

## **Hospital Molecular Epidemiology Capstone Project Epid 565: HME Master's Independent Research Requirement**

The Capstone project (Epid 565) in the Hospital Molecular Epidemiology program should provide the strongest applied experience of your scholarship in the Department. This project is a learning experience in molecular epidemiology that combines laboratory-based research and epidemiological data analysis, and may include many different types of projects consisting of volunteer or paid work; working in a lab, in a hospital, or in a health department. Most students do their capstone project on or near campus and start no later than winter term of their first year. In some cases, a summer internship can be used to fulfill part or all of the Epid 565 research experiences. The following is a general description of the requirements and logistics for Epid 565.

### **YEAR ONE:**

#### **Term 1:**

- Attend all Epid 565 seminar presentations by HME students who have completed their research projects. The seminar will be on one of the selected weekdays from noon to 1:00 p.m. You will be notified of the seminar dates, topics, and presenters by e-mail.
- Find an appropriate research project to fulfill the requirement for Epid 565. In addition to your ideas, you should speak to your advisor for ideas and suggestions of who to contact for possible project opportunities and to confirm the appropriateness of the project if you have found one on your own.

Once you have found a project, you must write a 200-300 word description of your 565 project that includes the title and an outline of the study, and have the "Contractual Agreement for Epid 565 Research" signed by you, the person you are going to work for, and your advisor.

#### **Term 2:**

- Attend all of the Epid 565 presentations. This is the term that most second year HME students will be presenting their research. Attending gives you an idea of what is expected of you next year, shows you the range of topics that are possible, and informs you as to what type of research others in your program are doing. In winter term presentations are made on Tuesdays from noon to 1:00 p.m. in Room 3040 SPH-I. You will be notified of the seminar topics and presenters by e-mail.
- You should have started your own Epid 565 project. Many students primarily complete the research project during the summer between the first and the second years.

### **YEAR TWO:**

- Schedule your Epid 565 presentation of your research for the fall or winter term.
  - Sign up on the Epid 565 Presentation Sign-up Sheet that is available at the Epid 565 Organizational Meeting, which is usually held in late September, and in the Epid Student Services Representative's office (Room 1018 SPI-I). At most, two students can present on a given day.
  - Write your name, title and abstract, along with the date, time and room of your presentation, on a single page. This is to be e-mailed to all the other HME students and professors at least one week before your presentation (allhmepid@umich.edu)
- Write up your research in a research paper format (title, abstract, introduction, methods, results, discussion or conclusion, references).
- Submit your Master's thesis to your advisor the day of your presentation, unless you make other arrangement with your advisor.
- Prepare for your seminar presentation in a Power Point Presentation format. The content that you should try to cover in your presentation should include:
  - Title
  - Background and significance
  - Objective(s)
  - Materials and methods
  - Results and discussion or conclusion
  - Public health implications and future directions of your research.

## REGISTERING FOR RESEARCH CREDITS

Register for **one** credit of Epid 565 each term, except for the term in which you give your presentation, when you should register for **two** credits. You can earn up to five credits of Epid 565 within the two-year MPH program period. Four credits are required for the HME program.

Sign up initially for the section specific for your advisor. If you end up doing your research with one of the other Epidemiology faculty, you should use their section number for terms after the first one.

Section numbers for the HME faculty are as follows:

Dr. Foxman - section # 006  
Dr. Marrs - section # 021

Dr. Gerrard – section # 062  
Dr. Yang – section # 030

**University of Michigan  
Department of Epidemiology  
Contractual Agreement for Research Experience by HME Students (Epid 565)**

1. Most HME students do their independent laboratory experience on or near campus and start no later than winter term of the first year. In some case, a summer laboratory-based internship experience can be used to fulfill part or all the Epid 565 research experience. For students who have had substantial prior laboratory experience, a field research experience can be used to fulfill part or all the Epid 565 research experience.
2. One HME faculty member must approve the Epid 565 laboratory research project and will act as the student's advisor for the research experience.
3. If the student does his or her Epid 565 research outside of the Department, the research experience needs to be supervised by a local scientist or public health professional approved by the HME faculty.
4. Laboratory experience must involve more than just carrying out experiments planned by others. It must also include the student's involvement in the analysis of the data from the experiments and in the planning of follow-up experiments. In other words, the student should be obtaining experience in all aspects of doing independent research.
5. Where human subjects' data are being collected or worked with in any way, it is imperative that the student receive University of Michigan IRB approval before beginning work on the project. In some cases where IRB approval for a project already exists, students may be able to fulfill this approval requirement by being added to the existing project by the P.I. and having a copy of the existing approval sent in. In any event the student must provide the IRB number on this document.

The Department of Epidemiology needs to ensure that the above characteristics of an Epid 565 research project are met. For that reason, we request that the student, the local supervisor and the HME faculty member approving an assignment sign in the appropriate places below and that the student provides this appropriately signed document to the departmental secretary for student affairs so it can be filed with his or her records before the student begins his or her research project. At the end of the project, the faculty advisor is responsible for ensuring that the requirements are met.

**STUDENT:** I have ascertained that this fieldwork placement is planned to be consistent with the above-described characteristics and I will endeavor to insure that the actual work carried out is consistent with that description.

\_\_\_\_\_  
Student Name, printed

\_\_\_\_\_  
Student's signature

**LOCAL SUPERVISOR:** This fieldwork placement is planned to be consistent with the above-described characteristics and I will endeavor to insure that the actual work carried out is consistent with that description.

\_\_\_\_\_  
Supervisor's name, printed

\_\_\_\_\_  
Supervisor's signature

**HME FACULTY:** I have ascertained that this fieldwork placement as planned, is consistent with the above-described characteristics.

\_\_\_\_\_  
HME faculty member's name, printed

\_\_\_\_\_  
HME faculty member's signature

**IRB Number:** \_\_\_\_\_