpiCH seminar ..... http://www.epi.umn.edu/news/seminars.asp

EpiCH telephone directory ..... http://www.epi.umn.edu/people/index.asp

Grant writing information ..... http://www.epi.umn.edu/support/grants.shtm

1.7 Division Advising Information

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 .

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.

Student Guide to Mission, Definitions and Expectations of Advising

Mission Statement

The School of Public Health strives to provide advising that promotes collaboration among students, staff and faculty to enhance students' academic and professional development in the field of public health. The School's goal is educational and experiential excellence that prepares students for successful careers improving the health of populations.

Defining Advising

The School of Public Health is committed to creating and sustaining high quality advising in the following four areas:

1. **Administrative Advising**: advising on course planning and scheduling, policies, procedures and benchmarks of the degree program/major, SPH, and the University.

2. **Academic Advising**: general guidance on topics related to program/major including, but not limited to program focus (may include identifying appropriate course work options), project selection and career planning.

3. **Field Experience/Internship/Practicum Advising**: specific and targeted advising for field experience/internship/practicum development, placement and completion.

4. **Masters Project/Thesis/Plan A&B/Dissertation Advising**: specific and targeted direction on a master's project or a PhD dissertation including, but not limited to development, completion and in some cases publication.

Advising Expectations for Students
SPH students are expected to…

- Regularly read and respond to University email (ideally once per day); email is the official mode of communication at the University of Minnesota
- Review program objectives and educational documents at least once per semester, (i.e. Student Guidebook, etc.), or when directed by major coordinator or major chair/DGS; students are responsible for knowing the requirements of the degree program
- Actively contribute to a welcoming and supportive SPH climate
- Initiate meetings with advisor(s) at least once per semester; regularly communicate with faculty advisor(s) and/or major coordinator about program progress
- Respond to inquiries from faculty or staff in a timely manner (ideally within 5 – 7 business days)
- Behave in a professional and courteous manner; fulfill educational and advising commitments, such as appointments, project deadlines, etc.

Faculty Guide to Mission, Definitions and Expectations of Advising

Mission Statement
The School of Public Health strives to provide advising that promotes collaboration among students, staff and faculty to enhance students' academic and professional development in the field of public health. The School's goal is educational and experiential excellence that prepares students for successful careers improving the health of populations.

Defining Advising
The School of Public Health is committed to creating and sustaining high quality advising in the following four areas:

1. **Administrative Advising**: advising on course planning and scheduling, policies, procedures and benchmarks of the degree program/major, SPH, and the University.

2. **Academic Advising**: general guidance on topics related to program/major including, but not limited to program focus (may include identifying appropriate course work options), project selection and career planning.

3. **Field Experience/Internship/Practicum Advising**: specific and targeted advising for field experience /internship/practicum development, placement and completion.

4. **Masters Project/Thesis/Plan A&B/Dissertation Advising**: specific and targeted direction on a master's project or a PhD dissertation including, but not limited to development, completion and in some cases publication.

Advising Expectations for Faculty
Faculty advisors are expected to…

- Refer advisee to Major Coordinator for course planning/scheduling, policy and procedural information
- Review program objectives and educational documents at least on an annual basis, (i.e. Student Guidebook, etc.), or when directed by major coordinator or major chair/DGS
- Actively contribute to a welcoming and supportive SPH climate
- Initiate meetings with advisee at least once per semester; regularly communicate with students on program progress
- Respond to student inquiries in a timely manner (ideally within 5 – 7 business days)
- Provide reasonable office hours and/or appointments and be generally available to student inquiries; communicate with students about extended absences or travel
- Serve as a model and example of respectful behavior
- Provide referrals to school and university resources when appropriate (e.g. Student Mental Health Services)

1.8 Division Courses 2008-2009

Number	Title	Credits	Offered	Instructor(s)
60xx	Obesity and Eating Disorders: Treatment, Prevention & Policy	2.0	Spring	Pereira/French
6000	Topics: E-Public HIth: On-line Interventions	3.0	Fall	Rosser and Others
6015	HIV/AIDS: Epi & Pub HIth Interventions	2.0	Fall	Rosser
6020	Fundamentals of Social and Behavioral Science	3.0	Fall	T. Nelson
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
6045	Skills for Policy Development	1.0	Spring	Toomey
6049	Legislative Advocacy Skills for Public Health	3.0	Spring	Forster/Toomey
6050	Community Health Theory and Practice I	3.0	Fall	Lytle
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 '09	Patterson
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	Spring	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
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/Spring	Luepker
6320	Fundamentals of Epidemiology (web course)	3.0	Summer	Anderson
6320	Fundamentals of Epidemiology	3.0	Fall	Lazovich
6320	Fundamentals of Epidemiology (web course)	3.0	Fall/Spring	Punyko
6325	SAS Programming for Data Management	1.0	Fall/Spring (January)	Oakes
6333	Human Behavior I	2.0	Fall	Lytle
6334	Human Behavior II	2.0	Spring	Hennrikus
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/Munoz-Zanzi
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	Oberg/Crow
6360	Obesity & Eating Disorders: Etiology/Epidemiology	2.0	Fall	French
6363	Community Trials	3.0	Spring	Oakes/Hannan
6381	Genetics in Public Health	2.0	Fall	Demerath
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: Social Epidemiology	2.0	Spring	Oakes
6600	Topics: Global Reproductive Health	2.0	Fall	Hellerstedt
6605	Reproductive and Perinatal Health	2.0	Spring	Hellerstedt
6606	Children's Health: Issues, Programs & Policies	2.0	Summer	Oberg
6606	Children's Health: Issues, Programs & Policies (web course)	2.0	Spring	Oberg
6607	Adolescent Health: Issues, Programs & Policies	2.0	Spring	Hellerstedt
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	Oberg
6634	Advocacy and Children's Rights	2.0	Spring	Oberg
6650	Community-Based Participatory Research	1.0	May	Hellerstedt/Call
6655	Principles and Programs in MCH (web course)	2.0	Summer	Patterson
6673	Grant Writing for Public Health	1.0	May	Toomey
6901	Public Health Nutrition: Principles & Programs	2.0	Fall	Stang/Story
6902	Maternal and Infant Nutrition	2.0	Fall	Stang
6902	Maternal and Infant Nutrition (web course)	2.0	Summer '09	Stang
6903	Child and Adolescent Nutrition	2.0	Fall	Story
6904	Nutrition and Aging	2.0	Sum	TBD
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.
8377	Seminar: Chronic Disease and Behavioral Epi	1.0	Fall/Spring	Jacobs/Harlow

2. EPIDEMIOLOGY PHD DEGREE PROGRAM

2.1 Fall 2008 Program Curriculum

63 Credit Minimum

Required Core Courses: 17 credits plus 24 thesis credits

Course	Notes	Title	Offered	Credits
PubH 8300		Topics: Epidemiology: Advanced Epidemiologic Methods: Concepts	Fall	3
PubH 8300		Topics: Epidemiology: Advanced Epidemiologic Methods: Applications	Spring	3
PubH 7401		Fundamentals of Biostatistics Inference	Fall	4
PubH 6348		Writing Research Grants (S/N only) [take section 002]	Fall	2
PubH 8377		Seminar in Chronic Disease and Behavioral Epidemiology (S/N only)	Fall or Spring	1
GRAD 8101		Teaching in Higher Education (must take for A grade option)	All terms	3
PubH 6742		Ethics in Public Health: Research and Policy	All terms	1
PubH 8888		Dissertation credits	All terms	24

Clinical/Biological Track: 22 credits minimum

Biological Methods/Statistics: 6 credits minimum				
Course	**Notes**	**Title**	**Offered**	**Credits**
PubH 7420		Clinical Trials: Design, Implementation, and Analysis (required)		3
Choose additional biological methods/statistics credits from the following courses:				
PubH 6363		Design and Analysis of Group-Randomized Trials in Epidemiology		3
PubH 7430		Statistical Methods for Correlated Data		3
PubH 7435		Latent Variable Measurement Models and Path Analysis		3
PubH 7407		Analysis of Categorical Data		3
EPSY 8268		Hierarchical Linear Modeling in Educational Research		3
EPSY 8282		Statistical Analysis of Longitudinal Data		3
PubH 8140		Validity Concepts in Epidemiologic Research		2
PubH 6915		Nutrition Assessment		2
PubH 7445		Statistics for Human Genetics and Molecular Biology		3
PubH 8141		Doctoral Seminar in Observational Inference		2
PubH 6355		Pathophysiology of Human Disease		4
PubH 7402		Biostatistical Modeling and Methods		4
Content area courses: 4 credits minimum Choose from the following courses:				
PubH 6386		Public Health Aspects of Cardiovascular Disease		2
PubH 6387		Cancer Epidemiology		2
PubH 6385		Epidemiology and Control of Infectious Diseases		2
PubH 6381		Genetics in Public Health		2
PubH 6389		Nutritional Epidemiology		2
PubH 6140		Occupational and Environmental Epidemiology		2

Supporting Program/Minor: 12 credits minimum Supporting program credits to be chosen with consultation with advisor. Potential supporting program courses include the following, or courses from the additional biological methods/statistics courses listed above not used to satisfy the biological methods/statistics requirement. Other courses can be considered with advisor and PhD Credentials Committee review/approval				
PubH 8140		Validity Concepts in Epidemiologic Research		2
PubH 6180		Ecology of Infectious Diseases		3
PubH 7405		Biostatistics: Regression		4
PubH 7430		Statistical Methods for Correlated Data		3
PubH 7435		Latent Variable Measurement Models and Path Analysis		3
PubH 7445		Statistics for Human Genetics and Molecular Biology		3
PubH 7450		Survival Analysis		3
VMed 8090		Epidemiology of Zoonoses		2

Social/Behavioral Track: 22 credits minimum

Behavioral Methods/Statistics: 6 credits minimum				
Course	**Notes**	**Title**	**Offered**	**Credits**
PubH 6363	①	Design and Analysis of Group-Randomized Trials in Epidemiology		3
Choose additional behavioral methods/statistics credits from the following courses:				
PubH 7402		Biostatistical Modeling and Methods		4
PubH 7420		Clinical Trials: Design, Implementation, and Analysis		3
PubH 7430		Statistical Methods for Correlated Data		3
PubH 7435		Latent Variable Measurement Models and Path Analysis		3
PubH 7407		Analysis of Categorical Data		3
EPSY 8268		Hierarchical Linear Modeling in Educational Research		3
EPSY 8282		Statistical Analysis of Longitudinal Data		3
PubH 8140		Validity Concepts in Epidemiologic Research		2
PubH 6915		Nutrition Assessment		2
EPSY 8264		Advanced Multiple Regression Analysis		3
EPSY 8267		Applied Multivariate Analysis		3
EPSY 8221		Psychological Scaling		3
Content area courses: 4 credits minimum				
PubH 6333	①	Human Behavior I		2
PubH 6334	①	Human Behavior II		2
Supporting Program/Minor: 12 credits minimum Supporting program credits to be chosen with consultation with advisor. Potential supporting program courses include the following, or courses from the additional behavioral methods/statistics courses listed above not used to satisfy the behavioral methods/statistics requirement. Other courses can be considered with advisor and PhD Credentials Committee review/approval.				
PubH TBA		Directed Study		1-4
PubH 7392		Readings in Epidemiology		1-4
PubH 6381		Genetics in Public Health		2
PubH 6385		Epidemiology and Control of Infectious Disease		2
PubH 6386		Public Health Aspects of Cardiovascular Disease		2
PubH 6387		Cancer Epidemiology		2
PubH 6000		Topics: Community Health Education		0.5-4
PubH 6000		Obesity: Treatment, Prevention, and Policy		2
PubH 6078		Public Health Policy as a Prevention Strategy		2

PubH 6074		Mass Communication and Public Health		3

① These courses are offered in alternate years: they are offered in 2008-2009, but are not offered in 2009-2010. Please plan accordingly.

Other details:

- Supporting program credits in either track may be directly applied to the PhD program or can be used to obtain a minor in another graduate program with the approval of the minor program's Director of Graduate Studies.
- Note that the recommended biostatistics core course (PubH 7401) may be replaced by PubH 6450 and 6451 if the student does not have adequate quantitative training for PubH 7401. Students who need a review or background training in basic epidemiology concepts will be encouraged to take the first year of the core sequence for MPH students (Epi Methods I, PubH 6341 and Epi Methods II, PubH 6342).
- Each track's faculty will make recommendations regarding courses required for students entering the doctoral program with insufficient training in epidemiology or the behavioral sciences to successfully complete the core or track courses. Courses used to make up deficiencies may not be used to fill PhD-level program requirements.

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:

- The teaching assistant experience (however Grad 8101, Teaching in Higher Education, is required)
- In the Supporting Program/Minor area, 5 credits required, not 12 credits.
- In the Content Area portion of the CBE and SBE curricula, 2 credits (one course) required, not 4 credits.

Sample Supporting Program Courses

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 offers a 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 required; 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]

Competency Areas

I. Descriptive Epidemiology		
Competency Area Skills	**How Acquired**	**How Measured**
• Produce descriptive epidemiology of a given condition • Calculate measures of incidence, morbidity and mortality • Calculate measures of excess risk • Make appropriate comparison by person, place and time • List strengths and limitations • Identify data from existing national and international sources	• PubH 8300 (Fall)	• Examinations • Assignments (exercises and papers) • Written preliminary exams
II. Biology		
Competency Area Skills	**How Acquired**	**How Measured**
• Describe models of disease etiology and control • Complete coursework or equivalent in human physiology and pathophysiology • Develop competence in specific content area	• PubH 8300 (Fall) • Research Assistantship • Teaching Assistantship • Thesis credits • Electives	• Examinations • Assignments (exercises and papers) • Written preliminary exams • Dissertation
III. History of the discipline		
Competency Area Skills	**How Acquired**	**How Measured**
• Describe general history of development of epidemiology • Recognize major epidemiologic studies of selected diseases • Identify major chronic and infectious diseases, leading causes of death • Recognize importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues	• PubH 6078, 8300 (Fall), 6381, 6385, 6386, 6387, 8377	• Examinations • Assignments (exercises and papers)
IV. Principles of screening and surveillance		
Competency Area Skills	**How Acquired**	**How Measured**
• Recognize conditions suitable for population screening • Evaluate validity and reliability of screening tests • Describe types of bias that affect validity of screening evaluations • Evaluate effectiveness of screening • Categorize types of surveillance systems and approaches used in disease surveillance	• PubH 8300 (Fall and Spring), 6363, 7420	• Examinations • Assignments (exercises and papers) • Written preliminary exams
V. Problem conceptualization		
Competency Area Skills	**How Acquired**	**How Measured**
• Search the literature • Review and critically evaluate the literature • Synthesize available information • Make appropriate causal inference • Identify meaningful gaps in knowledge • Formulate an original and key hypothesis or statement of research problem • Draw causal diagrams	• PubH 6333, 6334, 8300 (Fall), 6348, 8377 • Supporting program courses in subject concentration • Research Assistantship • Thesis credits	• Examinations • Assignments (exercises and papers) • Dissertation

VI. Study design		
Competency Area Skills	**How Acquired**	**How Measured**
• Describe each study design • Understand the advantages and limitations of each study design, including practical aspects of their use and trade-offs • Select the most appropriate and efficient design for a specific problem • Calculate sample size • Identify and minimize sources of bias • Describe the direction and magnitude of bias and effect on measures of association • Design a study using any of the main study designs • Use basic population sampling methods	• PubH 8300 (Fall and Spring), 6348, 6363, 7420, 8377 • Thesis credits	• Examinations • Assignments (exercises and papers) • Written preliminary exams • Dissertation
VII. Data collection and monitoring		
Competency Area Skills	**How Acquired**	**How Measured**
• Identify instruments appropriate for the research question • Identify presence and magnitude of measurement error • Monitor the conduct of data collection • Assess quality control measures • Design data collection instruments	• PubH 8300 (Fall), 6348, 8377 • Research Assistantship • Participation in grant activities • Electives • Thesis credits	• Examinations • Assignments (exercises and papers) • Dissertation
VIII. Data analysis		
Competency Area Skills	**How Acquired**	**How Measured**
• Use statistical computer packages to calculate and display describe statistics • Analyze categorical data • Perform multivariate regression, survival analysis and longitudinal analysis • Examine data for confounding and effect modification, and handle appropriately	• PubH 8300 (Fall and Spring), 6363, 7401, 7420 • Thesis credits	• Examinations • Assignments (exercises and papers) • Dissertation
IX. Interpretation		
Competency Area Skills	**How Acquired**	**How Measured**
• Interpret research results • Make appropriate inferences based on results	• PubH 8300 (Fall and Spring), 6363, 7401, 7420, 8377 • Thesis credits	• Examinations • Assignments (exercises and papers) • Dissertation
X. Substantive Area		
Competency Area Skills	**How Acquired**	**How Measured**
• Demonstrate mastery of substantive area • Conduct original research related to specific topic	• Electives • Teaching assistantship • Research assistantship • Thesis credits	• Dissertation • Participation in professional meetings through RA or grant work • Publication in peer-reviewed journals as part of dissertation format

XI. Communication		
Competency Area Skills	**How Acquired**	**How Measured**
• Communicate research results orally and in writing to scientists and non-scientists • Present data in tabular and figure formats • Prepare manuscript suitable for publication in scientific journal • Prepare professional presentations (oral and poster format)	• PubH 8300 (Spring), 8377, 8355, 6344	• Examinations • Assignments (exercises and papers) • Dissertation • Participation in professional meetings through RA or grant work • Publication in peer-reviewed journals as part of dissertation format
XII. Ethics		
Competency Area Skills	**How Acquired**	**How Measured**
• Understand concepts of human subjects protections and confidentiality • Apply this understanding as evidenced in design and conduct of research	• PubH 6742, 8377 • Thesis credits	• Examinations • Assignments (exercises and papers), particularly as part of grant writing coursework • IRB application for dissertation project or as part of grant activities • Dissertation

Sample Schedules for CBE and SBE Tracks for 2008-09

The sample schedules for both tracks are at this website: http://www.epi.umn.edu/students/current.shtm. Look under "Course Information."

2.2 Program Requirements

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 s*ection 2.3* for more information.

Core Curriculum/Summary of Credits/Grade Point Average Requirements

The core curriculum for the PhD is required for all epidemiology PhD students. For the remainder of the curricula, 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.

Summary of credits

The credit minimum for the PhD will be a total of 63 credits:

- Required Core Courses ..... 17 credits
- Clinical/Biological or Social/Behavioral Track Credits ..... 22 credits

- PhD-specific dissertation credits, PubH 8888 ..... 24 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 the core courses. Core classes include: PubH 8300 (Fall and Spring), PubH 7401, PubH 6348, PubH 6742, PubH 8777 and GRAD 8101. In addition, a B- or higher must be earned in PubH 7420 Clinical Trials or PubH 6363 Group-Randomized Trials. Students who earn a grade below B- in these courses are required to repeat that course. Students who cannot earn a B- in two attempts will be terminated from the program.

Transfer of Credits

Starting with the Fall 2008 class, Epi PhD students will be allowed to transfer in a maximum of 15 credits from previous master¹s level coursework. The 15 credits can be applied to any curriculum area. All requests for transferred coursework need to be reviewed and approved by the student¹s advisor, and then reviewed and approved by the Epi PhD credentials committee. The credentials committee will mandate the two new 8000-level Design and Analysis courses be taken by all Epi PhD students as the core methods courses for the degree. 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. It is also recommended that students review examples of faculty grant applications that have been funded to prepare for Part B.

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 1.6* of this guidebook.

Examinations

Preliminary Written Examination

Students who take the new PubH 8300 (Fall and Spring) Advanced Epidemiologic Methods courses are encouraged to take the exam within 18 months of matriculation. Students who took Epidemiology Methods I, II, and III are encouraged to take the examination within 24 months of matriculation. Students who took Epidemiology I and II are encouraged to write the examination within 18 months of matriculation into the PhD program. 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. 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 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 2.6* 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 2.6*) 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 2.8)*. See *section 2.9* 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 18 months for those who take the new PubH 8300 (Fall and Spring) Advanced Epidemiologic Methods classes; within 24 months for those who took Epi Methods I, II, III, and within 18 months for those who took Epidemiology I and II.
- 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.

2.3 Graduate School Registration Requirements

Detailed Graduate School registration information is available at: www.grad.umn.edu/current_students/registration.

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/. 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.isss.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.

2.4 Preliminary Written Examination Guidelines

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 applied methodology 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 specific coursework.

- For students entering Fall 2008 or later: two semesters of the new PubH 8300 (Fall and Spring) Advanced Epidemiologic Methods courses and PubH 7401. In addition, for students in the CBE track, PubH 7420, Clinical Trials; for students in the SBE track, PubH 6363, Group-Randomized Trials.

- For students entering Fall 2007 or earlier: Epidemiology Methods I, II and III, or Epidemiology I and II 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, usually 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 is one sample exam, 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 can 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
The student is strongly 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, the 18th day. 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.

STEPS	TIMELINE	ALLOWABLE CONSULTATION
Step 1: The student should begin thinking about potential topics; eventually three topics	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

are selected.		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 working on the exam.	The student is given the specific topic exactly one week after turning in the three potential topics. The student has exactly 17 days to write and complete the exam	The student can only consult/talk with the Exam Chair or the major coordinator while writing the exam.
Step 4: The exam is turned in.	The exam must be turned in by noon on the 18th 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	▪ 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. ▪ 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.
VI. Research Design and Methods	12-24 pages, double-spaced	▪ Describe the research design and the procedures to be used to accomplish the specific aims of the project. ▪ Include the means by which the data will be collected, analyzed, and interpreted. ▪ Describe any new methodology and its advantage over existing methodologies. ▪ Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims. ▪ Provide a tentative sequence or timetable for the investigation. ▪ Point out any procedures, situations, or materials that may be hazardous to personnel and the precautions to be exercised.
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
Alvaro Alonso, MD, MPH, PhD	626-8597	alonso@umn.edu	CBE	Cardiovascular disease epidemiology and neuroepidemiology
Kristin Anderson, PhD, MPH	626-8568	ander116@umn.edu	CBE	Cancer etiology; Laboratory-based cancer epidemiology; Pancreatic cancer; Adult solid tumors
Henry Blackburn, MD, MS	626-9396	black002@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
Sonya Brady, PhD	626-4026	ssbrady@umn.edu	SBE	Health risk behavior during adolescence and young adulthood; Developmental influences on risk taking; Socioeconomic and ethnic disparities in consequences of risk taking; Mechanisms linking stressful life circumstances to health risk behavior and factors promoting resiliency; Promotion of health protective behavior; Public policies affecting adolescent health
Richard Crow, MD	626-9678	crowx001@umn.edu	CBE	Preventive cardiology programs, trials and methods; Cardiac rehabilitation and work psychology; Ambulatory ECG recording; Computer applications
Ellen Demerath, PhD	624-8231	ewd@umn.edu	CBE	Body composition and obesity assessment; Developmental determinants of cardiovascular disease risk; Lifecourse epidemiology; Genetic epidemiology of obesity, diabetes, and coronary heart disease; Biomarkers of biological senescence
Susan Duval, PhD	624-3392	duval002@umn.edu	CBE	Cardiovascular and diabetes epidemiology; Biostatistical methods; Meta-analysis; Publication bias; Statistical consulting
Darin Erickson, PhD	626-0516	erick232@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	flood009@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	folso001@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	forst001@umn.edu	SBE	Public health policy as a prevention strategy; Community-based strategies for chronic disease prevention; Tobacco policy
Simone French, PhD	626-8594	frenc001@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	hanna001@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@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	harna001@umn.edu	CBE/ SBE	Nutritional epidemiology; Nutritional assessment
Eileen Harwood, PhD	626-1824	harwo002@umn.edu	SBE	Social epidemiology; Policy evaluation of alcohol, tobacco and illicit drugs
Wendy Hellerstedt, PhD	626-2077	helle023@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	hennr001@umn.edu	SBE	Smoking cessation; Reducing environmental tobacco smoke exposure; Health education in clinical settings
John Himes, PhD	624-8210	himes001@umn.edu	CBE/ SBE	Child growth and nutrition; Anthropometric assessment of nutritional status; Dietary assessment; Obesity and body composition
Keith Horvath, PhD	624-9556	horva018@umn.edu	SBE	HIV risk assessment and prevention; Internet-based interventions for chronic disease; Online survey design; Sexual minority health
David Jacobs, Jr., PhD	624-4196	jacob004@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	jones010@umn.edu	SBE	Alcohol studies; Alcohol policy as a prevention strategy; Minority health issues; behavioral epidemiology

Harry Lando, PhD *(on sabbatical June 08-May 09)*	624-1877	lando001@umn.edu	SBE	Global issues in tobacco reduction; Smoking cessation; Treatment of medically compromised smokers
DeAnn Lazovich, PhD *(on sabbatical January 09-December 09)*	626-9099	lazov001@umn.edu	CBE/ SBE	Cancer prevention and control; Cancer epidemiology
Alan Lifson, MD, MPH	626-9697	lifso001@umn.edu	CBE	HIV/AIDS; International health; Infectious disease epidemiology
Jennifer Linde, PhD	624-0065	linde074@umn.edu	SBE	Obesity prevention and intervention, Weight control behaviors, Weight loss goals, Public health messages
Russell Luepker, MD, MS	624-6362	luepk001@umn.edu	CBE/ SBE	Cardiovascular disease epidemiology and prevention; Health behavior; Community trials; Clinical trials
Leslie Lytle, PhD, RD	624-3518	lalytle@umn.edu	SBE	Planning and evaluating eating behavior change interventions in children; Youth health promotion research; Theories of health behavior
Michael Miller, PhD, MS, MPE	625-7836	mille444@umn.edu	CBE	Statistical analysis; Genetic and epidemiological processes
Claudia Munoz-Zanzi, MV, MPVM, PhD	626-2849	munozzan@umn.edu	CBE	Infectious disease
Heather Nelson, PhD, MPH	626-9887	hhnelson@umn.edu	CBE	Cancer susceptibility and etiology using both laboratory and epidemiologic tools; gene-environment interactions; skin cancer, mesothelioma, and other exposure-related malignancies.
Melissa Nelson, PhD	624-8832	nels5024@umn.edu	SBE	Environmental and behavioral determinants of excess weight gain and obesity during childhood, adolescence and young adulthood
Toben Nelson, ScD	626-9791	tfnelson@umn.edu	SBE	Health policy, organizational change, health behavior during developmental transitions, influence of sports participation on health, social determinants of health, program evaluation, prevention of alcohol-attributable harm, physical activity promotion, obesity prevention, motor vehicle safety.
Dianne Neumark-Sztainer, PhD, MPH	624-0880	neuma011@umn.edu	SBE	Adolescent health and nutrition, Obesity and eating disorder prevention, Health behavior change, Nutrition education program design and evaluation
Ruby Nguyen, PhD	626-7559	nguy0082@umn.edu	CBE	Women's health, etiology of reduced fertility, infertility and later disease, intersection of genital tract infections on reproduction, pregnancy-related morbidity, and epidemiologic methods in studies of fertility.
J. Michael Oakes, PhD	624-6855	oakes007@umn.edu	CBE/ SBE	Quantitative methods; Social epidemiology; Research ethics
Charles Oberg, MD, MPH	625-6616	oberg001@umn.edu	CBE/ SBE	Health disparities; Childhood poverty; Health care access and finance

James Pankow, PhD, MPH	624-2883	panko001@umn.edu	CBE	Cardiovascular disease epidemiology; Genetic epidemiology; Diabetes epidemiology
Mark Pereira, MPH, PhD *(on sabbatical Fall Semester 08)*	624-4173	perei004@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	Robie004@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@umn.edu	SBE	HIV prevention research; Human sexuality; Sex offending and religious identity; Internet-based research; e-Public Health
Pamela Schreiner, PhD	626-9097	schre012@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	sirar001@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	steff025@umn.edu	CBE	Cardiovascular disease epidemiology; nutritional epidemiology; surveillance of cardiovascular disease risk factors
Mary Story, PhD, MS	626-8801	story001@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	toome001@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	jyuan@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	651-201-5374	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	651-201-5116	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
Anne Jurek, PhD	624-1639	jure0007@umn.edu	CBE	Epidemiologic methodology; minimizing, and adjusting for, systematic error in epidemiologic studies in pediatric health
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
Catherine Lexau, PhD, MPH	651-201-5283	catherine.lexau@state.mn.us	CBE	Antibiotic resistance, including methicillin resistant Staph aureus. The epidemiology of pneumococcal disease and the impact of the pneumococcal vaccine
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	763-797-2765	john_w_oswald@optumhealth.com	SBE	Health statistics; behavioral Health Survey-Based Surveillance
Julie Ross, PhD, MPH	625-5437	rossx014@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	spect012@umn.edu	CBE	Etiology of childhood cancer; Design, conduct; Analysis of epidemiologic studies.
Michelle van Ryn, PhD, MPH	625-9105	vanry001@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

2.6 Preliminary Oral Examination Guidelines

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 2.9* "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 must be the Chair. This other Senior Member can either be from the Epi Graduate Faculty or someone representing the supporting program/minor. 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. 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 www.catalogs.umn.edu/grad; click on "Introduction, General Information, and Major and Degree Program table" link. The relevant information starts 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.

2.7 Checklist for Completing Degree

Step and Deadline	Check when complete
1. If appropriate, complete the process to have master's level coursework applicable to the doctoral program reviewed by the Epi PhD Credentials Committee. This happens in the summer before your first term.	☐
2. Register for courses promptly each term. Some courses, or sections of a course, fill up quickly so you are encouraged to register when your name appears in the registration queue. The registration queue is available at www.onestop.umn.edu. You must be registered by the first day of each term; if not, you will be "inactive" and will have to complete a form (and pay a fee) in order to be re-admitted. **Tips:** ★ While most coursework should be completed before the Preliminary Oral Exam, students are permitted to take coursework after the Preliminary Oral Exam; ★ Thesis credits cannot be taken prior to passing the Preliminary Oral Exam; ★ In any given term, if you don't register for at least 6 credits (to maintain full-time status), and you need 6 credits for your research assistantship or other financial loan reasons, please see section 2.3 for information about pre-thesis credits.	☐
3. Preliminary Written Examination (Parts A and B) **Tips:** ★ See the detailed guidelines (section 2.4) in the Student Guidebook; ★ Part A is offered twice a year (January and early summer): Part B can be taken throughout the year After you successfully pass both parts of the Preliminary Written Exam, Andrea Kish will submit a **Preliminary Written Exam Report** form to the Graduate School, confirming you have passed. You also get a letter confirming you have passed this milestone.	☐
4. Degree Program Plan form Fill out and complete the **Degree Program Plan** form after you have passed both parts of the Preliminary Written Exam. This is a two-page form that includes a list of committee members and all completed and anticipated coursework. Meet with Andrea Kish—she will help you complete the form correctly. The Graduate School states the form should be turned in at least one semester prior to the Preliminary Oral Exam; there is some latitude with this deadline, but a minimum of 8 – 10 weeks is required. **Tips for choosing a committee**: ★ See section 2.6 in the Student Guidebook for detailed information; ★ There are specific rules about committee membership; Andrea Kish can offer specific advice one-on-one; ★ View graduate faculty rosters at http://www.grad.umn.edu/faculty_rosters/ and click on Graduate Faculty Roster. You can look up individual faculty or see an entire graduate program's graduate faculty list; ★ If any of your committee members do not currently hold Graduate Faculty status at the University, the process of nominating someone to the Epidemiology graduate faculty can take 4 – 6 weeks or longer, so please plan accordingly.	☐

5. Preliminary Oral Examination	
Schedule the Preliminary Oral Exam: you need to find one date and time for all committee members to meet. All members must be present. The exam varies in length, but is usually 1.5 to 2 hours. See section 2.6 for detailed guidelines.	☐
Send the final draft of the dissertation proposal to the full committee at least two weeks prior to the Preliminary Oral Exam meeting.	☐
Schedule the Preliminary Oral Exam by notifying the Graduate School and submitting the **Doctoral Preliminary Examination Scheduling** form. The form can be downloaded at: www.grad.umn.edu/current_students/forms/gs12.pdf. Submit the form at least one week prior, or as soon as the date is scheduled, whichever is first. This form will ensure the Graduate School sends the required form (the **Preliminary Oral Exam** form) to the Chair of the Preliminary Oral Exam committee before the oral exam. After the exam, you need to turn in the original **Preliminary Oral Exam form** directly to the Graduate School within 24 business hours.	☐
6. Thesis Proposal form Complete and turn in the **Thesis Proposal** form one term after passing the Preliminary Oral Exam. You can download the form at www.grad.umn.edu/current_students/forms/gs63a.pdf. The form requires an abstract, the working title of your dissertation, and the final committee. **To complete the form, the student and advisor need to select three reviewers, and designate the Final Oral Exam chair:** The final exam chair cannot be your advisor or your co-advisor, and the chair must hold Senior Membership graduate faculty status. The chair can be either a member of the Epidemiology graduate faculty or another graduate faculty body. For Epidemiology students, the same committee membership should meet both Preliminary Oral and Final Oral committee rules. Reviewers are selected members of the committee who sign your **Thesis Reviewer's Report** form about one week prior to the final defense, notifying the Graduate School that you are ready to defend. There are specific rules about who can serve as a reviewer; Andrea Kish can help you correctly complete the form and select committee membership.	☐
7. Final Oral Examination and Preparing to Graduate	
Get a **Graduate School Graduation packet** In the final term before you defend (or at least 8 weeks before your Final Oral Exam). You can pick one up in person at Johnston Hall, or request one at www.grad.umn.edu/current_students/degree_completion/doctoral (link to Request a Doctoral Grad Packet).	☐
Read through the Graduation Instructions carefully, and complete all paperwork by the deadlines outlined. The Instructions include information about completing the Graduate School **Application for Degree form,** the timing of giving your final dissertation draft to your committee, scheduling your final oral exam with the Graduate School, and submitting the **Reviewer's Report** form. There are also instructions about what must be submitted after your Final Oral Exam to successfully graduate, and guidelines for formatting the dissertation and publishing the dissertation with UMI dissertation publishing. Andrea Kish has a sample packet.	☐
The **Application for Degree** form must be turned in by the first day of the month you plan to defend. You can turn the form in anytime earlier, but if you miss the first day of the month, your degree will not be cleared until the next month.	☐
By requesting a graduation packet, the **Thesis Reviewer's Report** form will be issued. This form is very important because the three reviewers sign off and return the form to the Graduate School at least one week before the final oral, therefore clearing you to hold your Final Oral exam. The three reviewers were selected on the **Thesis Proposal** form (see #5 above). If you have any reviewers who might be out of town right before your final oral, this form can be turned in early.	☐
Your committee must have at least two weeks notice that your dissertation will be submitted to them by a specific date; it is also required that all committee members will have at least two weeks to read your dissertation before the exam date.	☐

Submit the **Final Oral Defense Scheduling** form one week prior to the exam date. This will ensure the Graduate School sends the form to the Chair of the Final Oral Exam (not your advisor or co-advisor).	☐
The Epidemiology PhD Final Oral Exam includes a one-hour public presentation and then a 1.5 to 2 hour meeting with your committee. The one-hour presentation must be announced to all Epidemiology graduate faculty and doctoral students. At least two weeks prior to your final defense, please send the following information to Andrea Kish for the announcement: day, date and time of the presentation, building and room location; title of the thesis/talk and an abstract. Please make the abstract a reasonable length so that fits into an email announcement.	☐
8. Return the **Final Oral Exam Report** form to the Graduate School no later than one day after your final oral defense; and complete all the steps as outlined in the Graduation Packet for successful completion!	☐

2.8 Published Work and the PhD Dissertation

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.

Graduate School Requirements

The thesis may include materials that have published while a University of Minnesota graduate student. A letter authorizing use of this material must be obtained from the publisher. A copy of this letter must be included as the last page of your thesis.

If all or part of your thesis 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 graduate faculty and approved by the student's advisor for incorporation into the thesis.
2. Advisor(s) must notify the Graduate School in writing of the intention to publish a part of the material (the Graduate School's approval is not required).
3. The student must be listed as the sole author of the thesis. Editorial or substantive contributions with general significance made by others should be acknowledged in the preliminary materials; more specific contribution should be acknowledged by footnotes where appropriate.
4. Students whose manuscripts include more than the student's research must make their contribution clear in the thesis.
5. A suitable introduction is required, as well as transition sections that might not ordinarily be included in the published manuscript.
6. Where appropriate, a comprehensive literature review, not usually permitted by journals, should be part of the submitted thesis.
7. Appendices should be added to the manuscript as necessary to provide the comprehensiveness not ordinarily permitted by scholarly journals.
8. Use of reprints of the manuscripts or the published articles themselves is acceptable if they are satisfactorily (and legally) reproduced and conform to all the formatting specifications described in this document.

2.9 Other Information

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.