

University of Rochester School of Medicine and Dentistry

## Department of Public Health Sciences



# GRADUATE STUDENT HANDBOOK

**2018 – 2019**

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# DEPARTMENT EDUCATION POLICIES

## CONTINUATION OF ENROLLMENT

Students must maintain continuous registration from the time of matriculation until he/she

- is awarded his/her degree
- withdraws from the program
- is dropped from the program.

Students must register for each semester during this time, excluding the summer sessions. The continuation of enrollment fee for 2018 - 2019 academic year is \$1,070 per semester.

## COURSE WAIVERS

All requests must be made at the time of initial registration in a degree program. Please see the program administrator for this request.

## ELECTIVE COURSES

Courses may be chosen from the variety of courses offered within the Department and within the various departments and colleges of the University, but in any event the course topic must be relevant to public and population health. Descriptions of PHS courses can be found on the PHS website.

Courses may be accepted toward degree requirements if the subjects taken form an integral part of the student's proposed program of study

Students need to consult with their advisor and the Program Director as to whether or not a certain course is appropriate

With the permission of the Master's Program Director and approval in advance from the Senior Associate Dean of Graduate Studies, a student may take a course at another college or university to count as an elective. Ordinarily, the course must be taken in a timely fashion, and before beginning the MPH research project

## INCOMPLETE GRADES

An Incomplete ("I") grade may be given for medical reasons only per the University Policy. The student who receives an incomplete grade is passing the course and has already completed the majority of the work required in the course

Work for courses with grades of "I" must be completed no later than 2 months after the course concludes, although instructors may require work to be submitted sooner. If the work is not completed within the designated period of time, the instructor must grade on the basis of work completed by the specified completion date. This grade cannot be changed.

The grade must be submitted to the Dean in a memo within one week of the completion date. If the contract is not fulfilled or the grade not reported to the Registrar by the specified completion date, the incomplete grade will convert to an "IE" (Incomplete/Failure). This grade cannot be changed.

# DEPARTMENT EDUCATION POLICIES

## LEAVE OF ABSENCE

Upon the recommendation of the Program Director, the Dean may grant a leave of absence to a matriculated graduate student who has not yet completed the course requirements **only** for medical reasons. No more than two one-semester leaves or one one-year leave will be granted.

In order to declare a leave of absence, a student must complete and sign the appropriate form and pay a \$60 registration fee per semester.

## MAXIMUM TIME

An MPH candidate must complete all the requirements for the degree within five years from the time of his/her initial matriculation into the graduate program. PhD candidates have a maximum of seven years to complete degree requirements. Students must maintain continuous enrollment for each term after matriculation.

Students who for good reason have been unable to complete their program within the maximum time may, upon recommendation of their faculty advisor and the Program Director, petition the Dean for an extension of the time limit. The extension, if granted, will be of limited duration.

Minimum grades for courses or research work carrying graduate credit are B- or S. C is considered to be an unsatisfactory (poor) grade.

- One C grade would be cause for academic probation
- Two C grades would be cause for dismissal from the graduate program.

A C grade is considered to be a failing grade for any student who is on probation. See [Graduate Education Trainee Handbook-Policies & Benefits](#) related to minimum grade.

## PART-TIME/FULL-TIME

Any student registered for fewer than twelve credit hours is considered to be a part-time student.

## TRANSFER CREDIT POLICY

Of the School of Medicine and Dentistry's minimum required credit hours for the Doctor of Philosophy degree, no more than 30 credit hours may be accepted as transfer credit for work previously taken at the University of Rochester or at another university for the Masters degrees and only 1 course or 3 credits for the certificates. All transfer credits, whether taken at the University of Rochester or at another university must be approved by the Senior Associate Dean for Graduate Education prior to matriculation.

Of the University's minimum required 30 credits for the Master's degree, no more than 10 credit hours may be accepted as transfer credit for work previously taken at the University of Rochester or another university. All transfer credit, whether taken at the University of Rochester or at another university, must be approved by the Senior Associate Dean for Graduate Education prior to matriculation.

Work taken prior to matriculation in a graduate degree program is classified as possible transfer work. Credit hours up to the limit may be accepted toward degree requirements if the subjects taken form an integral part of the proposed program of study and if taken within five years of the date of matriculation with a grade of B- or higher as interpreted in this University. Requests for transfer credit must have the approval of the Senior Associate Dean for Graduate Education prior to matriculation. Permission to take

work at another institution for transfer credit after matriculation in a graduate program must be approved in advance by the Senior Associate Dean for Graduate Education.

## **DEPARTMENT EDUCATION POLICIES**

### **TUITION AND FEES**

Tuition in the School of Medicine and Dentistry for the 2018 – 2019 academic year is \$1,654 per credit hour. Most courses in the Department of Public Health Sciences are three credits, carrying a total cost of \$4,962 per course. Students taking courses outside of the Department must pay the tuition rate of the particular college offering the course(s) to be taken.

1) Students with other health insurance may choose to waive the University's policy. 2) All full-time students must pay a mandatory Health Fee of \$306.

**For more information please contact Pattie Kolomic, Graduate Programs Administrator**

**[pattie\\_kolomic@urmc.rochester.edu](mailto:pattie_kolomic@urmc.rochester.edu)**

**or telephone (585) 275-7882**

**Or visit the program website: <https://www.urmc.rochester.edu/public-health->**

**[sciences.aspx](https://www.urmc.rochester.edu/public-health-sciences.aspx)**

# INDEPENDENT STUDY POLICY

## Steps to take

- Pick who will be your supervisor/instructor
- Give your course a title,
- Submit a plan of what you plan to do, i.e., the specific about what you will accomplish, that you work out with your supervisor/instructor
  - Include books, readings, and exercises – similar to a regular course syllabus
  - Include an estimate as to the amount of time that will be required (aim for approximately 120 hours over the course of the semester)
  - Include a signed statement from your supervisor/teacher that that approve of the plan

I've included an example of a working proposal to give you an idea of what this should look like.

Department of Public Health Sciences  
PM494: Independent Study: Title  
Semester here for student name here

Topic: Recruitment efforts of Racial/Ethnic Minority and Underserved population in Clinical Trials: A comprehensive review of cultural humility, cultural responsiveness and cultural competency approaches.

Instructors: Amina Alio, PhD.

**Course Description:** This is an independent study course, designed to provide the student with knowledge and understanding of how cultural competency, humility and responsiveness have been used in the literature to address cancer health disparities. Specifically how those theoretical frameworks have been applied in addressing disparities in recruiting minority and underserved in clinical trials and research in general. The study will also help the student with the knowledge and skills of conducting systematic review of literature. Finally, the study will help equip the student with the skills of developing and submitting of manuscript for publication. The content and schedule for the course will be self-guided and there will be no textbook. Various scientific and public health databases (PubMed, MEDLINE, CINAHL etc.) will be searched for the purpose of the literature review. The student will meet with the instructors regularly, either in person, by phone or via electronic means.

**Required textbooks:** No textbook required.

**Credits:** 3 hours

**Learning Objectives:** At the completion of this course the student should be able to:

- Describe the steps involved in or methods of conducting systematic review of literature.
- Describe the concepts of Cultural humility, cultural responsiveness and cultural competence
- Describe application of those concepts to recruit the minority and underserved population to research.
- Describe steps involved in developing manuscript and manuscript submission process.

**Evaluation:** Along with working through the assignments as noted in the schedule, the student will be required to produce a written manuscript developed in the course. The manuscript should include a brief background, description of the search method, synthesize of the results and discussions and recommendations of the findings.

**Schedule** (TENTATIVE):

## INDEPENDENT STUDY POLICY

<u>Week</u>	<u>Topic</u>	<u>Lectures/Readings</u>	<u>Assignments</u>
1 (8/31)	Cultural Competence, Cultural humility, Cultural responsiveness		Database search
2 (9/09)	Cultural Competence, Cultural humility, Cultural responsiveness		Database search
3 (9/16)	Cultural Competence, Cultural humility, Cultural responsiveness		Database search
4 (9/23)	Cultural Competence, Cultural humility, Cultural responsiveness		Database search
5 (9/30)	Cultural Competence, Cultural humility, Cultural responsiveness		Database search
6 (10/7)	Cultural Competence, Cultural humility,		Develop manuscript (Background)
7 (10/14)	Cultural Competence, Cultural humility, Cultural responsiveness		Develop manuscript (Background)
8 (10/21)	Cultural Competence, Cultural humility, Cultural responsiveness		Develop manuscript (Methods)
9 (10/28)	Cultural Competence, Cultural humility, Cultural responsiveness		Develop manuscript (Methods)
10 (11/4)	Cultural Competence, Cultural humility,		Develop manuscript (Synthesize results)
11 (11/11)	Cultural Competence, Cultural humility, Cultural responsiveness		Develop manuscript (Synthesize results)
12 (11/18)	Cultural Competence, Cultural humility, Cultural responsiveness		Develop manuscript (Synthesize results)
13 (11/25)	Cultural Competence, Cultural humility, Cultural responsiveness		Develop manuscript (Discussions and conclusions; revise preliminary sections as needed)
14 (12/2)	Cultural Competence, Cultural humility, Cultural responsiveness		Develop manuscript (Discussions and conclusions; revise sections as needed)
15 (12/13)	Review		Finish and hand-in manuscript. Submission to a journal for publication.

Signatures:

Faculty Instructor: \_\_\_\_\_

Graduate Student: \_\_\_\_\_

Program Director: James Dolan, MD \_\_\_\_\_

# **Guidelines to Assure a Professional and Respectful Learning Environment**

## **University of Rochester Medical Center ICARE Values:**

The University of Rochester Medical Center's (URMC) culture is steeped in its values – Integrity, Inclusion, Compassion, Accountability, Respect and Excellence (ICARE). These values apply to all members of the URMC community – faculty, students, staff – in all missions of the medical center: education, research, clinical care and community. A respectful and professional learning environment is an important reflection of our ICARE values.

## **Learning Environment:**

The URMC learning environment is committed to facilitating students' and trainees' acquisition of the professional and collegial attitudes necessary for effective, successful careers in research, teaching, and clinical care. The development and nurturing of these attitudes is enhanced and based on the presence of mutual respect among all members of our learning community.

Characteristics of this mutual respect include the expectation that all participants in an educational program assume their responsibilities in a manner that enriches the quality of the learning process, supports a spirit of inquiry, and values diversity of opinion.

Members of our learning community include all individuals educated in undergraduate, graduate, doctoral and post-doctoral programs at the University and the medical center as well as those learners from other institutions training at URMC. Faculty include all faculty, employed and volunteer, who participate in the education of learners and contribute to the learning environment. Staff include all employed staff or volunteers at the University of Rochester.

URMC expects and requires learners, faculty, and staff to conduct themselves in a professional and respectful manner while participating in any activity related to URMC. Inappropriate behavior that negatively impacts URMC's professional and respectful learning environment is prohibited. Inappropriate behavior includes but is not limited to: sexual harassment; any discrimination or harassment based on age, color, disability, domestic violence status, ethnicity, gender identity or expression, genetic information, marital status, military/veteran status, national origin, race, religion/creed, sex, sexual orientation, or any other status protected by law; humiliation; verbal, psychological or physical punishment; and/or the use of grading and other forms of assessment in a punitive manner. The intentional or unintentional occurrence of such behavior results in a disruption of the spirit of learning and a breach in the integrity and trust among, and between, learners, faculty, and staff.

All concerns or complaints regarding inappropriate behavior, either witnessed or experienced, should be reported to designated officers or offices in the School of Nursing or the School of Medicine and Dentistry's Undergraduate Medical Education, Graduate Medical Education, Graduate Education and Postdoctoral Affairs, or Eastman Institute of Oral Health, as indicated below or in program handbooks. Each area is charged with taking appropriate steps consistent with their program's processes and procedures to thoroughly review and address the reported concern.



## **Expectations and Responsibilities for All Learners, Faculty and Staff:**

- Non-discrimination and non-harassment: to treat others and be treated consistent with the institution's commitment to maintaining a workplace and academic environment free from unlawful discrimination and harassment.
- Collegiality: to cultivate and enjoy a welcoming environment in which to pursue research, clinical care, teaching and professional activities.
- Respect: to be valued as an important member of the URMC community and to treat all others with respect.
- Conflicts of interest: to receive appropriate instruction about conflicts of interest to avoid situations where learners and educators are unable to do their jobs with the appropriate level of impartiality.
- Policies: to be educated about and know how to access University of Rochester, medical center, hospital and program-specific policies including, but not limited to, grievance processes and disciplinary processes.
- Procedures: to receive and be aware of guidelines, policies and resources to report concerns about the learning environment or behaviors of other learners, faculty, or staff, including but not limited to reporting concerns regarding harassment or discrimination.
- Feedback: to be provided formative and summative information on performance at regular intervals as well as ad hoc when necessary, consistent with the program's procedures, to provide clear guidance and expectations on performance. Additionally, provide feedback to all in a productive, prompt manner as required by educational or institutional expectations.
- Design of instruction: to ensure equal access for learners with diverse backgrounds and abilities to curricula, courses, learning activities, and academic support services.
- Assessment: to ensure valid and equitable measurement of learning through appropriate measurement instruments.
- Confidentiality and Due Process: to ensure that identity is protected to the greatest extent possible and due process received for any complaint or concern, as required by University policy and legal requirements.

# **Sexual Misconduct, Harassment, Discrimination, Unprofessional Behaviors and/or Violations of the Expectations and Responsibilities**

## **Policies and Reporting Procedures**

It is the University's aim to provide a setting which is characterized by respect for all and encouragement for the development of each individual's full potential. The University will not tolerate any behavior, including verbal or physical conduct, which constitutes sexual misconduct, harassment, discrimination or other unprofessional actions. All learners, staff, and faculty are accountable for compliance with our ICARE values and codes of conduct. Violations may lead to disciplinary action which, in sufficiently severe cases, may lead to separation from the University after applicable due process.

Students or trainees in the School of Medicine and Dentistry, School of Nursing, and URMC should advise a supervisor or other designated faculty member, leader or staff about all suspected violations of this guideline as well as all incidents of mistreatment, sexual discrimination, misconduct, harassment and acts of intolerance and discrimination. Reports should be directed to their school or program as indicated in the chart below. All individuals who file a report will be advised about the follow-up and outcome of any reported incident.

**The chart below describes types of discrimination and harassment based on membership in a protected class and identifies applicable policies, resources, and reporting mechanisms.**

## **SMD Ombudspersons for Graduate Students, Postdoctoral Appointees, and Preparatory Program Trainees\***

While graduate, postdoctoral, and pre-graduate study are exciting and intellectually stimulating times in a trainee's career, occasionally problems arise. There are many people to whom trainees can turn for advice when facing problems: faculty advisor(s), committee members, graduate program director, department chair, Senior Associate Dean for Graduate Education. However, sometimes trainees may feel unable to approach any of these people for help, and this is when a trainee should turn to the Ombudsperson.

There are three ombudspersons available:

- Bob Freeman, Professor of Pharmacology and Physiology  
Medical Center room 4-6718  
Phone: 585-273-4893  
Email: [robert\\_freeman@urmc.rochester.edu](mailto:robert_freeman@urmc.rochester.edu)
- Krystel Huxlin, Professor of Ophthalmology  
Medical Center room G-3186  
Phone: 585-275-5495  
Email: [khuxlin@ur.rochester.edu](mailto:khuxlin@ur.rochester.edu)
- Chris Seplaki, Associate Professor of Public Health Sciences  
Saunders Research Building Room 3.238  
Phone: 585-273-1549  
Email: [christopher\\_seplaki@urmc.rochester.edu](mailto:christopher_seplaki@urmc.rochester.edu)

Each of these ombudspersons is a faculty member who can provide **confidential, neutral, independent, and informal** advice to help trainees address their concerns.

The Ombudspersons provide a resource for and information about institutional policies, act as facilitators to help trainees resolve their problems and connecting trainees with those who can help, accompany the trainee in discussions of problems or issues with faculty or administrators, and act as an informal mediator between the trainee and faculty or administrators. The Ombudspersons can also help to effect positive change by providing feedback on patterns of problems and complaints to appropriate administrators.

Trainees can contact any of the three Ombudspersons for general questions. Discussions with the Ombudspersons can be through phone or in-person.

## KEY DATES & DELIVERABLES

### May Graduation

- **March 1** – First draft of the thesis must be submitted to your ENTIRE committee. Note this deadline applies to the report of the completed project, not your project proposal.
- **April 15** – Final completed hard copy of the thesis with completed committee sign-off form to the Graduate Program Administrator.

### August Graduation

- **June 15** – First draft of your essay must be submitted to your ENTIRE committee. Note this deadline applies to the report of the completed project, not your project proposal.
- **August 1** – Final completed hard copy of the thesis with completed committee sign-off form to the Graduate Program Administrator.

### December Graduation

- **November 1** – First draft of your essay must be submitted to your ENTIRE committee. Note this deadline applies to the report of the completed project, not your project proposal.
- **December 15** – Final completed hard copy of the thesis with completed committee sign-off form to the Graduate Program Administrator.

The Master's graduation ceremony is usually the second Saturday in May. Consult the academic calendar at: <https://www.rochester.edu/registrar/academiccalendar.html>



## Certificate Programs

An Advanced Certificate program is a post-Baccalaureate course of academic study designed for students and practitioners who seek to enhance their professional development.

Certificates consist of 4 or 5 courses (12-15 credits). Up to 10 credits can be applied to a subsequent Master's degree, if desired. Designated directors for each certificate are below.

**Analytic Epidemiology – Edwin van Wijngaarden, PhD**

**Biomedical Data Science – Dongmei Li, PhD**

**Clinical Research Methods – James Dolan, MD**

**Experimental Therapeutics – James Dolan, MD**

**Health Services Research – Peter Veazie, PhD**

**Public Health – James Dolan, MD**

**Regulatory Science – Scott Steele, PhD**

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
ANALYTIC EPIDEMIOLOGY CERTIFICATE**

**Program Description**

The advanced certificate in clinical research methods is designed to give individuals the knowledge and tools needed to conduct clinical research.

**Educational Objectives of the Program**

To provide researchers and other interested individuals with a practical understanding of quantitative and qualitative research methods including case control studies, cohort studies, randomized clinical trials, surveys, and mixed methods research.

<b>REQUIRED COURSES</b>	<b>COURSE TITLE</b>	<b>WHEN OFFERED</b>	<b>CREDITS</b>
PM 410	Intro to Data Management & Analysis	Fall, Summer	3
PM 415	Principles of Epidemiology	Fall	3
<b>ONE OF THE FOLLOWING:</b>			
PM 401	Quantitative Methods	Fall, Summer	3
BST 463	Introduction to Biostatistics	Fall	4
<b>ONE OF THE FOLLOWING:</b>			
PM 416	Advanced Epi Methods	Spring	3
BST 464	Linear Regression	Fall	4

**Revised: 12-13-18**

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
BIOMEDICAL DATA SCIENCE CERTIFICATE  
TOTAL CREDITS REQUIRED: 16-17**

**Curriculum**

The required courses cover the core aspects of biomedical data science. These courses are problem set and project-based, providing the guided hands-on learning experiences necessary to prepare students for real-world analysis of health-oriented data sets.

*Required courses (10 credits)*

Required Courses	Course Name	When Offered	Credits
<b>PM401</b>	Quantitative Methods in Public Health Research	Summer, Fall	3
<b>PM403</b>	Research Team Science Seminar	Fall, Spring	1
<b>PM410</b>	Introduction to Data Management and Analysis	Summer, Fall	3
<b>PM485</b>	Introduction to Biomedical Informatics	Fall	3

*Electives (select 2 courses; 6-7 credits)*

Students are permitted to select any combination of two elective courses from those listed below, but are encouraged to focus on a specific track. Each elective track is designed to add depth in one area of concentration beyond the core coursework. These tracks relate to key elements of the required course sequence.

*Computational Track*

Elective Courses	Course Name	When Offered	Credits
<b>BST411</b>	Statistical Inference	Fall	4
<b>BST430</b>	Introduction to Statistical Computing	Fall	3

*Clinical Research Informatics Track*

Elective Courses	Course Name	When Offered	Credits
<b>BST465</b>	Design of Clinical Trials	Spring	4
<b>PM431</b>	Advanced Methods in Health Services Research	Fall	3

*Genomics and Bioinformatics Track*

Elective Courses	Course Name	When Offered	Credits
<b>IND419</b>	Introduction to Quantitative Biology	Spring	4
<b>GEN508</b>	Genomics and Systems Biology	Fall	3

*Public Health Informatics Track (choose two courses)*

Required Courses	Course Name	When Offered	Credits
<b>PM421</b>	US Health Care System	Fall	3
<b>PM422</b>	Quality of Care and Risk Adjustment	Spring	3
<b>PM426</b>	Social and Behavioral Medicine	Spring	3
<b>PM484</b>	Medical Decisions and Cost Effectiveness Research	Spring	3
<b>PM486</b>	Medical Ecology	Spring	3

The Graduate Certificate of Advanced Study in Biomedical Data Science (CAS-BDS) is a program suitable for researchers and analysts with biomedical, computer science, statistical, biomedical, or health services backgrounds. The CAS-BDS addresses the growing needs of data analytics by providing the knowledge and skills necessary to work with large datasets increasingly available in healthcare systems (e.g. electronic health records or health registries) and clinical research enterprises (e.g. data resulting from ‘omics analyses).

### **Program Description**

The CAS-BDS is a multidisciplinary, cross-departmental University-wide graduate credential administered jointly by the University of Rochester’s [Clinical and Translational Science Institute](#) (CTSI) and the [Department of Public Health Sciences](#) that prepares researchers to conduct insightful, applied “big data” analytics for health services, clinical, and public health research.

### **Program Objectives**

- To prepare students to conduct analyses of, and analytics with, large, health-oriented data sets
- To provide team science experiences for students addressing health-related questions through data analysis

### **Admission Requirements**

Admission to the CAS-BDS certificate program will require completion of at least an undergraduate degree in the biological or social sciences, computer science, or in a clinical discipline. Applicants with previous clinical, hospital, public health, laboratory, or industry experience are strongly encouraged to apply.

**12-13-18**



**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
CLINICAL RESEARCH METHODS CERTIFICATE**

**Program Description**

The advanced certificate in clinical research methods is designed to give individuals the knowledge and tools needed to conduct clinical research.

**Educational Objectives of the Program**

To provide researchers and other interested individuals with a practical understanding of quantitative and qualitative research methods including case control studies, cohort studies, randomized clinical trials, surveys, and mixed methods research.

<b>REQUIRED COURSES</b>	<b>COURSE TITLE</b>	<b>WHEN OFFERED</b>	<b>CREDITS</b>
PM 412	Survey Research	Fall	3
PM 415	Principles of Epidemiology	Fall	3
PM 458	Qualitative Health Care Research	Spring	3
<b>ONE OF THE FOLLOWING:</b>			
PM 401	Quantitative Methods	Fall, Summer	3
PM 410	Intro to Data Management & Analysis	Fall, Summer	3
PM 426	Social and Behavioral Medicine	Spring	3
PM 461	Program Evaluation for Public Health	Summer	3
PM 472	Measurement & Evaluation of Research Instruments	Spring	3

**Revised: 12-13-18**

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
ADVANCED CERTIFICATE IN EXPERIMENTAL THERAPEUTICS**

**Program Description**

The advanced certificate in experimental therapeutics is designed to give individuals the knowledge and tools needed to conduct clinical research trials.

**Educational Objectives of the Program**

To provide researchers and other interested individuals with a practical understanding of how to design, implement and conduct randomized controlled clinical trials.

<b>REQUIRED COURSES</b>	<b>COURSE TITLE</b>	<b>WHEN OFFERED</b>	<b>CREDITS</b>
BST 465	Design of Clinical Trials	Spring	3
IND 501	Clinical Research Ethics	Fall	1
PM 401 <b>or</b> BST 463	Quantitative Methods in PH Res. Intro. To Biostatistics	Fall, Summer Fall	3
PM 488	Experimental Therapeutics	Fall	3
<b>AT LEAST ONE OF THE FOLLOWING:</b>			
PM 410	Introduction to Data Management & Analysis	Fall, Sumer	3
PM 415	Principles of Epidemiology	Fall	3
PM 419	Recruitment & Retention of Human Subjects	Fall	3
PM 438	Grantsmanship	<b>ONLINE ONLY</b>	3
PM 472	Measurement & Evaluation of Research Instruments	Spring	3
PM 484	Medical Decision Analysis & Cost Effectiveness Analysis	Spring	3
PM 487	Fundamentals of Science, Technology, & Health Policy	Spring	3
		<b>TOTAL</b>	<b>13</b>

12/13/18

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
HEALTH SERVICES RESEARCH CERTIFICATE**

**Program Description**

The advanced certificate in health services research is designed to give individuals the knowledge and tools needed to evaluate the effectiveness of health services programs and policies.

**Educational Objectives of the Program**

To provide researchers and other interested individuals with a practical understanding of health services research methods including cost-effectiveness analysis, impact analysis, and implementation research.

<b>REQUIRED COURSES</b>	<b>COURSE TITLE</b>	<b>WHEN OFFERED</b>	<b>CREDITS</b>
PM 445	Intro to Health Services Research & Policy	Fall	3
PM 484	Medical Decision Making and Cost Effectiveness Research	Spring	3
		<b>REQUIRED</b>	<b>6</b>
<b>TWO OF THE FOLLOWING:</b>			
PM 401	Quantitative Methods	Fall, Summer	3
PM 415	Principles of Epidemiology	Fall	3
PM 421	US Health Care System: Financing, Delivery, Performance	Fall	3
PM 422	Quality of Care & Risk Adjustment	Spring	3
PM 430	Psychology in Health Services Research	Fall	3
PM 456	Health Economics I	Fall	3
PM 487	Fundamentals of Science, Technology, & Health Policy	Spring	3
		<b>TOTAL</b>	<b>12</b>

12/13/18

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
PUBLIC HEALTH CERTIFICATE**

**Program Description**

To provide individuals with knowledge and understanding of the key elements of public health practice.

**Educational Objectives of the Program**

To convey a working knowledge of the five key areas of public health practice; epidemiology, biostatistics, social and behavioral medicine, the US health care system, and environmental epidemiology. The certificate is also designed to prepare qualified individuals to take the American Board of Public Health certification exam.

<b>REQUIRED COURSES</b>	<b>COURSE TITLE</b>	<b>WHEN OFFERED</b>	<b>CREDITS</b>
PM 401	Quantitative Methods	Fall, Summer	3
PM 415	Principles of Epidemiology	Fall	3
PM 421	US Health Care System: Financing, Delivery, Performance	Fall	3
PM 426	Social and Behavioral Medicine	Spring	3
PM 470	Environmental & Occupational Epidemiology	Fall	3

**Revised 12-13-18**

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
REGULATORY SCIENCE CERTIFICATE**

**Program Description**

The program is designed to produce a cadre of highly trained professionals able to contribute to the development of new medical interventions by enhancing the innovation, efficiency, and quality of the medical product development pipeline.

<b>REQUIRED COURSES</b>	<b>COURSE TITLE</b>	<b>WHEN OFFERED</b>	<b>CREDITS</b>
	<b>Core Courses:</b>		
BME 431	FDA Regulatory Processes & Intel Property	Fall	2
BME 432	Navigating FDA Regulatory & Commercialization Landscapes	Spring	2
PM 487	Fundamentals of Science, Technology & Health Policy	Spring	2
PM 488	Experimental Therapeutics	Fall	3
BST 463	Introduction to Biostatistics	Fall	3
IND 501	Ethics in Research	Fall	1
	<b>Graduate level elective courses. Select one or more of the following totaling at least 3 credits (sample graduate level e courses, with others available upon approval):</b>		
PHP 404	Principles of Pharmacology	Spring	4
PM 415	Principles of Epidemiology	Fall	3
BST 465	Design of Clinical Trials	Spring	4
MBI 403	Drug Discovery	Spring	2
	<b>Additional Requirement:</b>		
<i>Capstone</i>	<i>Regulatory Science Student Competition</i>	<i>Spring</i>	

**Revised 12-13-18**



# Masters' Programs

Master of Public Health (MPH)

Master of Science  
Clinical Investigation (MS-CI)

Master of Science  
Epidemiology (MS-EPI)

Master of Science  
Health Services Research & Policy  
(MS-HSRP)

# MPH Program Mission Statement

*The MPH program is dedicated to providing students with the knowledge and skills to improve health and healthcare among diverse populations through public health education, practice and research.*

## Skills You Acquire

- Formulate and answer questions related to health improvement and healthcare among diverse populations through statistical thinking as evidenced in student project work in methods classes
- Understand different ways to measure the distribution of traits and diseases in populations, and the determinants of those distributions
- Utilize concepts and theories of public health in addressing specific population health concerns in a community-based practice setting by using these to frame their Capstone Projects
- Identify and discuss different social and behavioral factors which impact on human health and the use of health services
- Employ statistical methods toward quantitative inferences
- Apply epidemiologic principles and methods to problems in population health
- Identify and analyze environmental factors and/or conditions that impact human health
- Conduct a practical study of community health problems and interpret and summarize the appropriate literature as evidenced in their Capstone Project
- Work collaboratively with communities to identify assets and problems, collect relevant data and devise and evaluate programs
- Portray high ethical and professional standards in public health practice and research activities
- Appreciate the cultural logic that informs the world views of diverse communities

<https://www.urmc.rochester.edu/public-health-sciences.aspx>

In order to meet the new CEPH (Council on Education for Public Health, our accrediting institution) program requirements, effective Fall 2017, the MPH program requirements have changed. Below is the link to those changes:

<http://goo.gl/forms/NzEBqmNovr>

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
 MASTER OF PUBLIC HEALTH (MPH) PROGRAM OF STUDY SHEET  
 TOTAL CREDITS REQUIRED: 43**

Student Name: \_\_\_\_\_ Date Matriculated: \_\_\_\_\_

**GENERAL INFORMATION**

Electives can be tailored toward individual's research focus and are identified accordingly.

<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>WHEN OFFERED</b>	<b>CREDITS COMPLETED</b>
IND 501	Ethics and Professional Integrity in Research	1	Fall	
PM 401	Quantitative Methods	3	Fall/Summer	
PM 410	Intro to Data Management & Analysis	3	Fall or Summer	
PM 415	Principles of Epidemiology	3	Fall	
PM421	US Health Care System: Financing, Delivery & Performance	3	Fall	
PM 426	Social & Behavioral Medicine	3	Spring	
PM 445	Intro to Health Services Res.	3	Fall	
PM 450 or PM 452	MPH Practicum  Community Health Improvement Practicum	3  3	<i>ONLINE ONLY</i>  Spring	
PM 455	Foundations in Public Health Sciences	3	<i>ONLINE ONLY</i>	
PM 458	Qualitative Health Research	3	Spring	
PM 460	Masters Essay (to include new research methods course)	6		
PM 461	Program Evaluation	3	Summer	
PM 487	Fundamentals of Science, Technology and Health Policy	3	Spring	
<b>ELECTIVES</b>				
	See Electives on page 2	3	Fall or Spring	
	<b>TOTAL CREDITS</b>	<b>43</b>		

**Revised: 6-5-18**



**MASTER OF PUBLIC HEALTH (MPH)  
MPH ELECTIVES**

<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>WHEN OFFERED</b>	<b>CREDITS COMPLETED</b>
PM 412 ^	Survey Research	3	Fall	
PM 413 #	Field Epidemiology	3	Spring	
PM 414	History of Epidemiology	3	Spring	
PM 416 ^	Epidemiologic Methods	3	Spring	
PM 417	Molecular Epidemiology	3	Spring	
PM 418 >	Cardiovascular Epidemiology	3	Fall	
PM 419	Recruitment & Retention of Human Subject	3	Fall (Alternate)	
PM 422	Qual. of Care & Risk Adjustment	3	Spring	
PM 424 >	Chronic Disease-Epi	3	Spring(Alternate)	
PM 425	Health Promo. & Preventive Med	3	Spring	
PM 430	Psychology in Health Svcs Res	3	Fall	
PM 438	Grantsmanship	3	<i>ONLINE ONLY</i>	
PM 442 ¥	Nutritional Epidemiology	3	Spring	
PM 443	Maternal & Child Health	3	Fall	
PM 451	Infectious Disease Epidemiology	3	Spring	
PM 466 ¥	Cancer Epidemiology	3	Fall	
PM 469 ¥	Multivariate Models for Epi	3	Fall	
PM 470	Environmental & Occ Med	3	Fall	
PM 472	Measurement & Evaluation of Research Instruments	3	Spring	
PM 484	Medical Decision Making & Cost Effectiveness Research	3	Spring	
PM 485	Intro. To Biomedical Informatics	3	Fall	
PM 486	Medical Ecology	3	Spring	
PM 488	Experimental Therapeutics	3	Fall	
PM 489 >	Injury Epi & Emergency Care Research Methods	3	Fall	

**Revised: 6-5-18**

Pre-requisites    ^    Principles of Epidemiology PM 415  
                          #    Principles of Epidemiology PM 415  
                          >    Principles of Epidemiology PM 415 -or- Introduction to Epidemiology PH 103  
                          ¥    Introductory courses in Epidemiology and Statistics

<https://www.urmc.rochester.edu/public-health-sciences.aspx>

# MS-CI Education Program Mission Statement

*Train individuals to combine clinical knowledge and population-based research in an academic program that awards a recognized credential indicating expertise in clinical epidemiology, research study design, clinical decision-making and the evaluation of health care services.*

The core courses required are epidemiology, biostatistics, health informatics, cost-effectiveness analysis, design of clinical trials, data management and clinical evaluative sciences.

The degree is completed with a mentored research experience, usually in conjunction with a post-doctoral fellowship program in the trainee's medical field. The mentored research project can begin concurrently with coursework and, in most cases, will extend beyond completion of courses. The goal of the research project is an article worthy of publication in a peer-reviewed journal.

## **Master of Science in Clinical Investigation Competencies**

At the conclusion of the MS-CI Degree program, a graduate should be able to:

### **Knowledge**

- Identify principles and theories which will serve as a basis for biostatistics and quantitative data analysis
- Understand the ways to measure the distribution of traits and diseases in populations, the determinants of those distributions and study designs for this purpose.
- Be able to design and analyze studies relevant to patient-oriented clinical research.
- Appreciate study designs, settings and databases available to evaluate clinical interventions.
- Comprehend the concepts underlying the quantitative analysis of medical decisions.
- Understand the design and conduct of human experiments.
- Identify social and behavioral factors which impact on human health and the use of health services.

### **Skills**

- Develop hypothesis with a data set and perform appropriate statistical tests.
- Use multiple types and sources of medical informatics to facilitate research.
- Use database management and statistical software to organize and analyze data.
- Gain skills in communicating results of research in abstract and presentation form.
- Acquire skills in writing and critiquing research manuscripts.
- Develop abilities in writing and critiquing of research grant proposals.
- Manage the fiscal, personnel, facilities and regulatory assets of a funded clinical research program.
- Identify institutional resources needed to carry out high-quality research

### **Attitudes**

- Appreciate ethical issues involved with research in human subjects.
- Understand the regulations and rationale for inclusion of women, minorities and children in research.
- Comprehend the types of clinical research which offers career opportunities.
- Appreciate the opportunities and challenges of multidisciplinary research involving two or more basic, clinical or population sciences.
- Understand the opportunities and obstacles to performing research within the private sector.

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
 MASTER OF SCIENCE CLINICAL INVESTIGATION (MS-CI) PROGRAM  
 OF STUDY SHEET  
 TOTAL CREDITS REQUIRED: 31**

**Student Name:** \_\_\_\_\_ **Date Matriculated:** \_\_\_\_\_

**GENERAL INFORMATION**

Electives can be tailored toward individual's research focus and are identified accordingly.

<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>PROPOSED SEMESTER</b>	<b>CREDITS COMPLETED</b>
Pm 401	Quantitative Methods	3	Fall or Summer	
PM 410	Intro. to Data Mgmt & Analysis	3	Fall or Summer	
PM 415	Principles of Epidemiology	3	Fall	
PM 460	Masters Research Project/Paper	6		
IND 501	Ethics in Prof. Integrity-Clinical	1	Fall	
BST 465	Design of Clinical Trials	3	Spring	
<b>PLUS ONE OF THE FOLLOWING</b>				
PM 413 or PM 416* or	Field Epidemiology  Advanced Epi Methods  *Advanced Biostatistics Course	3	Spring  Spring  Fall or Spring	
<b>OPTIONAL WORKSHOPS AS NEEDED</b>				
List of training opportunities may be found at <a href="http://www.urmc.rochester.edu/ctsi/education/">http://www.urmc.rochester.edu/ctsi/education/</a>				
<b>ELECTIVES</b>				
	Elective Table 1	3	Fall or Spring	
	Elective Table 2	3	Fall or Spring	
	Elective Table 3	3	Fall or Spring	
	<b>TOTAL CREDITS</b>	<b>31</b>		

**\*Pm 416 (Core 2, 3, 4) Epidemiologic Methods (CRN: 79443) 3 credits**

**\*PM 464 (Core) Introduction to Regression Analysis (CRN: 79758) 3 credits  
 (Instructor: Cai, Shubing, PhD)**

**\*Any biostats course of interest would qualify.**

11/28/18

## MS-CI ELECTIVES

We have identified certain electives into cluster areas to better assist students in choosing electives which focus around their research project topics

<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>WHEN OFFERED</b>	<b>CREDITS COMPLETED</b>
PM 412 ^	Survey Research	3	Fall	
PM 413 #	Field Epidemiology	3	Spring	
PM 414	History of Epidemiology	3	Spring	
*PM 416 ^	Epidemiologic Methods	3	Spring	
PM 417	Molecular Epidemiology	3	Spring	
PM 418 >	Cardiovas.r Disease Epi & Prevention	3	Fall	
PM 419	Recruitmt & Reten.of Human Subject	3	Fall (Alternate)	
PM 420	American Health Policy & Politics	3	Fall	
PM 421	US HC Sys.: Financing, Delivery, Performance	3	Fall	
PM 422	Quality of Care & Risk Adjustment	3	Spring	
PM 424 >	Chronic Disease-Epi	3	Spring(Alternate)	
PM 425	Health Promo.& Preventive Medicine	3	Spring	
PM 426	Social & Behavioral Medicine	3	Spring	
PM 430	Psychology in Health Services Res.	3	Fall	
PM 438	Grantsmanship	3	<b>ONLINE ONLY</b>	
PM 442 ¥	Nutritional Epidemiology	3	Spring	
PM 443	Maternal & Child Health	3	Fall	
PM 445	Intro to Health Services Res.& Policy	3	Fall	
PM 451	Infectious Disease Epidemiology	3	Spring	
PM 452	Comm.Health Improvemt Practicum	3	Spring	
PM 458	Qualitative Health Care Research	3	Spring	
PM 461	Program Evaluation for Public Health	3	Summer	
*PM 464	Introduction to Regression Analysis	3	Spring	
PM 466 ¥	Cancer Epidemiology	3	Fall/Spring	
PM 469 ¥	Multivariate Models for Epi	3	Fall	
PM 472	Measurement & Eval of Res. Instru.	3	Spring	
PM 484	Med Decision Making & Cost Effec. Research	3	Spring	
PM 485	Intro to Biomedical Infomatics	3	Fall	
PM 486	Medical Ecology	3	Spring	
PM 487	Fundamentals of Sci.,Tech. & Health Policy	3	Spring	
PM 488	Experimental Therapeutics	3	Fall	
PM 489 >	Injury Epi & Emer.Care Res. Methods	3	Fall	

**Pre-requisites**

- ^ Principles of Epidemiology PM 415
- # Principles of Epidemiology PM 415
- > Principles of Epidemiology PM 415 -or- Introduction to Epidemiology PH 103
- ¥ Introductory courses in Epidemiology and Statistics

<https://www.urmc.rochester.edu/public-health-sciences.aspx>

11/28/18

# Master of Science In Epidemiology (MS-EPI)

## Mission Statement

### How does the program relate to the institution's mission and/or master plan:

*Answer: The mission of the University of Rochester Medical Center is to use education, science, and technology to improve the health of patients and communities ---transforming the patient experience with fresh ideas and approaches steeped in disciplined science, and delivered by health care professionals who innovate, take intelligent risks, and care about the lives they touch. The proposed MS in Epidemiology will support this mission by preparing students to apply these ideals in clinical and public health research and outcomes evaluation.*

## Master of Science In Epidemiology (MS-EPI)

The Master of Science in Epidemiology is a three semester course of study designed to provide students with the knowledge and skills needed to understand and apply the methodologies used to examine factors associated with the development and prevention of disease. We meet this goal by providing students with a firm foundation in the fundamental elements of epidemiologic research and biostatistics. Students completing the program will be well prepared to take positions in a wide variety of private and public institutions engaged in clinical and public health research and evaluation. The program includes 34 credits of required coursework. This includes 6 epidemiology (or biostatistics) core methods courses, Ethics (1 credit), 3 elective courses, and thesis research (6 credits). Students will propose their thesis research to their thesis committee in a closed session. They will defend their thesis at completion in a public forum followed by a closed Q & A session with thesis committee members.

Please contact Edwin van Wijngaarden, PhD, Program Director

[Edwin\\_van\\_Wijngaarden@urmc.rochester.edu](mailto:Edwin_van_Wijngaarden@urmc.rochester.edu)

or telephone (585) 275-1985

Or visit the program website: <https://goo.gl/1ZAhCH>

[www.urmc.rochester.edu/education/graduate/masters-degrees/masters-of-science-in-epedemiology.aspx](http://www.urmc.rochester.edu/education/graduate/masters-degrees/masters-of-science-in-epedemiology.aspx)

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
 MASTER OF SCIENCE EPIDEMIOLOGY (MS-EPI)  
 PROGRAM OF STUDY SHEET  
 TOTAL CREDITS REQUIRED: 34**

Student Name: \_\_\_\_\_ Date Matriculated: \_\_\_\_\_

**GENERAL INFORMATION**

Electives can be tailored toward individual's research focus and are identified accordingly.

<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>CREDITS COMPLETED</b>
PM 401 <b>or</b> BST 463	Quantitative Methods in Public Health Research Introduction to Biostatistics	3 3	
PM 410	Intro To Data Mgmt. & Data Analysis Using SAS	3	
PM 413 <b>¥ or</b> BST 465	Field Epidemiology Design of Clinical Trials	3 4	
PM 415	Principles of Epidemiology	3	
PM 416	Epidemiological Methods	3	
PM 469 <b>or</b> BST 464	Multivariable Models for Epidemiology Linear Regression	3 4	
IND 501	Ethics		
	PM xxx Epidemiology Elective	3	
	PM xxx Epidemiology Elective	3	
	PM xxx epidemiology Elective <b>or</b> Public Health/ Clinical Research Elective	3 3	
PM 460	Master's Essay	6	
	<b>TOTAL CREDITS</b>		

Revised: 6-19-18

<https://www.urmc.rochester.edu/public-health-sciences.aspx>

**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
 MASTER OF SCIENCE EPIDEMIOLOGY (MS-EPI)  
 MS-EPI ELECTIVES**

<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>CREDITS COMPLETED</b>
	<b>EPIDEMIOLOGY</b>		
PM 413	Field Epidemiology	3	
PM 414	History of Epidemiology	3	
PM 417	Molecular Epidemiology	3	
PM 418	Cardiovascular Epidemiology	3	
PM 424	Chronic Disease Epidemiology	3	
PM 442	Nutritional Epidemiology	3	
PM 451	Infectious Disease Epidemiology	3	
PM 466	Cancer Epidemiology	3	
PM 469 ¥	Multivariable Models for Epidemiology	3	
PM 470	Environmental & Occupational Epi	3	
PM 489	Injury Epi & Emergency Care Res Methods	3	
	<b>PUBLIC HEALTH/CLINICAL RESEARCH</b>		
PM 412	Survey Research	3	
PM 419	Recruitment and Retention of Human Subjects in Clinical Research	3	
PM 426	Social & Behavioral Medicine	3	
PM 445	Intro to Human Services Research and Policy	3	
BST 465	Design of Clinical	4	
	Other course with approval from advisor	3	
	<b>*If not taken as required course</b>		

**Revised: 6-19-18**

¥ Introductory courses in Epidemiology and Statistics and PM 416.

<https://www.urmc.rochester.edu/public-health-sciences.aspx>

# MS-HSRP Program Mission Statement

*The MS HSRP program is dedicated to providing students with the knowledge and skills needed to conduct high quality health services research and policy analysis*

The American health care system is having trouble delivering equitable, high quality care at reasonable cost. In response, The Institute of Medicine has proposed the transformation of the current health care system into one that is continuously learning, characterized by real-time access to knowledge, digital capture of the clinical experience, engaged, empowered patients, incentives aligned for value, full transparency, a leadership-instilled culture of learning, and supportive system competencies. (*Best Care at Lower Cost*)

The MS HSRP curriculum at the University of Rochester equips students with knowledge and skills needed to accomplish and maintain this transformation.

## MS-HSRP Program Learning Competencies

At the conclusion of the Master of Science in Health Services Research and Policy program, a graduate will be able to:

- Appreciate the multi-disciplinary nature of health services research
- Understand the structure, financing, and performance of the US health care system
- Be familiar with quantitative and qualitative analyses of health care services and policy
- Understand the basic principles of statistical analysis, econometrics, quality assessment and comparative effectiveness analysis
- Understand current methods used to formulate health care policy
- Know how to conduct basic statistical tests and regression analysis
- Know how to interpret health services research studies
- Be able to perform decision analysis and comparative-effectiveness analysis.
- Learn how to risk-adjust health care data
- Be able to perform a health care policy analysis



**DEPARTMENT OF PUBLIC HEALTH SCIENCES  
 MASTER OF SCIENCE HEALTH SERVICES RESEARCH & POLICY (MS-HSRP)  
 PROGRAM OF STUDY SHEET  
 TOTAL CREDITS REQUIRED: 34**

**Year One – Fall Term**

<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>PRE-REQUISITE</b>
Pm 421	Us Health Care System: Financing, Delivery & Performance	3	None
PM 445	Introduction to Health Services Research & Policy	3	None
IND 501	Ethics in Professional Integrity-Clinical	1	None
	<b>Total Credits</b>	<b>7</b>	

**Year One – Spring Term**

<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>PRE-REQUISITE</b>
PM 416 ^	Epidemiologic Methods (depending on previous coursework)	3	PM 415
PM 422	Quality of Care & Risk Adjustment	3	Calculus & PM 421
PM 464	Introduction to Regression Analysis	3	None
PM 472	Measurement & Evaluation of Research Instruments	3	None
PM 484	Decision-making &* Cost Effectiveness (all years)	3	One graduate level statistics course
	<b>Total Credits</b>	<b>15</b>	

**Year Two – Fall Term**

<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDITS</b>	<b>PRE-REQUISITE</b>
PM 412	Survey Research	3	None
PM 415	Principles of Epidemiology	3	None
<b>or</b> PM 416	Epidemiological Methods	3	None
PM 460	Master's Essay	6	None
	<b>Total Credits</b>	<b>12</b>	

<https://www.urmc.rochester.edu/public-health-sciences.aspx>

1012/18



# Masters' Capstone Project

**Master of Public Health – (MPH)**

**Master of Science – Clinical Investigation (MS-CI) & Health Services  
Research & Policy (MS-HSRP)**

**Master of Science – Epidemiology (MS-EPI)**

**Guidelines**

# MPH THESIS PROJECT GUIDELINES

## IMPORTANT STEPS TOWARDS MPH THESIS PROJECT COMPLETION

Steps	Involvement	Description
1. Feasibility Inquiry	Student & Advisor	<ul style="list-style-type: none"> <li>Idea discussion</li> </ul>
2. General Topic Identification	Student & Advisor	<ul style="list-style-type: none"> <li>Development of idea into topic</li> </ul>
3. Identification of proposed Committee Chair	Student & Advisor	
4. Research Committee Identified	Student, Advisor, proposed Committee Chair and other faculty	<ul style="list-style-type: none"> <li>Student secures agreement for involvement from suggested committee members, then submits list of committee members &amp; completed committee member sign-off sheet for approval by program director.</li> </ul>
5. Complete learning modules 1-3	Student & committee	<ul style="list-style-type: none"> <li>Student completes leadership course</li> <li>Student reads appropriate chapters in O'Leary book and completes checklists</li> <li>Student incorporates dissemination plan into proposal</li> </ul>
6. Committee Meeting(s)	Student & committee	<ul style="list-style-type: none"> <li>Refine topic and research question</li> <li>Plan methods (including dissemination plan)</li> <li>Prepare timeline</li> </ul>
7. Schedule Project Proposal Presentation when deemed ready by committee	Student, Committee Chair, Committee Members	<ul style="list-style-type: none"> <li>Schedule presentation with assistance of Elaine Topeck, Administrative Assistant, <a href="mailto:Elaine_topeck@urmc.rochester.edu">Elaine_topeck@urmc.rochester.edu</a></li> </ul>
9. Announcement of Project Proposal Presentation	Student & Graduate Programs Administrative Assistant	<ul style="list-style-type: none"> <li>Submission of abstract to approved by the committee to Administrative Assistant one week prior to presentation</li> <li>Notice posted within department and forwarded via email to all PHS faculty and students one week prior to presentation date</li> </ul>
10. Project Proposal Presentation	Student, Committee Chair and Members, PHS faculty and students	<ul style="list-style-type: none"> <li>Student presents</li> </ul>
11. Committee Caucus	Student, Committee Chair and Members, other faculty	<ul style="list-style-type: none"> <li>Review feedback and suggestions based on presentation, adjust project plan if necessary</li> </ul>

12. Project	Student, Committee Chair and Members (plus consultants as necessary)	<ul style="list-style-type: none"> <li>• RSRB approval</li> <li>• Data collection</li> <li>• Data analyses</li> <li>• Completion of thesis document (results, discussion, and documentation of the analysis)</li> </ul>
13. Committee Meeting(s) (synchronous or asynchronous e.g., via email)	Student, Committee Chair and Members	<ul style="list-style-type: none"> <li>• Review of progress</li> <li>• Revisions based as needed</li> </ul>
14. First draft of the completed thesis to Committee	Student	<ul style="list-style-type: none"> <li>• March 1 for May graduation</li> <li>• June 15 for August graduation</li> <li>• November 1 for December graduation</li> </ul>
15. Final Project (see guidelines)	Student, Committee Chair and Members, Graduate Programs Administrator	<ul style="list-style-type: none"> <li>• Recording and submission of final project findings presentation</li> <li>• Preparation and submission of visual abstract illustrating study findings</li> <li>• Submission of final project, project presentation and visual abstract to Committee members for sign off: April 15 for May graduation, August 1 for August graduation, December 15 for December graduation</li> <li>• After committee sign-off: Submission of final project to Graduate Programs Administrator &amp; Submission of final abstract with findings to Graduate Programs Administrative Assistant</li> </ul>

# MPH Thesis Project Guidelines

## Purpose/Background

A Public Health Sciences (PHS) Capstone Project is a requirement of all Masters programs. It is an opportunity for students to synthesize knowledge and skills gained during their course work. All students are to design, conduct, and write this project under the supervision of a chair and committee.

## Requirements

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Students can start working on their Capstone Project when they are ready in the judgment of their advisor and committee chair. Students will generally be expected to have taken courses covering the methods the student proposes to use in their project. In addition to completing the Capstone project, MPH students are also required to complete four educational modules that are designed to facilitate planning, execution, and reporting of the project. These modules are described below.

## Departmental Specifications for Students

### TOPIC

Consult with your advisor on identification of a topic. Note that MPH research topics have a public health and/or population relevance.

Using completed course assignments to satisfy the capstone requirement, with no additional work, is prohibited.

### Committee Chair

The committee chair has primary responsibility for helping the student plan, propose, complete, and report the results of their capstone project. The committee chair also has primary responsibility for coordinating the efforts of all committee members.

All committee chairs need to complete the chair section of the committee sign off agreement form (see below). MPH committee chairs also have primary responsibility for ensuring MPH students complete the required educational modules and conducting the required assessments. (See below)

To model best practices and avoid future misunderstanding, students and their chair should talk about authorship on any potential publication derived from the capstone project as part of the proposal development process. Plans for deciding manuscript authorship should be made following [the International Committee of Medical Journal Editors \(ICMJE\) guidelines](#):

*All those designated as authors should meet all four of the following criteria for authorship, and all who meet the four criteria should be identified as authors:*

- 1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND*
- 2. Drafting the work or revising it critically for important intellectual content; AND*
- 3. Final approval of the version to be published; AND*
- 4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.*

Consult with your advisor on identification of a Committee Chair. The Committee Chair must hold a full-time faculty appointment in PHS.

# MPH Thesis Project Guidelines

## Committee Members

Consult with your advisor and/or your committee chair regarding identification of committee members. Committees shall consist of at least three members: Two members, whose primary faculty appointment is in the Department of Public Health Sciences (PHS) and one whose primary faculty appointment is not in the Department of Public Health Sciences.

Committee members who are not the chair are responsible for helping the student plan, complete, and report the results of their capstone project, particularly in areas of their individual expertise. They are also required to agree to the terms of the committee member agreement form (see below).

All committee members should also be listed as authors on manuscripts reporting the results of the capstone project if they meet the ICMJE criteria for authorship.

Committee members who supply Capstone project data agree to allow the student to use the data to complete their proposed project and to include the student and all committee members on any manuscripts reporting the project that are subsequently published whenever ICMJE authorship criteria are met.

A committee may also include one or more consultants who are asked to help with specific issues identified by the committee.

## Approval

After the committee is chosen, you must submit a description of your proposed committee members, along with the completed committee member agreement form (see below), for review and approval by the Program Director.

## Research Proposal Presentations

Before the actual research project starts, the final research proposal, including the background, study objectives, and methods, is presented publicly. The goal of the presentation is to obtain feedback about the study objectives and proposed methodology from additional faculty and students.

All committee members need to agree that the proposal is ready for presentation before it can be scheduled. At this point, the proposal will consist of the first part of the finished thesis document and include the introduction, background, public health significance (MPH projects only), and a detailed description of the proposed methods. These thesis components typically are 10 to 25 pages long.

Presentations are usually scheduled on Wednesday from 12:00 to 1:00 in 30-minute time slots. The presentation should last no more than 18 minutes to leave ample time for discussion.

To set a date, first verify consent and availability of committee members, then secure a presentation date with Elaine Topeck (see contact information below).

## MPH Thesis Project Guidelines

Send an electronic version of the proposal abstract to Elaine Topeck at least 7 days in advance of scheduled presentation with a copy sent to the committee chair. The abstract should describe the project and be approximately 250-300 words. An electronic announcement for the presentation with the abstract will be disseminated to all PHS faculty, staff and students as well as invited guests one week prior to the scheduled presentation. Printed announcements will also be posted. A reminder announcement will be forwarded the morning of the scheduled presentation.

Students are strongly encouraged to arrange a time with committee members to rehearse the proposal presentation several days in advance of the proposal date.

Students are also encouraged to review information and guidelines regarding how to prepare effective Power Point presentations available from the University of Rochester (as they prepare for their proposal. This information can be accessed using this [link](#).

### Investigations Involving Human Subjects

Projects involving the use of human subjects (through direct subject contact or through use of subject records) must be approved by the Research Review Board, Human Subjects for approval. For this reason, all students must have an active Human Subjects Protection Program (HSPP) number.

Your committee chair will be the primary investigator. Students should register as the study coordinator. Because review may take several weeks before a decision is rendered, advance planning is necessary. After submission, there is a departmental review prior to delivery of the proposal to the RSRB. You can track the status of your application on the RSRB website. If it remains in “Departmental Review” for more than one week, ask your committee chair to follow-up with the Department Chair. Please consult the on-line RSRB application instructions for protocol development, templates for consent letters, etc. and definition of terms (<http://www.urmc.rochester.edu/rsrb>).

### Contact Information:

**James G. Dolan, MD, Program Director for MPH and MSCI**

Phone: (585) 276-5161

Email: [james\\_dolan@urmc.rochester.edu](mailto:james_dolan@urmc.rochester.edu)

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# MPH Thesis Project Guidelines

## Sign off

### Committee chair

I have read and agree to serve as committee chair for [student name] Master's thesis subject to the following stipulations:

<input type="checkbox"/>	I will only serve as chair if I am listed as the senior author on all publications resulting from this project.
<input type="checkbox"/>	I will only serve as chair if I am listed as the senior author on at least one publication resulting from this project.
<input type="checkbox"/>	I will serve as chair if I am listed as an author on all publications resulting from this project.
<input type="checkbox"/>	I will serve as chair if I am listed as an author on at least one publication resulting from this project.
<input type="checkbox"/>	Other:

Name:

Date:

### Other committee member #1

I have read and agree to serve on the Master's thesis committee for [student name] thesis subject to the stipulations stated above.

Name:

Date:

### Other committee member #2

I have read and agree to serve on the Master's thesis committee for [student name] thesis subject to the stipulations stated above.

Name:

Date:



# MPH Thesis Project Guidelines

## Thesis Requirements

**The final thesis document should be a complete record of the capstone project. The following sections should be included:**

1. Title page (see formatting below)
  - a. The cover page is not numbered
  - b. Project title is typed in Title Case following standard rules of English
  - c. Only the Chair is listed on the cover page. Others may be included in the acknowledgements
  - d. Student's Departmental Name
  - e. College/School
  - f. Year of Final Defense (not month or day)
2. Table of contents
3. Abstract
  - a. The final abstract of the project should appear immediately after the table of contents
  - b. The final abstract must include the following headings bolded with a brief description of each: Background, Objective, Methods, Results and Conclusion.
4. Introduction
5. Background
6. Public Health Significance (For MPH projects only)
7. Methods (including a dissemination plan, see below)
8. Results
9. Discussion
  - a. Summary of findings
  - b. Relationship of study findings with previous results
  - c. Strengths and weaknesses
  - d. Conclusion and implications for further research
10. References
11. Tables
12. Figures
13. Appendix
  - a. Study materials (surveys etc)

## Formatting Text

The report should be double-spaced and use the following margins: 1 1/2" from the left side and 1 1/4" from the right side, top and bottom. Page numbers should be put on the bottom of the page.

Font size should be 11 – 12. Font type should be Times New Roman.

**(Example cover page format)**

Title of Thesis

by

Your Name

Submitted in Partial Fulfillment of the Requirements for the (Master of Science Degree) or (Master of  
Public Health Degree)

Supervised by

(Chair of Committee **Only**)

Department of Public Health Sciences

School of Medicine and Dentistry

University of Rochester  
Rochester, New York

20XX

## MPH Thesis Project Guidelines

### Additional MPH (PM 460, requirements) learning modules check list for committee chair

Module	Requirements
<b>Module 1: Leadership and project management</b>	<input type="checkbox"/> Chapter quizzes 80% correct, Leadership foundations course at Lynda .com  <input type="checkbox"/> Weber leadership assessment rubric completed
<b>Module 2: Research Project Fundamentals</b>	<input type="checkbox"/> Checklist for good questions  <input type="checkbox"/> Checklist for elements of a research proposal  <input type="checkbox"/> Checklist for literature review  Checklists (Appropriate for proposed study design, chosen and evaluated by committee chair) for: <input type="checkbox"/> Assessing practicality <input type="checkbox"/> Experimental design <input type="checkbox"/> Appropriate data analysis
<b>Module 3 – Knowledge Translation</b>	<input type="checkbox"/> Incorporation of key questions for knowledge translation listed on pages 15-17 of the Guide to knowledge translation planning at CIHR into the thesis protocol. Primary evaluator: committee chair.
<b>Module 4 – Communication of study results</b>	<input type="checkbox"/> Creation and presentation of a summary of thesis research findings and implications using an adapted version of the 3 minute thesis format  <input type="checkbox"/> Creation of a visual abstract using the method developed by Ibrahim.

# MPH Thesis Project Guidelines

## Overall Learning Objective for Modules

---

To provide students with the essential resources and skills they need to plan, conduct, and report a successful MPH thesis capstone project.

Modules 1, 2, and 3 should be completed during the proposal development period.

Module 4 should be completed during the thesis writing and reporting period.

## Module 1: Leadership and Project Management

### Objective

To provide students with the leadership skills needed to successfully organize and lead an in-depth scholarly research project

### Activities

[Leadership foundations course at Lynda.com](#)

This course, taught by Britt Andreatta of the Project Management Institute covers the following topics:

- What is leadership, and when are you leading?
- Mapping your leadership competencies
- Dealing with changing scope and stakes
- Motivating and engaging others
- Increasing team performance
- Developing political acumen
- Creating a culture of trust and integrity
- Developing resilience

Time required: 1 hour 24 minutes

Students can use free 30 day trial membership if they do not already have a subscription to Lynda.com. (See [appendix](#))

### Assessments:

1. Completion of all chapter quizzes with at least 80% of questions correct. Students are required to submit screen shots of completed chapter quizzes to the committee chair for evaluation.
2. Assessment by committee members about how well the student functioned as a project leader in preparing, doing, and completing the thesis project using Weber leadership assessment rubric. (see appendix)

# MPH Thesis Project Guidelines

## Module 2: Research Project Fundamentals

### Objective

To help students identify the steps needed to successfully conduct a research project and learn how to accomplish them.

### Activities

#### Required:

[O'Leary, Z: The essential guide to doing your research project. 3rd ed. Sage](#)

Chapters: 1-7, & 16 + additional chapters relevant to study method chosen for the study

This book is available at Amazon, Barnes & Noble, and other online sellers. Cost is about \$10 to rent, \$25 to buy.

#### Optional:

[Review of Tutors quick guide to statistics](#)

Relevant sections for study method chosen for study

### Assessments:

Completion of applicable student resources (available at <https://study.sagepub.com/oleary3e>).

Primary evaluator: committee chair. Secondary evaluators: other committee members.

1. Checklist for good questions
2. Checklist for elements of a research proposal
3. Checklist for literature review
4. Checklists (Appropriate for proposed study design, chosen and evaluated by committee chair) for:
  - a. Assessing practicality
  - b. Experimental design
  - c. Appropriate data analysis

## Module 3 – Knowledge Translation

### Objective

To learn how to effectively plan to disseminate results of a research project.

### Activities

- Read pages 15-25 of the [Guide to knowledge translation planning at CIHR](#): Integrated and end-of-grant approaches published by the Canadian Institutes of Health Research

# MPH Thesis Project Guidelines

## Assessment

Incorporation of key questions for knowledge translation listed on pages 15-17 of the Guide to knowledge translation planning at CIHR into the thesis protocol. Primary evaluator: committee chair. Secondary evaluators: other committee members.

## Module 4 – Communication of study results

### Objective

To learn how to communicate audience-appropriate public health content, both in writing and through oral presentation.

### Activities

#### **1. Creation and presentation of a summary of thesis research findings and implications using an adapted version of the 3 minute thesis format:**

The presentations will be recorded by the student and the resulting file submitted for evaluation. Students should plan to record their presentation using Powerpoint, Zoom, Panopto, Keynote, or a similar screencast/presentation tool.

Presentations will be limited to 5 minutes. Presentations longer than 5 minutes will be rejected as unacceptable. The presentation should include a brief summary of your study question, study methods, results and conclusions. Two projected diagrams, such as power point slides, may be used: one to help describe the study and the other to summarize the results.

#### **2. Creation of a visual abstract using the [method](#) developed by Ibrahim.**

Optional use of [Mind the Graph](#) online software.

The visual abstract can be included in the presentation or submitted as a separate file.

Both the final report and the visual abstract should be saved and submitted via email to the PHS Graduate Programs Administrator.

## Assessment

Presentations and visual abstracts will be judged using the following criteria by a faculty committee:

- Did the presentation provide an understanding of the background to the research question being addressed and its significance?
- Did the presentation clearly describe the key results of the research including conclusions and outcomes?
- Did the presentation follow a clear and logical sequence?

## **MPH Thesis Project Guidelines**

- Was the thesis topic, key results and research significance and outcomes communicated in language appropriate to a non-specialist audience?
- Did the speaker avoid scientific jargon, explain terminology and provide adequate background information to illustrate points?
- Did the presenter spend adequate time on each element of their presentation - or did they elaborate for too long on one aspect or was the presentation rushed?

# MPH Thesis Project Guidelines

## Appendix

### Weber Leadership Assessment Rubric

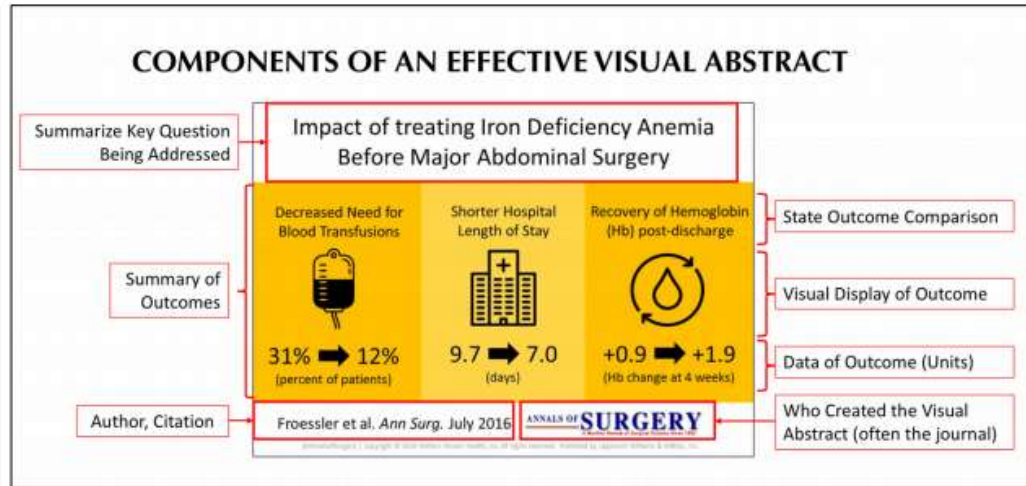
	1 - Emerging	2 - Approaching	3 - Meeting	4 - Exceeding	N/A
<b>Potential</b> <input type="checkbox"/>	<ul style="list-style-type: none"> <li>Unaware of own potential</li> </ul>	<ul style="list-style-type: none"> <li>Aware of own potential, but not able to recognize it in others</li> </ul>	<ul style="list-style-type: none"> <li>Aware of own potential and can recognize potential in others</li> </ul>	<ul style="list-style-type: none"> <li>Aware of own potential and both recognizes and encourages potential in others</li> </ul>	
<b>Accountability</b> <input type="checkbox"/>	<ul style="list-style-type: none"> <li>Does not hold self accountable for actions</li> </ul>	<ul style="list-style-type: none"> <li>Inconsistently holds self accountable for actions</li> </ul>	<ul style="list-style-type: none"> <li>Holds self accountable for actions but not others</li> </ul>	<ul style="list-style-type: none"> <li>Holds self and others accountable for their actions</li> </ul>	
<b>Involvement</b> <input type="checkbox"/>	<ul style="list-style-type: none"> <li>Does not seek involvement opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Actively seeks involvement opportunities for self</li> </ul>	<ul style="list-style-type: none"> <li>Seeks involvement opportunities for self and others</li> </ul>	<ul style="list-style-type: none"> <li>Seeks and generates opportunities for involvement for self and others</li> </ul>	
<b>Facilitation</b> <input type="checkbox"/>	<ul style="list-style-type: none"> <li>Is not able to lead or empower a group to develop a consensus which results in the members' commitment/satisfaction regarding their responses within a specified time limit.</li> </ul>	<ul style="list-style-type: none"> <li>Requires significant assistance in leading and empowering group members in collaborative solutions resulting in group satisfaction with agreed responses after an extended time period.</li> </ul>	<ul style="list-style-type: none"> <li>Is hesitant but able to lead and empower group members in collaborative solutions resulting in group satisfaction with agreed responses within a specific time limit.</li> </ul>	<ul style="list-style-type: none"> <li>Leads and empowers group members towards collaborative solutions which maximize members' commitment to and satisfaction with agreed upon responses within a specified time limit.</li> </ul>	
<b>Feedback</b> <input type="checkbox"/>	<ul style="list-style-type: none"> <li>Does not give feedback and is not open to receiving feedback.</li> </ul>	<ul style="list-style-type: none"> <li>Inconsistently provides feedback and is somewhat open to receiving feedback</li> </ul>	<ul style="list-style-type: none"> <li>Consistently provides feedback and is open to receiving feedback</li> </ul>	<ul style="list-style-type: none"> <li>Incorporates reciprocal feedback as an integral part of processes.</li> </ul>	
<b>Total:</b>					

Overall Comments:



# MPH Thesis Project Guidelines

## Visual Abstracts



Key components of the visual abstract include:

**Summarize Key Question Being Addressed:** This usually comes from the title of the article or a heading of key figure. Keep it short and clear.

**Summary of Outcomes:** You will need to spend time thinking about outcomes you want to present. Most articles have many more than 3, so you'll have to prioritize.

**Author, Citation:** Always include at least the first author's name and year of publication.

**State Outcome Comparison:** A short phrase that clearly states the outcome with the respect to groups being compared. For example, "Decreased Need for Blood Transfusions" is easier to follow than simply, "Blood Transfusions." As much as possible, you should use the same prose used in the article for consistency.

**Visual Display of Outcome:** You will want a visual that reflects the outcome you're describing. (More on this below – "Making it Visual.")

**Data of Outcome (Units):** In addition to stating the outcome, you will want to give the numeric representation. Be sure to include the units.

# MPH Thesis Project Guidelines

## How to Open a Free 30-day Account at Lynda.com

1. go to [www.lynda.com](http://www.lynda.com)
2. Click on Free trial
3. Enter an email address and password.
4. Select either a basic or premium account in case you decide to keep your account open after the 30 day free trial period.
5. Select either monthly or yearly billing
6. Enter your payment information: paypal or charge card
7. Note the end date of your free trial. If you can cancel any time before this date, you will not be charged. If you leave your account open past this date, your paypal account or credit card will be billed according to the schedule you picked in step 5.
8. Pick at least one skill area of interest
9. Proceed to Leadership course:
  - select leadership from library menu
  - check Britt Andreatta from the author list on the left

# MS-CI & HSRP Capstone Project Guidelines

## IMPORTANT STEPS TOWARDS CAPSTONE PROJECT COMPLETION

Steps	Involvement	Description
1. Feasibility Inquiry	Student & Advisor	<ul style="list-style-type: none"> <li>Idea discussion</li> </ul>
2. General Topic Identification	Student & Advisor	<ul style="list-style-type: none"> <li>Development of idea into topic</li> </ul>
3. Identification of proposed Committee Chair	Student & Advisor	
4. Research Committee Identified	Student, Advisor, proposed Committee Chair and other faculty	<ul style="list-style-type: none"> <li>Student secures agreement for involvement from suggested committee members</li> </ul>
5. Topic & Committee Member Approval	Student & Program Director	<ul style="list-style-type: none"> <li>Brief abstract submitted for discussion, review and approval by Program Director</li> </ul>
6. Committee Meeting	Student, Committee Chair and Committee Members	<ul style="list-style-type: none"> <li>Refine topic and research question</li> <li>Layout methods</li> <li>Prepare timeline</li> </ul>
7. Project Proposal	Student, Committee Chair and Committee Members	<ul style="list-style-type: none"> <li>Preparation of proposal with review and feedback from Committee Chair and Members</li> </ul>
8. Schedule Project Proposal Presentation	Student, Committee Chair, Committee Members	<ul style="list-style-type: none"> <li>Schedule presentation with assistance of Elaine Topeck, Administrative Assistant, <a href="mailto:Elaine_topeck@umc.rochester.edu">Elaine_topeck@umc.rochester.edu</a></li> </ul>
9. Announcement of Project Proposal Presentation	Student & Graduate Programs Administrative Assistant	<ul style="list-style-type: none"> <li>Submission of abstract to Administrative Assistant one week prior to presentation</li> <li>Notice posted within department and forwarded via email to all PHS faculty and students one week prior to presentation date</li> </ul>
10. Project Proposal Presentation	Student, Committee Chair and Members, PHS faculty and students	<ul style="list-style-type: none"> <li>Student presents</li> </ul>
11. Faculty Caucus	Student, Committee Chair and Members, other faculty	<ul style="list-style-type: none"> <li>Provided feedback and suggestions based on presentation</li> </ul>
12. Project	Student, Committee Chair and Members and Consultants as necessary	<ul style="list-style-type: none"> <li>RSRB approval</li> <li>Data collection</li> <li>Data analyses</li> <li>Essay write up (draft format)</li> </ul>
13. Committee Meeting(s)	Student, Committee Chair and Members	<ul style="list-style-type: none"> <li>Review of progress and essay draft</li> <li>Reworks based on feedback</li> </ul>
14. First draft of thesis to Committee	Student	<ul style="list-style-type: none"> <li>March 1 for May graduation</li> <li>June 15 for August graduation</li> <li>November 1 for December graduation</li> </ul>
15. Final Project (see guidelines)	Student, Committee Chair and Members, Graduate Programs Administrator	<ul style="list-style-type: none"> <li>Submission of final project to Committee Chair &amp; Members for sign off</li> <li>Submission of final project to Graduate Programs Administrator</li> <li>Submission of final abstract with findings to Graduate Programs Administrative Assistant</li> </ul>

# MS-CI & HSRP Capstone Project Guidelines

## Purpose/Background

A Public Health Sciences (PHS) Capstone Project is a requirement of all Masters programs. It is an opportunity for students to synthesize knowledge and skills gained during their course work. All students are to design, conduct, and write this project under the supervision of a chair and committee.

## Requirements

Students are able to start working on their Capstone Project when they are ready in the judgment of their advisor and committee chair. Students will generally be expected to have taken courses covering the methods the student proposes to use in their project.

## Departmental Specifications for Students

### Topic:

Consult with your advisor on identification of a topic. Note that MPH research topics have a public health and/or population relevance.

Use of course assignments to satisfy the capstone requirement, with no additional work, is prohibited.

### Committee Chair:

Consult with your advisor on identification of a Project Chair.

The Project Chair **must** hold a full-time faculty appointment in PHS.

### Committee Members:

Consult with your advisor and/or your committee chair on identification of committee members.

Committees shall consist of at least three members:

Two members whose primary faculty appointment is in the Department of Public Health Sciences (PHS) and one whose primary faculty appointment is not in the Department of Public Health Sciences.

A committee may also include one or more consultants who are asked to help with specific issues identified by the committee.

# MS-CI & HSRP Capstone Project Guidelines

## Department Specifications for Faculty

### Committee Chair

The committee chair has primary responsibility for helping the student plan, propose, complete, and report the results of their capstone project.

The committee chair also has primary responsibility for coordinating the efforts of all committee members.

The committee chair is also charged with encouraging the student to publish a manuscript based on their capstone project.

To model best practices and avoid future misunderstanding, students and their chair should expect to talk about authorship order on any potential publication derived from the capstone project as part of the proposal development process. Plans for deciding manuscript authorship should be made following [the International Committee of Medical Journal Editors \(ICMJE\) guidelines](#):

*All those designated as authors should meet all four of the following criteria for authorship, and all who meet the four criteria should be identified as authors:*

- *Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND*
- *Drafting the work or revising it critically for important intellectual content; AND*
- *Final approval of the version to be published; AND*
- *Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.*

### Other committee members

Committee members are responsible for helping the student plan, complete, and report the results of their capstone project, particularly in areas of their individual expertise.

All committee members should also be listed as authors on manuscripts reporting the results of the capstone project if they meet the ICMJE criteria for authorship

Committee members who supply Capstone project data agree to allow the student to use the data to complete their proposed project and include the student and all committee members on any manuscripts reporting the project that are subsequently published whenever ICMJE authorship criteria are met.

# MS-CI & HSRP Capstone Project Guidelines

## Proposed Master's Committee Sign Off Form

### Committee chair

I have read and agree to serve as committee chair for [student name] Master's thesis subject to the following stipulations:

	I will only serve as chair if I am listed as the senior author on all publications resulting from this project.
	I will only serve as chair if I am listed as the senior author on at least one publication resulting from this project.
	I will serve as chair if I am listed as an author on all publications resulting from this project.
	I will serve as chair if I am listed as an author on at least one publication resulting from this project.
	Other:

Name:

Date:

### Other committee member #1

I have read and agree to serve on the Master's thesis committee for [student name] thesis subject to the stipulations stated above.

Name:

Date:

### Other committee member #2

I have read and agree to serve on the Master's thesis committee for [student name] thesis subject to the stipulations stated above.

Name:

Date:

# MS-CI & HSRP Capstone Project Guidelines

## Research Proposal Presentations:

Before the actual research project starts, the final research proposal, including the background, study objectives, and methods, is presented publicly.

The goal of the presentation is to obtain feedback about the study objectives and proposed methodology from additional faculty and students.

Presentations are usually scheduled on Wednesday from 12:00 to 1:00 in 30 minute time slots.

The presentation should last no more than 18 minutes to leave ample time for discussion.

To set a date, first verify availability of committee members, then secure a presentation date with Elaine Topeck (see contact information below).

Send an electronic version of the proposal abstract to Elaine Topeck at least 7 days in advance of scheduled presentation.

The abstract should describe the project and be approximately 250-300 words.

An electronic announcement for the presentation with the abstract will be disseminated to all PHS faculty, staff and students as well as invited guests one week prior to the scheduled presentation. Printed announcements will also be posted.

A reminder announcement will be forwarded the morning of the scheduled presentation.

Students are strongly encouraged to arrange a time with committee members to rehearse the proposal presentation several days in advance of the proposal date.

Students are strongly encouraged to review information and guidelines regarding how to prepare effective Power Point presentations available from the University of Rochester (as they prepare for their proposal. This information can be accessed using this [link](#)).

## Investigations Involving Human Subjects:

Projects involving the use of human subjects (through direct subject contact or through use of subject records) must be approved by the Research Review Board, Human Subjects for approval.

All students must have an active Human Subjects Protection Program (HSPP) number.

Your committee chair will be the primary investigator; students should register as the study coordinator.

Because review may take several weeks before a decision is rendered, advance planning is necessary.

## **MS-CI & HSRP Capstone Project Guidelines**

After submission, there is a departmental review prior to delivery of the proposal to the RSRB. You can track the status of your application on the RSRB website. If it remains in “Departmental Review” for more than one week, ask the PI (your committee chair) to follow-up with the Department Chair.

Please consult the on-line RSRB application instructions for protocol development, templates for consent letters, etc. and definition of terms (<http://www.urmc.rochester.edu/rsrb>)

### **Contact Information:**

**James G. Dolan, MD, Masters Program Director**

Phone: (585) 276-5161

Email: [james\\_dolan@urmc.rochester.edu](mailto:james_dolan@urmc.rochester.edu)

**Pattie Kolomic, Graduate Programs Administrator**

Phone: (585) 275-7882

Email: [Pattie\\_kolomic@urmc.rochester.edu](mailto:Pattie_kolomic@urmc.rochester.edu)

**Elaine Topeck, Secretary IV**

Phone: (585) 275-6806

Email: [Elaine\\_topeck@urmc.rochester.edu](mailto:Elaine_topeck@urmc.rochester.edu)



# MS-CI & HSRP Capstone Project Guidelines

## Thesis Requirements

The final thesis document should be a complete record of the capstone project. The following sections should be included:

1. **Title page (see formatting below)**
  - a. *The cover page is not numbered*
  - b. *Project title is typed in Title Case following standard rules of English*
  - c. *Only the Chair is listed on the cover page. Others may be included in the acknowledgements*
  - d. *Student's Departmental Name*
  - e. *College/School*
  - f. *Year of Final Defense (not month or day)*
2. **Table of contents**
3. **Abstract**
  - a. *The final abstract of the project should appear immediately after the table of contents*
  - b. *The final abstract must include the following headings bolded with a brief description of each: **Background, Objective, Methods, Results and Conclusion.***
4. Introduction
5. Background
6. Public Health Significance (For MPH projects)
7. Methods
8. Results
9. Discussion
  - a. Summary of findings
  - b. Relationship of study findings with previous results
  - c. Strengths and weaknesses
  - d. Conclusion and implications for further research
10. References
11. Tables
12. Figures
13. Appendix
  - a. Study materials (surveys etc)

In addition to the final thesis document, we encourage students to prepare a shorter version of the project in the form of a manuscript suitable for publication as they complete the main thesis document.

# **MS-CI & HSRP Capstone Project Guidelines**

## **Formatting**

All students are required to submit a final copy of their Masters Capstone Project to the Graduate Programs Administrator in an electronic version. In addition they are required to present the final abstract with findings to Elaine Topeck.

## **Text:**

Students should use the following margins: 1 1/2" from the left side and 1 1/4" from the right side, top and bottom, including the page number (you may put the page number on the bottom of the page)

Font size should be 11 – 12; Font type should be Times New Roman; The report should be double-spaced

**(Example cover page format)**

Title of Thesis

by

Your Name

Submitted in Partial Fulfillment of the Requirements for the (Master of Science Degree) or (Master of  
Public Health Degree)

Supervised by

(Chair of Committee **Only**)

Department of Public Health Sciences

School of Medicine and Dentistry

University of Rochester  
Rochester, New York

20XX

# MS-EPI Thesis Project Guidelines

## Purpose/Background

A Master's Thesis Project is a requirement of all MS-EPI students. It is an opportunity for students to synthesize knowledge and skills gained during their course work. All students are to design, conduct, and write a document summarizing this project under the supervision of a chair and committee.

## Requirements

Students are able to start working on their Thesis Project when they are ready in the judgment of their advisor and committee chair. Students will generally be expected to have taken courses covering the methods the student proposes to use in their project.

## Program Specifications for Students

### Topic

Consult with your advisor on identification of a topic. Note that MS thesis topic must have a public health relevance, focusing on the determinants of disease in a population (e.g., descriptive or qualitative studies will not be considered). Thesis projects in epidemiologic methods will be considered on a case by case basis. Use of course assignments to satisfy the thesis requirement, with no additional work, is prohibited.

### Committee Chair

Consult with your advisor on identification of a thesis committee chairperson. The chair must hold a full-time faculty appointment in the Division of Epidemiology in the Department of Public Health Sciences. The committee chair has primary responsibility for helping the student plan, propose, complete, and report the results of their thesis project.

The committee chair also has primary responsibility for coordinating the efforts of all committee members. The committee chair is also charged with mentoring the student through publication of the thesis as it is our expectation that all thesis projects will be submitted for peer review in an academic journal. To model best practices and avoid future misunderstanding, students and their chair should expect to talk about authorship order on any potential publication derived from the thesis project as part of the proposal development process.

### Committee Members

Consult with your advisor and/or your committee chair on identification of committee members (at least 3):

- Two members whose primary faculty appointment is in the Division of Epidemiology, and one whose primary faculty appointment is not in the Division of Epidemiology.
- A committee may also include one or more consultants who are asked to help with specific issues identified by the committee, but who would not formally serve on the committee.

# MS-EPI Thesis Project Guidelines

Committee members are responsible for helping the student plan, complete, and report the results of their thesis project, particularly in areas of their individual expertise. Committee members who supply thesis project data must agree to allow the student to use the data to complete their proposed project. The student and all committee members must be included on any manuscripts reporting the project that are subsequently published whenever established authorship criteria are met.

## Approval

Submit a description of your proposed research topic and proposed committee members for approval by the Program Director. Students may then proceed with the proposed work upon approval of the thesis proposal by the committee. The Program Director should be notified by the committee chair of the proposal approval.

## Investigations Involving Human Subjects

Projects involving the use of human subjects (through direct subject contact or through use of subject records) must be approved by the University of Rochester Research Subjects Review Board. All students must have successfully completed human subjects training through an on-line program called the Collaborative Institutional Training Initiative (CITI Program) prior to conducting any human subject research (see

<https://www.rochester.edu/ohsp/education/certification/initialCertification.html> for more information). Your committee chair will typically be the primary investigator for the RSRB application; however, in cases where the data used for the thesis come from a project led by another member of the committee, that committee member should be the primary investigator for the RSRB application. Students should register as the study coordinator. Because review may take several weeks before a decision is rendered, advance planning is necessary. After submission, there is a departmental review prior to delivery of the proposal to the RSRB. You can track the status of your application on the RSRB website. If it remains in “Departmental Review” for more than one week, ask the PI (your committee chair) to follow up with the Department Chair. Please consult the on-line RSRB application instructions for protocol development, templates for consent letters, and definition of terms (<http://www.urmc.rochester.edu/rsrb>).

## Thesis Project presentations

The final thesis document, including the background, study objectives, methods, results and discussion is presented publicly. The goal of the presentation is to obtain feedback about the completed work from additional faculty and students. Presentations are usually scheduled on Wednesday from 12:00 to 1:30 in 90-minute time slots. The presentation should last no more than 30 minutes to leave ample time for public discussion. The public forum will be followed by a closed Q & A session with thesis committee members.

To set a date, first verify availability of committee members. Then send an electronic version of the proposal abstract to Elaine Topeck and schedule a presentation date with her (see contact information below). The abstract should describe the project and be approximately 250-300 words. An electronic announcement for the presentation with the abstract will be disseminated to all PHS faculty, staff and students as well as invited guests one week prior to the scheduled presentation.

# MS-EPI Thesis Project Guidelines

Printed announcements will also be posted. A reminder announcement will be forwarded the morning of the scheduled presentation. Students are strongly encouraged to arrange a time with the committee chair to rehearse the proposal presentation several days in advance of the proposal date. Students are strongly encouraged to review information and guidelines regarding how to prepare effective PowerPoint presentations available from the University of Rochester (as they prepare for their proposal). This information can be accessed at

<https://www.urmc.rochester.edu/education/graduate/professional-development/skills-development/communication/powerpoint.aspx>.

## Contact Information

Edwin van Wijngaarden, PhD, MS-EPI Program Director

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Pattie Kolomic, Graduate Programs Administrator

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Elaine Topeck, Secretary IV

Phone: (585) 275-6806

Email: [Elaine\\_topeck@urmc.rochester.edu](mailto:Elaine_topeck@urmc.rochester.edu)

## Formatting

All students are required to submit a final copy of their Master's Thesis to the Graduate Programs Administrator in an electronic version. In addition they are required to present the final abstract with findings to Elaine Topeck. Students should use the following margins: 1 1/2" from the left side and 1 1/4" from the right side, top and bottom, including the page number (you may put the page number on the bottom of the page). Font size should be 11 – 12; font type should be Times New Roman; the report should be double-spaced.

## Thesis Requirements

The final thesis document should be a complete record of the Thesis project. The following sections should be included:

1. Title page (see formatting below)
  - a. The cover page is not numbered
  - b. Project title is typed in Title Case following standard rules of English
  - c. Only the Chair is listed on the cover page. Others may be included in the acknowledgements
  - d. Student's Departmental Name
  - e. College/School
  - f. Year of Final Defense (not month or day)

# MS-EPI Thesis Project Guidelines

2. Table of contents
3. Abstract
  - a. The final abstract of the project should appear immediately after the table of contents
  - b. The final abstract must include the following headings bolded with a brief description of each: Background, Objective, Methods, Results and Conclusion.
4. Introduction
5. Background
6. Public Health Significance
7. Methods
8. Results
9. Discussion
  - a. Summary of findings
  - b. Relationship of study findings with previous results
  - c. Strengths and weaknesses
  - d. Conclusion and implications for further research
10. References
11. Tables
12. Figures
13. Appendix
  - a. Study materials (surveys, etc.)

In addition to the final thesis document, we encourage students to prepare a shorter version of the project in the form of a manuscript suitable for publication as they complete the main thesis document.



# Doctoral Programs

Epidemiology

Health Services Research & Policy



# EPIDEMIOLOGY PhD PROGRAM

## Mission Statement

*To prepare individuals for an academic career in the conduct of scholarly work in epidemiology that acknowledges the complexity of disease occurrence, etiology and prevention in populations.*

### PROGRAM GOALS

- Foster scholarly achievement in the field of epidemiology in an environment of interdisciplinary and collaborative research at the University of Rochester
- Train graduate students to become independent research investigators and educators
- Provide trainees with a unique set of skills and perspectives that can be applied in all areas of clinical and population research
- Promote research and service at the local, state and national level, thereby contributing to improving the health of all U.S. communities
- Build a cadre of prepared individuals who will reflect the strengths of the university as these individuals fill academic positions in other institutions nationwide

### PROGRAM OBJECTIVES

The primary objective of the epidemiology doctoral program at the University of Rochester is to train epidemiologists in a wide variety of skills and methods spanning the disciplines of psychology, social and behavioral health, statistics and biostatistics in addition to solid course offerings in advanced epidemiologic methods and specialized areas of epidemiologic and population health research.

Specific objectives are to:

- Educate individuals in the basic science of Epidemiology
- Teach the skills required to conduct population research
- Provide intense mentoring to assure a productive, and satisfying educational and research experience
- Prepare students to successfully transition into a role of an independent investigator by providing opportunities for peer mentoring, writing grant proposals, publishing work in scientific journals, and reviewing the work of peers
- Provide educational role models and opportunities that encourage students to develop and cultivate their own teaching skills
- Nurture a research environment in which accuracy, integrity and ethical practices are highly valued

### EPIDEMIOLOGY PHD PROGRAM COMPETENCIES

Upon completion of the epidemiology doctoral program, every graduate should be able to:

- Describe the development of epidemiology into its own distinct scientific field from various disciplines
- Understand and describe traditional and emerging epidemiological study designs, including their advantages and limitations
- Define key concepts of bias and interaction and assess their impact in epidemiologic investigations
- Develop and apply a detailed statistical analysis strategy using a combination of techniques
- Critically evaluate the design and conduct of published observational and interventional studies and interpret their findings
- Design and conduct an original epidemiologic investigation including recruitment, data collection, data management and statistical analysis
- Understand the methodological commonalities and differences across specialized areas of epidemiologic and population health research

# EPIDEMIOLOGY PhD PROGRAM

## PROGRAM REQUIREMENTS

- 64 credit hours of formal coursework and 29 credit hours of dissertation research as mandated by the University of Rochester Graduate Studies Program
- Coursework will focus on methodologic skills while providing adequate training in current epidemiologic content areas
- Three electives specific to area of research interest

## SUGGESTED SCHEDULE OF CLASSES

<b>YEAR 1 (Fall Semester)</b>	<b>YEAR 1 (Spring Semester)</b>	<b>Total</b>
PM412 Survey Research (3)	PM413 Field Epidemiology (3)	
PM415 Principles of Epidemiology (3)	PM416 Advanced Epi Methods (3)	
BST463 Intro to Biostatistics (4)	PM426 Social & Behavioral Medicine (3)	
PM410 Intro to Data Management (3)	Elective or Epi Content Course (3)	
Elective or Epi Content Course (3)	Elective or Epi Content Course (3)	
IND503 Ethics (1)		
Total Semester Credits: 17	Total Semester Credits: 15	32
<b>YEAR 2 (Fall Semester)</b>	<b>YEAR 2 (Spring Semester)</b>	
PM414 History of Epidemiology (3)	BST465 Clinical Trials (4)	
BST464 Statistical Methods (4)	PM472 Measurement & Evaluation (3)	
BST448 Grant Writing (3)	Elective or Epi Content Course (3)	
PM469 Multivariate Stats for Epi (3)	Elective or Epi Content Course (3)	
Elective or Epi Content Course (3)	Elective or Epi Content Course (3)	
Total Semester Credits: 16	Total Semester Credits: 16	32
<b>TOTAL RECOMMENDED COURSE CREDITS</b>		<b>64</b>

### Epidemiology Content Courses (3 credits each) include:

- PM417 Molecular Epidemiology (spring)
- PM418 Cardiovascular Epidemiology (fall)
- PM424 Chronic Disease Epidemiology (spring)
- PM442 Nutritional Epidemiology (spring)
- PM451 Infectious Disease Epidemiology (spring)
- PM466 Cancer Epidemiology (fall)
- PM470 Environmental and Occupational Epidemiology (spring)
- PM484 Injury Epidemiology (fall)

# EPIDEMIOLOGY PhD PROGRAM

## COMPREHENSIVE EXAMINATIONS

A predetermined objective system of grading both the oral and written qualifying examination is established. Student performance in the oral examination is independently scored by each committee member and these scores are averaged to one grade which represents 30% of the overall qualifying examination grade (0-100%). Each written examination is independently scored by two faculty reviewers. If the scores differ by more than 10% or if the two grades result in a differing decision regarding the pass/fail status of the student, that written exam is graded by a third reviewer. The scores are then averaged and this grade represents 70% of the overall grade. The weighted average of the oral and written exams represents the student's final qualifying examination grade. A cut-off score for passing has been established, determining successful completion of the examination. Students will receive formal notification of pass/fail status but will not receive the actual grade. If a student does not pass the exam, he may repeat the examination once following a minimum of six months of remedial preparation.

Written and oral qualifying examinations are required upon completion of a minimum of 55 credit hours of coursework.

- Written examination is developed yearly by the Executive Committee of the Program and administered in a two-day classroom setting.
- Oral examination is administered by the Executive Committee of the Program.

### Completion (pass) status

- Based on scores of written and oral examination
- Second qualifying examination opportunity is provided for those who fail
- A minimum of six months must elapse since the first examination
- No further opportunities will be provided
- Any student not successfully completing the examination will be counseled to complete requirements for a Master of Public Health

## TEACHING ASSISTANTSHIPS

- Each student is required to serve as a Teaching Assistant for a minimum of two courses
- If additional Teaching Assistant positions need to be filled in order to meet course demands, students who are funded on a training fellowship will be the first asked to serve in these additional Teaching Assistantships.

## SEMINAR SERIES

- All students are required to attend this weekly series
- The series includes "Nuts & Bolts" informal discussions with an investigator, formal lecture series of speakers in Epidemiology and Public Health, and Journal Club

## DISSERTATION RESEARCH

Research Component of the Doctoral Training that is planned as an intense, carefully mentored process:

- Program faculty will provide the primary source of research opportunities for students to share in during their training, as well as serving as the foundation for dissertation research
- Collaboration with faculty across URMIC clinical and basic science departments is encouraged
- The inclusion of primary data collection in the doctoral research will be a critical component of each project
- Candidates are required to make a formal oral presentation of their planned research investigation to their respective Dissertation Advisory Committee. This presentation is open to any URMIC faculty and staff
- Each student will be strongly encouraged to seek pre-doctoral funding to support the dissertation research.
- At the completion of the research investigation the student will be required to present and defend his/her research methodology and findings at a public forum

# EPIDEMIOLOGY PhD PROGRAM

- The committee for the final defense will consist of the dissertation committee
  - The committee Chairman must be at the Assistant Professor or higher level and must hold a primary appointment in the Division of Epidemiology. Faculty at the Assistant Professor level must have served as a member on the committee of a completed dissertation research project prior to serving as committee Chairman
  - Other members will include at least one full-time faculty member of the rank of Assistant Professor or higher who holds a primary appointment in the PHS and one or two “outside” members who hold a primary appointment in another department
  - All other requirements for completion of this process will follow the regulations outlined in the *Official Bulletin for Graduate Studies*
  
- Award of Degree
  - A degree candidate upon meeting all degree requirements will be recommended for the degree at the next meeting of the Board of Trustees
  - Degrees are approved by the Board of Trustees at its regular meetings in October, February and May
  - Degrees are conferred annually at the University’s Graduate Commencement in May

# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

## 1. General Expectations and Requirements

### 1.1 *Timeline and milestones.*

All incoming first-year students are required to participate in Math Camp (see section 1.2) two weeks prior to the start of the Fall Semester. Core courses that comprise the basis of the comprehensive exams are completed in the first two years (see section 1.3); depending on cohort and individual plans, additional courses may be required in the third year. Comprehensive exams are required at the end of the second academic year (see section 2); if the student does not pass this exam, they may retake the exam before the end of the calendar year.

After the comprehensive exams, students typically begin fulfilling their required Research Assistantships (see section 1.6) and Teaching Assistantships (see section 1.7).

After taking the comprehensive exams students are expected to begin formally developing their dissertation proposal (see section 3). As presented in Table 1 below, students are expected (1) to have a proposal topic selected by November of the third year, (2) to have a theory and conceptual framework identified by March of the third year, (3) data identified by June of the third year, and (4) methods identified by September of the fourth year. Progress toward, and completion of, each milestone is to be periodically reviewed with the student's advisor. A dissertation committee must be formed and a proposal date scheduled by December of the fourth year. The proposal (which is the University's qualifying exam) must be completed by January of the fourth year. The dissertation is expected to be completed within 2 years following a successful proposal (see section 4).

### 1.2 *Math Camp*

Incoming students are required to attend a short-course prior to the start of the fall semester of their first year. This course provides a refresher on key mathematical concepts used in the program. The course is held within the two-week period prior to the start of the fall semester: the syllabus and specific schedule will be provided to each incoming student before the two-week period.

### 1.3 *Curriculum*

Each student will receive a curriculum of required courses at the beginning of their first year—these are the courses the student must take, except as modified by necessity due to course availability or as determined by the Director. Per Graduate School policy, a student receiving a C grade or below on any course is placed on academic probation; the receipt of a second C (or below) at any time during their tenure in the program constitutes grounds for dismissal from the program.



# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

## 1.4 *Financial Support*

Students are provided with a fellowship from the Office for Graduate Education and Postdoctoral Affairs that covers a stipend and health fee for 20 months. If used continuously, this funding continues through April of the second year. However, if the student obtains a paid internship during their first summer, the Dean's fellowship can be extended accordingly up to the 1<sup>st</sup> of July (the Dean's fellowship does not extend into or beyond July of the second year).

Students' stipends and health fees are covered by Research Assistantships after the Dean's fellowship is completed.

Tuition is waived for students throughout the program when covered by the Dean's fellowship, a Research Assistantship, or as otherwise approved by the Associate Dean of Graduate Education.

## 1.5 *Seminars and Workshops*

Students are expected to attend workshops, seminars, and presentations listed below and as required by the Director:

- RESEARCH WORKSHOPS, a bi-weekly workshop (PM 428) at which students present their work and ideas.
- DISSERTATION SEMINARS, students who have not yet proposed their doctoral thesis are required to attend monthly dissertation seminars (during the academic year). These are informal, but required gatherings, designed to educate students with regard to the dissertation process, teach students how to identify research areas, how to focus on the appropriate research questions, how to choose a committee and to discuss other dissertation-related issues.
- SPONSORED PRESENTATIONS. Division of Health Policy and Outcomes Research sponsored presentations.
- JOB CANDIDATE TALKS. Presentations by faculty job candidates in the Division.
- HSRP DOCTORAL STUDENT PROPOSALS AND DEFENSES. HSRP doctoral students' dissertation proposals and dissertation defenses.

1.6 *Research Assistantships*. After 20 months of Dean's funding, students are required to complete 28 months of Research Assistantships. Research assistantships are based within the University of Rochester; however, the Director can approve community-based research assistantships if the assistantship is judged to provide an educational opportunity for the student. Assistantships can be no more than 20 hours per week appointments.

1.7 *Teaching Assistantships*. Students are required to gain experience as teaching assistants for two courses. Except by permission of the Director, students must have passed their comprehensive exams before becoming a teaching assistant. Students should consult with their advisor to determine appropriate timing for completing the TA requirement: a teaching assistantships should be timed so as not to postpone progress toward the dissertation proposal.

# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

## 2. Comprehensive Exams

Except as otherwise approved by the Director, Comprehensive Exams are taken at the end of the second academic year in the program. They are graded by faculty exam committees appointed by the Director. Students who fail the exams may retake the exams before the end of the calendar year. Students who fail the retake of the comprehensive exams will be dismissed from the program.

The objectives, structure, and content of the comprehensive exams is as stated below, or as modified by the Director and core HSRP faculty.

### Objectives:

- Part 1: Examine student's ability to integrate methodological knowledge across coursework
- Part 2: Assess student's ability to reason and present sound arguments in the context of health services and health policy.

### Structure:

- Part 1: Two-day take-home exam.
- Part 2: Four-day take-home exam.

### Content:

- Part 1: Questions that ask the student to integrate and use methods taught in individual courses.
- Part 2: Paper on an assigned topic to demonstrate student's ability regarding
  1. *Analysis*. Students must show sufficient ability to break down complex conceptual structures into appropriate components and understand the individual components and how they relate to each other.
  2. *Synthesis*. Students must show sufficient ability to combine disparate ideas into coherent systems of concepts.
  3. *Reasoning*. Students must show sufficient ability to properly reason to conclusions, providing arguments for claims.

## 3. Dissertation Proposal

Year 3 is crucial in identifying and focusing on the possible dissertation research topic. Starting in the summer preceding year 3, and continuing onwards, each student is expected to work closely with his/her academic advisor, selected faculty member, or future dissertation chair to complete each of the following benchmarks and research milestones in a timely manner. At each milestone, the advisor, together with the student, will review the student's progress and identify reasons and remedies for insufficient progress.



# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

## 3.1 Dates and Milestones

### 1. **November 30** (YR3)

- Select an area of interest; synthesize and critically evaluate the current state of knowledge within this area.
- Identify important gap(s) in current knowledge and isolate the phenomenon or question of interest.
- Argue why the phenomenon or question is important to explain, answer, or further investigate.

### 2. **March 31** (YR3)

- Formulate a theory-based explanation or conceptual framework for the phenomenon or question of interest.
- Argue why the explanation or framework is important for understanding the selected phenomenon or answering the selected question.
- Develop a model that connects theory to data such that theory implied hypotheses are testable or theory implied quantities can be estimated.
- Meet with core faculty to discuss the phenomenon or question and its importance.
- Identify dissertation committee.

### 3. **June 30** (YR3)

- Identify the required type of data and measurements.
- Identify appropriate data collection and/or data generation procedures.

### 4. **September 30** (YR4)

- Select appropriate methodology for the proposed analyses.
- Draft written proposal and work with the committee to finalize.

### 5. **December 31** (YR4)

- Complete written proposal
- Obtain consensus of committee that the student is ready to propose.
- Schedule doctoral proposal defense.

### 6. **January 30<sup>th</sup>** (YR4)

- Doctoral dissertation proposals must be defended no later than January 30<sup>th</sup> of Year 4.

# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

Any student who has not proposed by January of 30<sup>th</sup> of their fourth year will be recommended to the Associate Dean of Graduate Education for dismissal from the program unless an extension is granted per section 3.2 below. Students are expected to defend their dissertation within two years of successfully passing the dissertation proposal.

## 3.2 *Extensions.*

3.2.1 Automatic extensions. Students will be granted extensions to the timeline as per University policy for prior medical leave or maternity leave.

3.2.2 Technical extensions. Extensions due to technical difficulties not due to student progress (e.g. difficulty scheduling proposal dates due to committee schedules, unexpected legitimate absences) may be granted at the discretion of the PhD Program Director.

3.2.3 Progress extensions. Students who do not propose by January 30<sup>th</sup> and who do not obtain Automatic or Technical extensions may petition the Director for an extension. The petition must include (1) the request for extension, (2) a summary of previous progress, (3) a description of current status, (4) the justification for extension, (5) a plan for completing the proposal, and (6) the endorsement of the proposed plan by the chair of the dissertation committee. Upon review of the student's petition by the Director and the Progress Review Committee, the Director will take one of two actions: (1) notify the student that the petition for extension is granted and notify the student of conditions for continuing in the program, or (2) recommend dismissal of the student to the URSMD Associate Dean of Graduate Education.

## 3.3 *The dissertation proposal*

Unless otherwise approved by the dissertation committee, the dissertation proposal should contain seven essential components:

1. *Provide an introduction that motivates the study:* What are the basic questions, why are they important, and how can they be answered? This is a short version of the introduction to the dissertation.
2. *Sufficiently summarize the synthesis and analysis of the current literature bearing upon the thesis topic.* Essentially this is a version of the background section for the thesis. What is "sufficient" means is up to the committee, but this section should leave little doubt regarding the student's knowledge of the literature and provide assurance that the remaining, unexplored, literature is not likely to render the thesis topic moot.
3. *Carefully develop and articulate the theory, model, and hypotheses or questions.* This of course is a preliminary version of the corresponding sections in the thesis. This section must be sufficiently developed to convince the committee that it is correct, or at least that any uncertainty about it will not compromise the dissertation. A failing in theory or modeling and their connection to the hypotheses could well derail the dissertation effort later if it is undetected at an early stage. Essentially, this section provides the explanation of the phenomenon being studied and frames the investigation.

# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

4. *Describe the key variables and the data collection (or generation) process.* This section must be sufficient to assure the committee that the data properly correspond to the requirements for testing and estimation, and that the data generation process is sufficient to support the analysis.
5. *Describe the methods of analysis with supporting argument why the methods are appropriate.* This section must be sufficient to assure the committee that there exists an analytical method appropriate to the data generating process and data to facilitate the required tests or estimation.
6. *Discuss limitations.* This section should identify any limitations can compromise achieving the study goals. Each limitation should be accompanied by a discussion of why it is not fatal and why the study remains sufficiently informative to warrant its status as a thesis topic.
7. *Provide a conclusion* that discusses some potential outcomes and briefly summarizes the proposed study and its importance.

The structure of the proposal is determined by the dissertation committee: common structures are a document following the sections above, or a document in the form of an NIH research grant application, with modifications as indicated by the committee.

## 3.4 Qualifying Exam

The dissertation proposal constitutes the University required Qualifying Exam. The exam is a closed door oral exam at which the dissertation committee and student are in attendance. Prior to the exam (typically by 3 to 4 weeks), the student must provide the committee with an acceptable proposal document as outlined in section 3.3 above. The committee must meet and determine that the student is ready to propose prior to formally scheduling the exam through the Office for Graduate Education and Postdoctoral Affairs.

The qualifying exam must be immediately preceded by a public presentation of the proposed dissertation work by the student.

## 4. Dissertation

### 4.1 The dissertation process objectives.

The goal of the dissertation process is to train the student to, and provide evidence to the dissertation committee that the candidate can, operate at the level of a PhD in both thought and performance. In Health Services Research this requires that the student, through the dissertation process and writing of the final document itself, learn and exhibit the following ten capabilities:

1. to synthesize and analyze the current state of knowledge regarding a specific area of interest;
2. to identify an important gap in current knowledge and a research question or phenomenon to be explained;
3. to clearly formulate a theory-based conceptual framework or explanation that implies testable consequences or interpretable parameters for estimation;
4. to develop a model that connects the conceptual framework/explanation to data such that implied hypotheses are testable or implied quantities can be estimated;
5. to identify the required type of data and measurements;

# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

6. to identify appropriate data collection and/or data generation procedures (this is where design issues come in to play);
7. to select appropriate methodology for analysis;
8. to carry out the analysis;
9. to draw conclusions based on results and integrate findings into the current body of knowledge;  
and
10. to communicate the full extent of the preceding steps in both written and oral form.

## 4.2 *Dissertation Committees*

The dissertation committee for the Health Services Research and Policy PhD must comprise at least four members meeting the following eligibility requirements:

A committee chair, who must be a

1. PhD or academic equivalent (e.g. ScD) faculty member with the Division of Health Policy and Outcomes Research having a primary appointment in the Department of Public Health Sciences, and either
2. A full or associate professor who has been a committee member of a completed HPOR PhD dissertation proposal (i.e. the qualifying exam), or
3. An assistant professor with at least three years of experience in the Division and who has been a committee member of a completed HPOR PhD dissertation.

A second member who must be a

1. A faculty member with the Division of Health Policy and Outcomes Research having a primary appointment in the Department of Public Health Sciences, and either
2. Have a PhD or academic equivalent (e.g. ScD), or
3. Have a professional doctorate (e.g. MD, JD, DrPH) with at least three years of experience in the Division, research experience on HSRP, and, if the committee chair has not been chair for a completed dissertation, has been a member of a committee for a completed HSRP dissertation.

A third member who must be a

1. University of Rochester faculty member as allowed by the UR policy, and who
2. Must not have a primary appointment with the Department of Public Health Sciences.

A fourth member who

1. Need not have a primary appointment with the department, but must be a
2. University of Rochester faculty member as allowed by the UR policy. Students can petition for individuals who are not University of Rochester faculty to be the fourth member.

Additional members may be added as deemed appropriate by the Chair and the student.

At least two members of the dissertation committee must have relevant PhD's or academically equivalent doctoral degrees (e.g. ScD) and experience in the fields of Health Services Research or Health Policy.

# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

## 4.3 *The structure of the dissertation.*

The Health Services Research and Policy PhD dissertation may be structured in the traditional dissertation format or in the three-paper format described below. The student must select the format with agreement of the dissertation committee. Dissertations must be the student's original work.

A thesis is to be written for non-specialized scientists. Specifically, every member of the thesis examination committee must be able to read and understand the document as a whole, and the details of each section must be understandable to at least one committee member with the expertise to verify its content is sound. Specialist terms need to be explained or avoided. It is written in English with correct spelling and grammar. It is not the job of the committee to proof-read the text. Having the text of the thesis corrected and edited for spelling and grammar by a second person is acceptable and recommended. A committee member can refuse to accept a thesis with excessive grammatical or graphical errors. There is no formal minimum or maximum length.

This section is meant to be a supplement to the general guidelines of the University of Rochester for preparation of a traditional thesis (THE PREPARATION OF DOCTORAL THESES: A MANUAL FOR GRADUATE STUDENTS), which can be found at the website:

<http://www.rochester.edu/Theses/ThesesManual.pdf>, and which governs all theses at this university. This guideline does not supersede the general guidelines.

The Graduate School's manual titled "The Preparation of Doctoral Theses" outlines the overall structure of the thesis in terms of general formatting and required parts such as Title Page, Abstract, etc. See The Preparation of Doctoral Theses manual for specifications regarding these components. The graduate school's manual does not address the substantive chapters of the thesis. HSRP theses may have a traditional or a three-paper structure as described in the following sections

### 4.3.1 Traditional format

Because HSRP theses topics and methods vary greatly, the thesis document may vary from the guidelines presented below as is required to facilitate coherent presentation. However, notwithstanding such exceptions, the structure and content provided below is the standard for a traditional HSRP thesis at the University of Rochester.

A traditionally formatted Health Services Research and Policy thesis will typically contain five chapters:

1. Introduction, which introduces the research question, provides the requisite arguments to establish its importance as a health services research topic, and briefly summarizes the research approach to the thesis.
2. Background, which provides the information necessary to understanding what is currently known and what needs to be known regarding the research question. This chapter also describes underlying theories, the development of explanations, and the description of substantive parameters of interest and any substantive hypotheses.
3. Methods, which details the study design, data, and analytical methods that were used in the research. This chapter will also provide the identification of structural parameters of interest with empirical parameters to be estimated and the translation of substantive hypotheses into empirical hypotheses. Results of specification tests used to determine the statistically adequate model used to empirically address hypotheses or identify parameters can be included in this section.
4. Results, which reports the empirical results of applying the methods to address the research question.

# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

5. Discussion and conclusion, which briefly outlines the dissertation topic, and then provides an interpretation of the results in light of the research question, integrates the results and interpretation with existing literature, discusses any limitations of the methods in addressing the research question, and provides a concluding section that addresses the student's broad scientific conclusions, broad policy implications, and future research.

## 4.3.2 The three-paper format

The three-paper format must meet the following requirements:

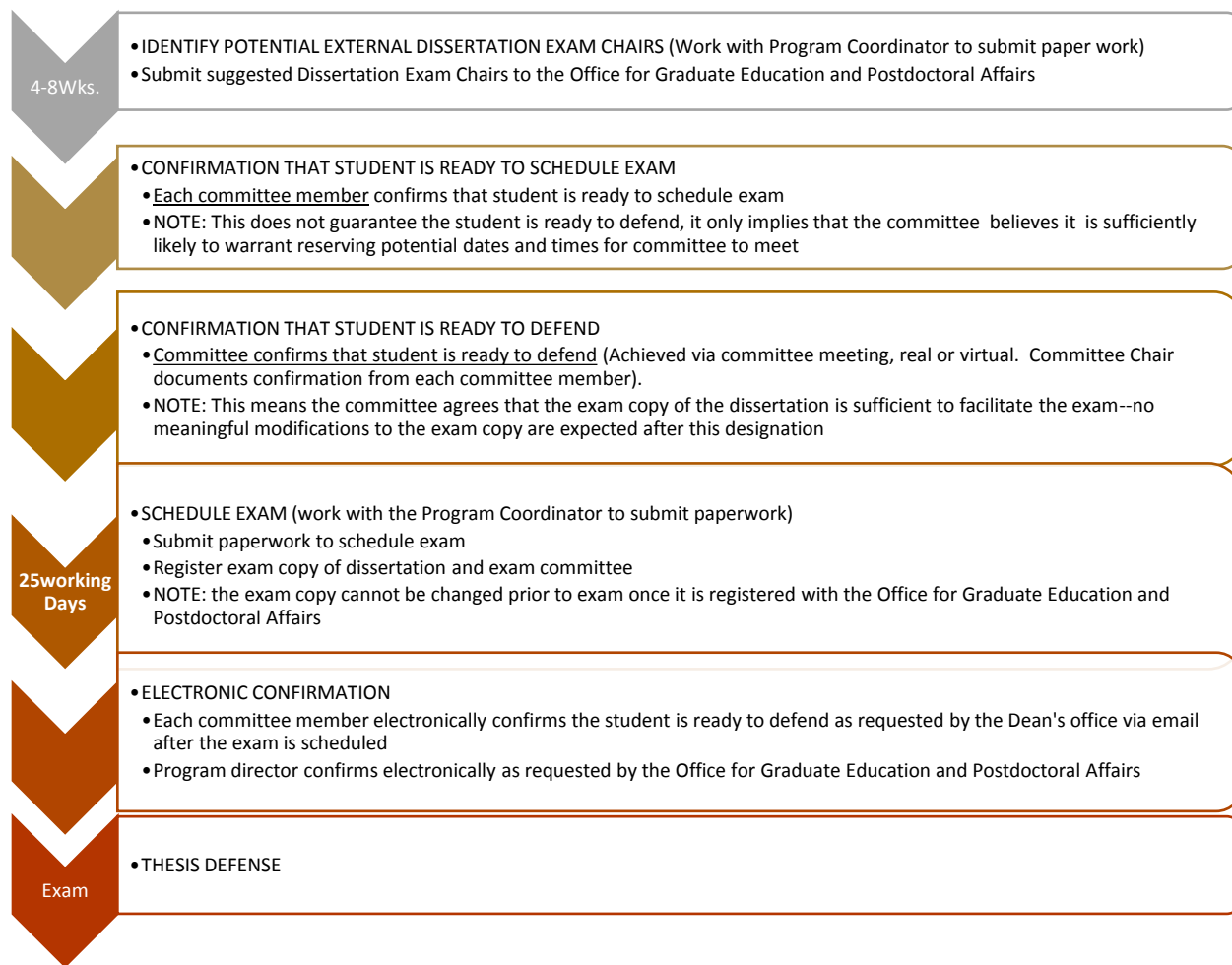
1. The dissertation must form a coherent body of work addressing a single research topic.
2. Each paper must be distinct; therefore, each paper must address different questions, perspectives (e.g. phenomenological/theoretical/conceptual frameworks, or methodological approaches), or goals (e.g. identification of predictors, risk factors and moderators, estimation of effects, or testing explanations) regarding the research topic. The purpose and scope of each paper should be presented as part of the proposal and accepted by the committee at that time.
3. The dissertation must have four sections, each may comprise multiple chapters:
  - a. An introductory section that presents the research topic with general background, the general theoretical/conceptual framework (if a general framework does not cover all papers, the conceptual framework section within each paper may be acceptable at the discretion of the committee), and the purpose, scope, and justification for each specific aim and paper.
  - b. A results section that comprises three chapters, one for each paper. Each paper must be deemed by the dissertation committee to be of publishable quality and formatted for specific peer-reviewed journals.
  - c. A concluding section that integrates the findings of the three papers and discusses implications.
  - d. An appendix section that includes any additional elaboration or details related to each paper required to support the level of training for a PhD dissertation project.
  - e. All content and formatting requirements of the Graduate School must be followed.

# HEALTH SERVICES RESEARCH & POLICY PhD PROGRAM

## 4.4 The dissertation defense.

### 4.4.1 Timeline

The timeline for submission of paperwork prior to defense is as follows:



### 4.4.2 Results of the defense

The result of the dissertation defense can be (1) pass without revision, (2) pass with only minor revisions, (3) pass with major revisions, or (4) a fail. If the student passes without revisions or with only minor revisions, the student is expected to make any requested changes before submitting the final document. No further review of the document from faculty is necessary. If the student passes with major revisions, the student must make the required revisions and they must be approved by a designated committee member before submitting the final document. If a student fails, the student will need to discuss the situation with the chair of the dissertation committee to determine next steps.