University of Rochester School of Medicine and Dentistry
Department of Public Health Sciences

Graduate Student Handbook
2024-2025

Last Modified 9/16/2024

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SECTION 1: GENERAL INFORMATION AND DEPARTMENTAL POLICIES

1.1 GENERAL INFORMATION

1.1.1 Department Educational Administrative Team

Role	Name
PHS Department Chair	Ann Dozier, PhD
PHS Associate Chair	Edwin van Wijngaarden, PhD
Program Directors	
PhD Epidemiology (PhD-EPI)	David Rich, ScD
PhD Health Services Research & Policy (PhD-HSRP)	Yue Li, PhD
MS in Epidemiology (MS-EPI)	David Rich, ScD
MS in Health Services Research & Policy (MS-HSRP)	Yue Li, PhD
Master of Public Health (MPH)	Christopher Seplaki, PhD
MS in Clinical Investigation (MS-CI)	Edwin van Wijngaarden, PhD
Preventive Medicine Residency (PM)	James Tacci, MD, JD, MPH
Advanced Certificates (AC)	Edwin van Wijngaarden, PhD
Education Program Staff	
Graduate Programs Administrator	Annie Majoka, MBA
Education Analyst	Nofel Sohail
Instructional Design Specialist	Nicole O'Dell, PhD
Information Technology Support	Kelly Thevenet-Morrison, MS
Web Support, Assistant to Chair	Susan Van Dongen

1.1.2 Guidelines to Assure a Professional and Respectful Learning Environment

https://www.urmc.rochester.edu/MediaLibraries/URMCMedia/education/graduate/trainee-handbook/documents/Guidelines-to-Assure-a-Professional-and-Respectful-Learning-Environment-FINAL-820181.pdf

1.1.3 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.

1.1.4 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.

1.1.5 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.

1.1.6 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 everyone'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.

1.1.7 Emergency or Temporary Closings and Other Changes in Class Schedules and University Operations

The University plans to commence and conclude classes on the dates indicated in the academic calendars. But unforeseen circumstances or events may occur that require the University to temporarily close or otherwise make adjustments to its student life, residential housing, class schedules and format, method and location of instruction, educational activities, and operations because of reasons beyond the University's control. For example, such circumstances or events may include but are not limited to inclement weather, the onset of public health crises, being subject to government order(s), significant safety or security concerns, faculty illness, strikes, labor disturbances, sabotage, terrorism, war, riot, civil unrest, fire, flood, earthquake, acts of God, malfunction of University equipment (including computers), cyberattacks, unavailability of particular University facilities occasioned by damage to the premises, repairs or other causes, as well as disruption/unavailability of utilities, labor, energy, materials, transportation, electricity, security, or the internet. If any of these or other unforeseen circumstances or events outside of the University's control occur, the University will respond as necessary and appropriate, and it assumes no liability for any interruption or adjustments made to student life, residential housing, class schedules and format, method and location of instruction, educational activities, and operations caused by these or other unforeseen circumstances or events. And the University shall not be responsible for the refund of any tuition or fees in the event of any such unforeseen circumstances or events, except as may otherwise be expressly provided in the University's Leave of Absence and Withdrawal Policy or its published tuition refund schedule ([Payments and Refunds - Office of the Bursar (rochester.edu)](rochester.edu)).

1.1.8 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**
- Krystel Huxlin, Professor of Ophthalmology
  Medical Center room G-3186
  Phone: 585-275-5495
  Email: **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**

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.

1.2. DEPARTMENT EDUCATIONAL POLICIES

1.2.1 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 2020-2021 academic year is $1,070 per semester (https://www.urmc.rochester.edu/education/graduate/forms/tuition-and-fees.aspx) .

1.2.2 COURSE WAIVERS
A course waiver is an exemption from a required course because the competencies of the course have already been attained due to prior training, education, or work experience. All requests must be made at the time of initial registration in a degree program. Transfer credit is not granted with course waiver. Students approved for course waiver are required to earn full credit. Please see the program administrator for this request, and visit https://www.urmc.rochester.edu/education/graduate/trainee-handbook/policies-benefits/course-waiver-instructions.aspx.

1.2.3 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.

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.

1.2.4 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.

1.2.5 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.

1.2.6 GRADING POLICY FOR SMD GRADUATE STUDENTS

The School of Medicine and Dentistry requires satisfactory academic performance and accomplishment in research and coursework for all students. This satisfactory performance is mandatory for continuation in good academic standing in the graduate program. The grading policy can be found here: https://www.urmc.rochester.edu/education/graduate/trainee-handbook/policies-benefits/grade-policy.aspx

The incomplete grade policy can be found here: https://www.urmc.rochester.edu/education/graduate/trainee-handbook/policies-benefits/assignment-of-incomplete-grades.aspx

1.2.7 PART-TIME/FULL-TIME

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

1.2.8 TRANSFER CREDIT POLICY

The School of Medicine and Dentistry's transfer credit policy can be found here: https://www.urmc.rochester.edu/education/graduate/trainee-handbook/policies-benefits/transfer-credit-policy.aspx

1.2.9 TUITION AND FEES

Tuition in the School of Medicine and Dentistry per credit hour and fees can be found here: https://www.urmc.rochester.edu/education/graduate/forms/tuition-and-fees.aspx. Most courses in the Department of Public Health Sciences are three credits. The Department of Public Health Sciences provides a 40% tuition scholarship to full-time Master's students who register for and complete 9 or more credit hours per semester. Students taking courses outside of the School of Medicine and Dentistry must pay the tuition rate of the particular school offering the course(s) to be taken. Students with other health insurance may choose to waive the University's policy. All full-time students must pay a mandatory Health Fee.

1.2.10 USE OF LARGE LANGUAGE MODELS (LLM)

Use of Large Language Models (LLMs) may be considered an honesty policy violation ("receiving, using, or having access to unauthorized aid"). This includes, but is not limited to, programs such as GPT-4 and ChatGPT, and DALL-E. To use LLMs for any course assignments, you need explicit approval from your instructor. If approved, use of an LLM should be properly disclosed. Please note that students are ultimately responsible and accountable for the contents of their submitted assignments. Suspected and non-disclosed LLM-based works will be further assessed for an honesty policy violation.

If not allowed by instructor, then the text in course syllabi will be as follows:

"Use of Large Language Models (LLMs) may be considered an honesty policy violation ("receiving, using, or having access to unauthorized aid"). This includes, but is not limited to, programs such as GPT-4 and ChatGPT, and DALL-E. To use LLMs for any course assignments, you need explicit approval from your instructor. The use of LLMs is not allowed in PMxxx. Suspected and non-disclosed LLM-based works will be further assessed for an honesty policy violation."

If allowed by instructor, the text in course syllabi will be as follows:

"Use of Large Language Models (LLMs) may be considered an honesty policy violation ("receiving, using, or having access to unauthorized aid"). This includes, but is not limited to, programs such as GPT-4 and ChatGPT, and DALL-E. To use LLMs for any course assignments, you need explicit approval from your instructor. The use of LLMs is allowed in PMxxx but should be properly disclosed in submitted assignments using the statement below. Please note that students are ultimately responsible and accountable for the contents of their submitted assignments. Non-disclosed LLM-based works will be further assessed for an honesty policy violation."

Statement: *During the preparation of this work, I used [NAME TOOL / SERVICE] in order to [REASON]. After using this tool/service, I reviewed and edited the content as needed and take full responsibility for the content of the submitted work.*

This statement does not apply to the use of basic tools for checking grammar, spelling, references etc. If there is nothing to disclose, there is no need to add a statement."

1.2.11 INDEPENDENT STUDY POLICY

Independent study courses allow students to study subject matter not included or not treated in sufficient depth in a regularly offered course.

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

Below is an EXAMPLE of a working proposal to give you an idea of what this should look like.

Department of Public Health Sciences
PM494: Recruitment efforts of Racial/Ethnic Minority and Underserved population in Clinical Trials
Semester here for student name here

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.

[Example continued on next page, illustrating a schedule/assignment template]

Schedule (TENTATIVE):

Week	Topic	Lectures/Readings	Assignments
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:

_____

1.2.11 Policy on Teaching Assistant Requirements for Graduate Students

Overview of the Teaching Assistant Role

Teaching assistants provide academic and administrative support for faculty. They also act as liaisons between students and faculty to address student concerns where appropriate or meet individually with students to discuss course content. Specifically, responsibilities (designated by the instructor) may include attending lectures and organizational meetings, grading homework and exams, designing assignments and answer keys, holding office hours, updating the course BlackBoard site and coordinating room bookings, and running labs or leading seminars. Generally, a teaching assistant should have some prior knowledge of the course content and, preferably, have taken the course previously. However, there may be specific teaching assistant opportunities where previous knowledge is not a requirement. Teaching assistants are expected to respect confidentiality and privacy of student information in accordance with FERPA and other relevant requirements.

The teaching assistant role is generally intended to be a professionally rewarding experience. Working with students to help them attain skills and competencies helps the teaching assistant reinforce their own mastery of course content and prepare them for future careers that may include teaching. The role provides teaching assistants, as students themselves, the opportunity to work closely with our renowned faculty, while honing their management, communication, and teaching skills in an academic setting.

The department identifies the need for teaching assistants for each course based on enrollment, anticipated duties, and doctoral student teaching assistant requirements. Masters and Doctoral students are eligible to apply for paid teaching assistant positions when they are available. We recommend interested Master's students reach out to the *graduate program administrator*, whereas doctoral students should review section 2 below and consult with their *Program Director* for guidance. Students in our doctoral degree programs have a requirement of two, unpaid teaching assistant roles during their time in the program.

Any additional questions about possible teaching assistant opportunities can be directed to the *graduate program administrator*.

Teaching assistant requirement for doctoral students:

a. Requirements for Epidemiology PhD students

Epidemiology PhD students are required to be a teaching assistant for two PHS graduate courses that are core courses for the Epidemiology PhD program. There is no payment for these two required teaching assistant positions.

The primary courses to meet this TA requirement, with approvals needed by the course Director and the Epidemiology Program Director, include:

PM 413 Field Epidemiology
PM 415 Principles of Epidemiology
PM 416 Epidemiologic Methods
PM 469 Multivariate Models for Epidemiology

If a teaching assistant position in one of these courses is not available, other courses that can be used to meet the teaching assistant requirement, with approvals by the course Director and the Epidemiology Program Director, include:

PM 410 Intro to Data Management and Data Analysis Using SAS
PM 412 Survey Research
PM 426 Social and Behavioral Medicine

Teaching assistantships for undergraduate courses <u>do not count</u> towards the doctoral program teaching assistant requirement.

b. <u>Requirements for Health Services Research and Policy (HSR) PhD students</u>

HSRP PhD students are required to be a teaching assistant for two PHS graduate courses that are core courses for the HSRP PhD program. There is no payment for these two required teaching assistant positions.

This is the list of current core courses for the HSRP PhD program:

> https://www.urmc.rochester.edu/education/graduate/phd/health-services-research-policy/curriculum.aspx.

Other PHS graduate courses may also meet this TA requirement, with approvals needed by the course Director and the HSRP Program Director.

Teaching assistantships for undergraduate courses <u>do not count</u> towards the doctoral program teaching assistant requirement.

c. <u>Payment for TA positions:</u>

Once doctoral students complete their required two teaching assistant positions, they are eligible to be a paid teaching assistant for other graduate classes offered by faculty in the Department of Public Health Sciences, with approvals by the course Director, Program Director, and the Associate Chair or Chair of Public Health Sciences.

1.2.12 PhD Programs Residency Requirement

University Graduate Studies Full-Time Residency Requirement ([1] Page 3 of https://www.rochester.edu/graduate-education/wp-content/uploads/2020/11/Regulations.pdf):

A student is defined as being in residence at the University of Rochester if he or she is registered as a full-time student and is using the facilities of the University (laboratories, libraries, consultations with faculty members, or course attendance) with sufficient frequency and regularity to establish this status clearly. Some period of residence at this University is required for all advanced degrees.

A minimum of one year (two consecutive semesters, excluding summers) in residence while enrolled as a full-time student is required. Doctoral Dissertation ("999") may not be used to meet the one-year residency requirement. Further requirements may be completed by full-time residence either during the academic year or during the summer. Departmental/program requirements, however, may necessitate continuous residence until work for the degree is completed.

Department of Public Health Sciences Residency Requirement for Doctoral Students:

Increasing use of technology has created new means for delivery of courses, for communication with faculty and other students, and for access to campus resources. Further, we recognize that some graduate students may benefit from a program of study that does not necessarily involve full-time study on campus for the entire doctoral degree time period, because of personal or professional circumstances. On the other hand, we also strongly believe that residency encourages doctoral students to establish a close association with the faculty, other graduate students, and the

university community. Furthermore, full-time residence encourages students to engage more fully in independent or collaborative research utilizing the full faculty resources and facilities of the university. The Department of Public Health Sciences residency requirement seeks to balance academic requirements of its doctoral programs, benefits of full-time residence, and individual student needs.

Full-time residence is required for doctoral students in the Department of Public Health Sciences from the time they start the doctoral program, take all their courses required for the degree, prepare a thesis proposal, until they successfully pass their qualifying examination (i.e. "thesis proposal defense"). This will ensure that doctoral students establish close connections with faculty and peers and cultivate a strong support network while they complete required coursework, study for their comprehensive examination, and complete their thesis proposal.

After passing the qualifying examination, full-time residence may continue to be required depending on the nature of the proposed research, the required institutional resources to conduct the work, and any applicable policies and regulations. Indeed, doctoral students are strongly encouraged to maintain full-time residency status until procurement of data has been completed and most specific aims has been addressed.

If a student wishes to complete their PhD research in absentia, the student must be in good standing, must have met with the advisory committee within the past 6 months, and must commit to completion of all degree program requirements within no more than 6 months of departure. They will need obtain written approval from their advisor and all members of their dissertation committee, as this committee is most familiar with the student's research and, presumably, individual needs. This written approval will need to establish the terms of the PhD research in absentia, including the frequency of mentor-mentee and committee meetings, the frequency of on-campus visits, a proposed timeline for graduation, and any circumstances that might warrant a return to full-time on-campus residence. After committee approval, the student will also need to obtain written approval from the doctoral program director and their URMC supervisor or employer (if different from dissertation committee). Approval from the SMD graduate dean may also be required. The completed approvals will be put into the student's file kept by the graduate programs administrator.

1.2.13 KEY DATES & DELIVERABLES FOR MASTER'S STUDENTS

For May degree conferral (completion in spring semester)
- **March 1 –** First draft of the complete thesis must be submitted to your ENTIRE committee. Note this deadline applies to the report of the completed project, not your project proposal.
- **April 10 –** Final version of the completed thesis (for MS programs) or ILE essay (for MPH program) with completed sign-off forms and any other required materials to the Graduate Program Administrator (for MS programs) or to the MPH Hub (for MPH program*). For MPH students*: a reminder that successful completion of the ILE also includes completion and upload of deliverables from the four, online training modules. You must ensure that the associated evaluation of these deliverables by your Chair and committee has been completed.

For October degree conferral (completion in summer semester)
- **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 (for MS programs) or ILE essay (for MPH program) with completed sign-off forms and any other required materials to the Graduate Program Administrator (for MS programs) or to the MPH Hub (for MPH program).

For March degree conferral (completion in fall semester)
- **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 (for MS programs) or ILE essay (for MPH program) with completed sign-off forms and any other required materials to the Graduate Program Administrator (for MS programs) or to the MPH Hub (for MPH program).

NOTE: The *Graduation Ceremony* (as distinct from degree conferral) is held once a year, usually the second Saturday in May, and includes all degree conferrals since the prior ceremony. Consult the SMD academic calendar at: **https://www.urmc.rochester.edu/education/graduate/current-students/academic-calendar.aspx**

Section 2. 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 typically consist of 4 or 5 courses (12-15 credits). Credits can be applied to a subsequent Master's degree, if desired. We offer the following Advanced Certificate programs, which are overseen by the Department's Associate Chair:

Analytic Epidemiology
Clinical Research Methods (online)
Experimental Therapeutics
Health Services Research
Public Health (online)

2.1 ADVANCED CERTIFICATE IN ANALYTIC EPIDEMIOLOGY

Website: https://www.urmc.rochester.edu/education/graduate/certificate/advanced-certificate-in-analytic-epidemiology.aspx

Program Format: On-Campus
Total Credits Required: 12

Program Description
The advanced certificate in analytic epidemiology is designed to provide individuals with the knowledge and tools to assess and understand health-related information as encountered in their professional or personal lives.

Program Objective
To provide researchers and other interested individuals with a practical understanding of quantitative research methods including survey development, case control studies, cohort studies, randomized controlled trials, pragmatic trials and quasi experimental methods, as well as qualitative research methods including ethnographic interviewing, participant observation, focus groups, and community-based participatory research.

REQUIRED COURSES:	COURSE TITLE	CREDITS
PM 410	Intro to Data Management & Analysis	3
PM 415	Principles of Epidemiology	3
ONE OF THE FOLLOWING:		
PM 401	Quantitative Methods	3
BST 463	Introduction to Biostatistics	3
ONE OF THE FOLLOWING:		
PM 416	Advanced Epi Methods	3
BST 464 or PM 464	Linear Regression or Intro to Regression Analysis	4 or 3

2.2 ADVANCED CERTIFICATE IN CLINICAL RESEARCH METHODS (ONLINE)

Website: https://www.urmc.rochester.edu/education/graduate/certificate/advanced-certificate-in-clinical-research-meth.aspx

Program Format: Online
Total Credits Required: 12

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

Program Objective
To provide researchers and other interested individuals with a practical understanding of quantitative research methods including survey development, case control studies, cohort studies, randomized controlled trials, pragmatic trials, and quasi experimental methods, as well as qualitative research methods including ethnographic interviewing, participant observation, focus groups, and community-based participatory research.

REQUIRED COURSES	COURSE TITLE	CREDITS
PM 415	Principles of Epidemiology	3
PM 458	Qualitative Health Care Research	3
TWO OF THE FOLLOWING:		
PM 413	Field Methods in Epidemiology	3
PM 418	Cardiovascular Disease Epidemiology & Prevention	3
PM 419	Recruitment and Retention of Human Subjects in Clinical Research	3
PM 445	Introduction to Health Services Research & Policy	3
Or course with permission of the program director		

2.3 ADVANCED CERTIFICATE IN EXPERIMENTAL THERAPEUTICS

Website: https://www.urmc.rochester.edu/education/graduate/certificate/advanced-certificate-in-experimental-therapeutics.aspx

Program Format: On-Campus
Total Credits Required: 14

Program Description
The Advanced Certificate in Experimental Therapeutics research is designed to give individuals the knowledge and tools needed to conduct clinical research trials.

Program Objective
To provide researchers and other interested individuals with an practical understanding of quantitative research methods including case control studies, cohort studies, and randomized clinical trials.

REQUIRED COURSES	COURSE TITLE	CREDITS
PM 401 or BST 463	Quantitative Methods or Introduction in Biostatistics	3
PM 488	Experimental Therapeutics	3
BST 465	Design of Clinical Trials	4
IND 501	Ethics	1
ONE OF THE FOLLOWING:		
PM 410	Introduction to Data Management and Analysis	3
PM 415	Principles of Epidemiology	3
PM 419	Recruitment and Retention of Human Subjects	3
PM 438	Grantsmanship	3
PM472	Measurement & Evaluation of Research Instruments	3
PM 484	Medical Decisions and Cost-Effectiveness Research	3

2.4 ADVANCED CERTIFICATE IN HEALTH SERVICES RESEARCH

Website: https://www.urmc.rochester.edu/education/graduate/certificate/adv-certificate-in-health-services-research.aspx

Program Format: On-Campus
Total Credits Required: 12

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.

Program Objective
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.

REQUIRED COURSES	COURSE TITLE	CREDITS
PM 421	US Health Care System: Financing, Delivery, Performance	3
PM 484	Medical Decision Making and Cost Effectiveness Research	3
PM 456	Health Economics	3
ONE OF THE FOLLOWING:		
PM 401	Quantitative Methods	3
PM 415	Principles of Epidemiology	3
PM 422	Quality of Care & Risk Adjustment	3
PM 430	Psychology in Health Services Research	3
PM 445	Intro to Health Services Research & Policy	3
PM 493	Health Policy Lab	3

2.5 ADVANCED CERTIFICATE IN PUBLIC HEALTH (ONLINE)

Website: https://www.urmc.rochester.edu/education/graduate/certificate/advanced-certificate-in-public-health.aspx

Program Format: Online
Total Credits Required: 15

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

Program Objective
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.

REQUIRED COURSES	COURSE TITLE	CREDITS
PM 415	Principles of Epidemiology	3
PM 421	US Health Care System: Financing, Delivery & Performance	3
PM 426	Social & Behavioral Medicine	3
PM 455	Foundations in Public Health Sciences	3
ONE OF THE FOLLOWING:		
PM401	Quantitative Methods	3
PM 445	Intro to Health Services Research	3
PM 461	Program Evaluation	3
PM493	Health Policy Lab	3
PM 504	Environmental Health	3
Or course with permission of program director		

Section 3. Master's Programs

A Master's program is a post-Baccalaureate course of academic study designed for students and practitioners who seek to enhance their professional development through advanced coursework in research methods or public health practice. We offer the following Master's programs:

MS in Epidemiology (MS-EPI)
Program Director: Dr. David Rich

MS in Clinical Investigation (MS-CI)
Program Director: Dr. Edwin van Wijngaarden

MS in Health Services Research and Policy (MS-HSRP)
Program Director: Dr. Yue Li

Master of Public Health (MPH)
Program Director: Christopher Seplaki

Our MS programs include a six-credit research thesis and are intended for learners who are interested in pursuing a research career, whereas the MPH program includes a three-credit capstone and is intended for learners who are interested in pursuing a career in public health practice.

Section 3.1: Master of Public Health (MPH)

Program website: https://www.urmc.rochester.edu/education/graduate/masters-degrees/public-health.aspx
Program Director: Christopher Seplaki, PhD
Program Formats: Online and Online/On-Campus Hybrid
STEM approved: No
Total credits required: 43

Notes:

1. This Handbook applies ONLY to MPH students who matriculated in Fall 2020 or beyond. MPH Students who matriculated in Spring 2020 or in a prior semester should refer to the 2019-2020 edition of the Graduate Student Handbook, or the version specific to their semester/year of matriculation. All relevant editions of the Graduate Student Handbook are available on the MPH Hub.

2. All MPH students should use the **MPH Hub** as the primary source of program information regarding all aspects of their program experience. The information in this Handbook is accurate as of the date of publication. Beyond that point, in the event of any discrepancy in guidance between the MPH Hub and this Handbook—the MPH Hub should be taken as the holding the most current information.

   Students can access the MPH Hub via Blackboard: Log in to Blackboard at https://learn.rochester.edu . On the left side choose "Organizations". Then from the resulting list on the right choose "MPH Hub". Links to primary content items can be found on the left margin; e.g., see the link on the left for "ILE" for information about the Integrated Learning Experience (ILE).

3.1.1 MPH Program Guiding Statements

The University of Rochester MPH Program Vision
A world in which diverse, highly-trained public health professionals act to improve the health of individuals and the communities in which they live and in which health inequities no longer exist.

The University of Rochester MPH Program Mission
The program offers a flexible and supportive academic experience that provides students with the educational experiences, professional mentorship and career guidance to improve health and reduce health inequities among diverse populations, through public health scholarship, instruction and service.

The University of Rochester MPH Program Goals
Goals for our MPH program are organized into three groups: scholarship goals, instructional goals, and service goals.

Scholarship Goals
1. To stimulate student ILE capstone paper topics related to faculty research activities and/or joint faculty-community initiatives related to public health.
2. To maintain a departmental research program that encompasses important public health science topics

Instructional Goals
1. To provide students with up-to-date scientific knowledge and skills to address contemporary public health problems
2. To provide outstanding academic and career development mentorship
3. To provide diverse perspectives by recruiting and retaining a diverse faculty, staff and student body

Service Goals
1. To engage in meaningful local, regional and national/international service roles
2. To regularly engage with public health professionals and community partners so that the MPH program is responsive to evolving public health needs

As noted above, we provide here a brief description of the values and culture for the URMC, and UR. The values and culture of the University of Rochester Medical Center are expressed in our **ICARE values**. ICARE is an acronym for Integrity, Inclusion, Compassion, Accountability, Respect and Excellence.

INCLUSION: I will embrace diversity, be an ally for others, and acknowledge that everyone has their own story.
INTEGRITY: I will be honest, ethical, and act in a fair and trustworthy manner.
COMPASSION: I will act with kindness, show empathy, and be responsive to individual needs.
ACCOUNTABILITY: I will lead by example, take responsibility for my actions, and support the efforts of my team.
RESPECT: I will be open and accepting of others' perspectives, and treat each person with dignity and cultural sensitivity.
EXCELLENCE: I will advance personal and team goals, seek innovative approaches, be Ever Better – Meliora.

Additional information about the values and culture of the URMC are available online at https://www.urmc.rochester.edu/about-us/values-culture.aspx.

The vision and values of the University of Rochester are available online at https://rochester.edu/about/values.html and are included here. As a community, the University of Rochester is defined by a deep commitment to Meliora—ever better. Embedded in that ideal are the values we share: equity, leadership, integrity, openness, respect, and accountability. Together, we will set the highest standards for how we treat each other to ensure our community is welcoming to all and is a place where all can thrive. We will hold ourselves accountable to these values in the design of our programs, the development and delivery of our services, the evaluation of performance, and the ways in which we interact as a community.

Meliora: We strive to be ever better, for everyone.
Equity: We commit to diversity, inclusion, and access.
Leadership: We take initiative and share responsibility for exemplifying excellence.
Integrity: We conduct ourselves with honesty, dedication, and fairness.
Openness: We embrace freedom of ideas, inquiry, and expression.
Respect: We value our differences, our environment, and our individual and collective contributions.
Accountability: We are responsible for making our community ever better, through our actions, our words, and our dealings with others.

3.1.2 MPH Program of Study Sheet

Current MPH students should download an updated version of the program of study worksheet (according to their semester of matriculation) and view the approved list of electives, on the appropriate pages of the MPH Hub.

3.1.3 MPH Integrated Learning Experience (ILE)

All MPH students should use the **MPH Hub** as the primary source of program information regarding all aspects of their program experience. The information in this Handbook is accurate as of the date of publication. Beyond that point, in the event of any discrepancy in guidance between the MPH Hub and this Handbook—the MPH Hub should be taken as the holding the most current information.

Students can access the MPH Hub via Blackboard: from the main "My URMC" login page, scroll down to "My Organizations" (on the right side)—there you will see a link to "MPH Hub". Click this link to enter the MPH Hub. Links to primary content items can be found on the left margin; e.g., see the link on the left for "ILE" for information about the Integrated Learning Experience (ILE).

Students should access information about the Integrated Learning Experience (ILE) on the MPH Hub—see the link on the left side margin, labeled *"Integrated Learning Experience (ILE)".* Only a brief overview is presented in this Handbook.

When completing their ILE students will register for credit the course *PM 500 MPH Integrated Learning Experience (ILE)*. Student can download the syllabus and timeline for *PM 500 MPH Integrated Learning Experience (ILE)* on the MPH Hub. This document describes the ILE in detail. Students are encouraged to familiarize themselves with the ILE project steps and begin thinking about their topic, and potential faculty readers, early in their program experience.   The syllabus for PM500 is also available directly **here** or via this link: https://rochester.box.com/s/seejydgvsn4hxpvohb3to3t4teyb4an3.

The *ILE Primary Reader and Project Advisor* must be a primary, full-time faculty member in the Department of Public Health Sciences. You can view a list of PHS primary faculty **here**. (https://www.urmc.rochester.edu/public-health-sciences/people/faculty.aspx) Students should enter the name of their primary reader/advisor when requested during the registration process for PM500.

The *Secondary Reader* must be a full-time faculty member at University of Rochester and be approved by the Primary Reader and MPH Program Director (PD director approval is via the agreement form submitted to the Hub via Step 1 link).

Students are encouraged to discuss their ideas for ILE paper option, topic and primary reader with their Academic Advisor in an ongoing fashion in the semesters preceding their ILE.

See the PM 500 syllabus for guidance on the ILE paper structure and formatting.

3.1.4 MPH Contact Information

Quratulain A. Majoka, MBA, PHS Graduate Programs Administrator
Phone (585) 275-7882
Email: Annie_majoka@urmc.rochester.edu

Christopher Seplaki, PhD, Program Director for MPH
Phone: (585) 273-1549
Email: Christopher_seplaki@urmc.rochester.edu

Section 3.2: Master of Science in Clinical Investigation (MS-CI)

Program website: https://www.urmc.rochester.edu/education/graduate/masters-degrees/clinical-investigation.aspx
Program Director: Edwin van Wijngaarden, PhD
MS-CI Program Format: On-Campus
STEM approved: Yes
Total credits required: 31

3.2.1 MS-CI Program Guiding Statements

> *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.

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.

3.2.2 MS-CI Program of Study Sheet

Current MS-CI students can use the below program of study worksheet and view the approved list of electives on the program website (https://www.urmc.rochester.edu/education/graduate/masters-degrees/clinical-investigation/curriculum.aspx). Electives can be tailored toward an individual's research focus and are identified accordingly.

COURSE NUMBER	COURSE TITLE	CREDITS	CREDITS COMPLETED
PM 401	Quantitative Methods	3	
PM 410	Intro. to Data Mgmt & Analysis	3	
PM 415	Principles of Epidemiology	3	
PM 460	Master's Research Project/Paper	6	
IND 501	Ethics in Prof. Integrity-Clinical	1	
BST 465 or PM 488	Design of Clinical Trials Experimental Therapeutics	4 3	
PLUS ONE OF THE FOLLOWING			
PM 413 or PM 416* or	Field Epidemiology Advanced Epi Methods *Advanced Biostatistics Course	3	
OPTIONAL WORKSHOPS AS NEDED			
List of training opportunities may be found at **http://www.urmc.rochester.edu/ctsi/education/**			
ELECTIVES			
	Elective Table 1	3	
	Elective Table 2	3	
	Elective Table 3	3	
	TOTAL CREDITS	**31/32**	

3.2.3 MS-CI Thesis Project

Purpose/Background

A Public Health Sciences (PHS) Capstone Project is a requirement of all Master's 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 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. Use of course assignments to satisfy the capstone requirement, with no additional work, is prohibited.

Topic

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

Committee Chair and Committee Members

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

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.

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.

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 (https://www.rochester.edu/ohsp/education/certification/initialCertification.html). 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**).

PHS Master's ILE Essay / Thesis Committee
Member Agreement Form

Form to be used for program (please circle): MPH, MS-CI, MS-EPI, MS-HSRP

Student Name (print)**: _____ Date: _____**

A PHS Master's committee is comprised of 3 members: **#1 Committee Chair** (must have PHS primary faculty appointment), **Member #2** (must have PHS primary faculty appointment), **Member #3 (external)**. The external member can be any URMC faculty (PHS secondary, or other URMC faculty appointment) or other qualified individuals *with special permission of the Master's Program Director and PHS Associate Chair* (if applicable, obtain initial here: Program Director: _____; PHS Associate Chair: _____)

Committee chair (Must be PHS primary faculty)

I agree to serve as committee chair for the above named student's Master's ILE essay / thesis subject to the following stipulations:

Initial one	Authorship expectations for any publication(s) that may result from this project
	I will serve as chair if I am listed as the *senior author on all publications* resulting from this project.
	I will 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.
	I will serve as chair and have *no preferences* regarding authorship decisions.
	Other:

Committee Chair:_____
                        (print name and sign)   Date

Committee Member #2 (Must be PHS primary faculty)

I agree to serve on the Master's ILE Essay / Thesis Committee for the above named student subject to the stipulations stated above.

Committee Member
#2:_____
                        (print name and sign)   Date

Committee Member #3 (External)

I agree to serve on the Master's ILE Essay / Thesis Committee for the above named student subject to the stipulations stated above.

Committee Member
#3:_____
                        (print name and sign)   Date

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. The presentation should last no more than 20 minutes to leave ample time for discussion. To set a date, first verify availability of committee members, then secure a presentation date with the Graduate Program Administrator.

Send an electronic version of the proposal abstract to the Administrator 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.

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. **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)**

Students should use the following margins: 1 l/2" from the left side and 1 l/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.

All students are required to submit a final copy of their Master's Thesis Project to the Graduate Programs Administrator in an electronic version. In addition, they are required to present the final abstract with findings to the Education Secretary. 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.

3.2.4 MS-CI Contact Information

Quratulain A. Majoka, MBA, PHS Graduate Programs Administrator
Phone (585) 275-7882
Email: Annie_majoka@urmc.rochester.edu

Edwin van Wijngaarden, PhD, Program Director for MS-CI
Phone: (585) 275-1985
Email: edwin_van_wijngaarden@urmc.rochester.edu

(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

3.2.5 MS-CI Thesis Project Planning Guidance

Steps	Involvement	Description
1. Feasibility Inquiry	Student & Advisor	• Idea discussion
2. General Topic Identification	Student & Advisor	• Development of idea into topic
3. Identification of proposed Committee Chair	Student & Advisor	
4. Research Committee Identified	Student, Advisor, proposed Committee Chair and other faculty	• Student secures agreement for involvement from suggested committee members
5. Topic & Committee Member Approval	Student & Program Director	• Brief abstract submitted for discussion, review and approval by Program Director
6. Committee Meeting	Student, Committee Chair and Committee Members	• Refine topic and research question • Layout methods • Prepare timeline
7. Project Proposal	Student, Committee Chair and Committee Members	• Preparation of proposal with review and feedback from Committee Chair and Members
8. Schedule Project Proposal Presentation	Student, Committee Chair, Committee Members	• Schedule presentation with assistance of Education Secretary
9. Announcement of Project Proposal Presentation	Student & Graduate Programs Administrative Assistant	• Submission of abstract to Administrative Assistant one week prior to presentation • Notice posted within department and forwarded via email to all PHS faculty and students one week prior to presentation date
10. Project Proposal Presentation	Student, Committee Chair and Members, PHS faculty and students	• Student presents
11. Faculty Caucus	Student, Committee Chair and Members, other faculty	• Provided feedback and suggestions based on presentation
12. Project	Student, Committee Chair and Members and Consultants as necessary	• RSRB approval • Data collection • Data analyses • Essay write up (draft format)
13. Committee Meeting(s)	Student, Committee Chair and Members	• Review of progress and essay draft • Reworks based on feedback
14. First draft of thesis to Committee	Student	• March 1 for May graduation • June 15 for August graduation • November 1 for December graduation
15. Final Project (see guidelines)	Student, Committee Chair and Members, Graduate Programs Administrator	• Submission of final project to Committee Chair & Members for sign off • Submission of final project to Graduate Programs Administrator • Submission of final abstract with findings to Graduate Programs Administrative Assistant

Section 3.3: Master of Science in Epidemiology (MS-EPI)

Program website: https://www.urmc.rochester.edu/education/graduate/masters-degrees/epidemiology.aspx
Program Director: David Rich, ScD
MS-CI Program Format: On-Campus
STEM approved: Yes
Total credits required: 31

3.3.1 MS-EPI Program Guiding Statements

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 MS in Epidemiology will support this mission by preparing students to apply these ideals in clinical and public health research and outcomes evaluation.

Our Master of Science in degree is a 31-credit course of study designed to provide students with the methodologies and skills needed to 1) carry out research and manage public health programs to identify correlates of disease that may be targets of primary prevention; 2) evaluate the consequences of changes in health care delivery on populations; and 3) to accommodate the growing need to integrate and analyze large-scale information. We meet this goal by providing students with a firm foundation in the fundamental elements of epidemiologic research and biostatistics. The 31 credits of required coursework, include 6 epidemiology (or biostatistics) core methods courses, 1 Ethics (1 credit) course, 2 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. Students completing the program will be well prepared to take positions in academic research, private industry, government, and non-profit agencies.

3.3.2 MS-EPI Program of Study Sheet
Current MS-EPI students can use the below program of study worksheet and view the approved list of electives on the program website (https://www.urmc.rochester.edu/education/graduate/masters-degrees/epidemiology/curriculum.aspx). Electives can be tailored toward an individual's research focus and are identified accordingly.

COURSE NUMBER	COURSE TITLE	CREDITS	CREDITS COMPLETED
PM 401 **or**	Quantitative Methods in Public Health Research	3	
BST 463	Introduction to Biostatistics	3	
PM 410	Intro To Data Mgmt. & Data Analysis Using SAS	3	
PM 413 **or**	Field Epidemiology	3	
BST 465	Design of Clinical Trials	4	
PM 415	Principles of Epidemiology	3	
PM 416	Epidemiology Methods	3	
PM 469 **or**	Multivariable Models for Epidemiology	3	
PM 464	Introduction to Regression Analysis	3	
IND 501	Ethics	1	
	Epidemiology Elective	3	
	General Elective	3	
PM 460	Master's Essay	6	
	Total	31/32	

3.3.3 MS-EPI Thesis Project

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 can 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.

Topic

Consult with your advisor on identification of a topic. Note that your MS-EPI 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 and Committee Members

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. Plans for deciding manuscript authorship should be made following the International Committee of Medical Journal Editors (ICMJE) guidelines:

Consult with your advisor and/or your committee chair on identification of committee members. Committees shall consist of at least three members:

- Two members who are epidemiology faculty (Drs. Rich, van Wijngaarden, Seplaki, Jusko, Liu, Block, Fernandez, Williams, and Jones), and one member who is not epidemiology faculty.
- 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.

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.

Thesis Topic and Committee 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. **At this point the committee members will complete the Thesis Committee Member Agreement Form.**

Thesis Proposal

After you and your committee agree on the thesis topic, please prepare a thesis proposal that provides the information on which you based the research question, design, and analysis of the thesis. This proposal is to be submitted to each committee member. Once all committee members have reviewed it and agree that the document sufficiently describes the planned work and sign off on the thesis proposal form for master's programs, the student can begin working on the thesis. The thesis proposal should have the following sections:

1. **Title Page**
   a. **Project title is typed in Title Case following standard rules of English**
   b. **Student name with prior degrees**
   c. **List the Chair and Committee Members**
   d. **Department of Public Health Sciences**
   e. **University of Rochester School of Medicine and Dentistry**
2. **Abstract: Describe the research topic of your thesis, including primary dependent and independent variable(s), your aim(s) and hypothesis/es, and why the proposed thesis/analysis is important to do.**
3. **Background: Describe your dependent and independent variable(s)other topics deemed necessary by your committee, and the theoretical framework and previous research on which you based your thesis design, analysis, and research question**
4. **Specific Aim(s)**
5. **Methods**
   a. **Data Source**
   b. **Aim 1 (if you have more than one aim, include the same information for each additional aim)**
      i. **Study Population and Study design**
      ii. **Primary dependent variable(s) (outcome(s))**
      iii. **Primary independent variable(s) (exposure(s))**
      iv. **Covariates**
      v. **Statistical Analysis**
   c. **Power**
6. **Strengths and limitations of the proposed research**
7. **Public Health Significance**
8. **References**

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 (https://www.rochester.edu/ohsp/education/certification/initialCertification.html). 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 ("thesis defense"):

The final thesis document, including the background, study objectives, methods, results and discussion is presented publicly. The goal of the presentation is to defend the completed work to the public including the dissertation committee, additional faculty and students, and anyone from the public. The presentation should last no more than 60 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 thesis abstract to the Education Secretary and schedule a presentation date with them (see contact information below). The abstract should provide the background, objectives, methods, results, and conclusions, 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 at least one week prior to the scheduled presentation.

Printed announcements will also be posted. A reminder announcement will be forwarded a day before the scheduled presentation. Students are strongly encouraged to rehearse the proposal presentation several days in advance of the proposal date, and to review information and guidelines regarding how to prepare effective PowerPoint presentations.

PHS Master's ILE Essay / Thesis Committee
Member Agreement Form

Form to be used for program (please circle): MPH, MS-CI, MS-EPI, MS-HSRP

Student Name (print)**: _____**   **Date: _____**

A PHS Master's committee is comprised of 3 members: **#1 Committee Chair** (must be an Epidemiology MS Program faculty member), **Member #2** (must be an Epidemiology MS Program faculty member), **Member #3 (external)**. The external member can be any URMC faculty (a non-Epidemiology program faculty or other URMC faculty appointment) or other qualified individuals *with special permission of the Master's Program Director and PHS Associate Chair* (if applicable, obtain initial here: Program Director: _____; PHS Associate Chair: _____)

Committee chair (Must be Epidemiology MS Program faculty)
I agree to serve as committee chair for the above named student's Master's ILE essay / thesis subject to the following stipulations:

Initial one	Authorship expectations for any publication(s) that may result from this project
	I will serve as chair if I am listed as the *senior author on all publications* resulting from this project.
	I will 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.
	I will serve as chair and have *no preferences* regarding authorship decisions.
	Other:

Committee Chair:_____
                        (print name and sign)   Date

Committee Member #2 (Must be Epidemiology MS Progam faculty)
I agree to serve on the Master's ILE Essay / Thesis Committee for the above named student subject to the stipulations stated above.

Committee Member
#2:_____
                        (print name and sign)   Date

Committee Member #3 (External)

I agree to serve on the Master's ILE Essay / Thesis Committee for the above named student subject to the stipulations stated above.

Committee Member
#3:_____
                        (print name and sign)   Date

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 on next page)*
   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. *Department of Public Health Sciences*
   e. *University of Rochester School of Medicine and Dentistry*
   f. *Year of Final Defense (not month or day)*
2. *Table of contents*
3. *Abstract*
   a. *The final abstract of the thesis 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, Objectives, Methods, Results, and Conclusion.*
4. **Introduction – Give a brief summary of the past research on which the thesis was designed, and a summary of the study objectives**
5. **Background**
6. **Clinical or Public Health Significance**
7. **Methods**
   a. **Study design and study population**
   b. **Outcome(s)**
   c. **Exposure(s)**
   d. **Statistical Analyses**
8. **Results**
9. **Discussion**
   a. **Summary of main findings**
   b. **Relationship of study findings with previous published studies**
   c. **Potential biologic mechanisms**
   d. **Strengths and weaknesses**
   e. **Conclusion and implications for further research**
10. **References**
11. **Tables**
12. **Figures**
13. **Appendix**
    a. **Study materials (surveys etc)**

Students should use the following margins: 1 l/2" from the left side and 1 l/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. All students are required to submit a final copy of their Master's Thesis Project to the Graduate Programs Administrator in an electronic version. In addition, they are required to present the final abstract with findings to the Education Secretary. 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.

3.3.4 MS-EPI Contact Information

Quratulain A. Majoka, MBA, PHS Graduate Programs Administrator
Phone (585) 275-7882

Email: Annie_majoka@urmc.rochester.edu

David Rich, ScD, Program Director for MS-EPI
Phone: (585) 276-4119
Email: david_rich@urmc.rochester.edu

(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

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3.3.5 MS-EPI Thesis Project Planning Guidance

Steps	Involvement	Description
1. Feasibility Inquiry	Student & Advisor	• Idea discussion
2. General Topic Identification	Student & Advisor	• Development of idea into topic
3. Identification of proposed Committee Chair	Student & Advisor	
4. Research Committee Identified	Student, Advisor, proposed Committee Chair and other faculty	• Student secures agreement for involvement from suggested committee members
5. Topic & Committee Member Approval	Student & Program Director	• Brief abstract submitted for discussion, review and approval by Program Director
6. Committee Meeting	Student, Committee Chair and Committee Members	• Refine topic and research question • Layout methods • Prepare timeline
7. Project Proposal	Student, Committee Chair and Committee Members	• Preparation of proposal with review and feedback from Committee Chair and Members
8. Project	Student, Committee Chair and Members and Consultants as necessary	• RSRB approval • Data collection • Data analyses • Essay write up (draft format)
9. Committee Meeting(s)	Student, Committee Chair and Members	• Review of progress and essay draft • Reworks based on feedback
10. First draft of thesis to Committee	Student	• March 1 for May graduation • June 15 for August graduation • November 1 for December graduation
11. Schedule Project Presentation	Student, Committee Chair, Committee Members	• Schedule presentation with assistance of Education Secretary
12. Announcement of Project Presentation	Student & Graduate Programs Administrative Assistant	• Submission of abstract to Administrative Assistant one week prior to presentation • Notice posted within department and forwarded via email to all PHS faculty and students one week prior to presentation date
13. Project Presentation ("thesis defense")	Student, Committee Chair and Members, PHS faculty and students	• Student presents
14. Faculty Caucus	Student, Committee Chair and Members, other faculty	• Provided feedback and suggestions based on presentation
15. Final Project (see guidelines)	Student, Committee Chair and Members, Graduate Programs Administrator	• Submission of final project to Committee Chair & Members for sign off • Submission of final project to Graduate Programs Administrator • Submission of final abstract with findings to Graduate Programs Administrative Assistant

Section 3.4: Master of Science in Health Services Research and Policy (MS-HSRP)

Program website: https://www.urmc.rochester.edu/education/graduate/masters-degrees/health-services-research-policy.aspx
Program Director: Yue Li, PhD
MS-HSRP Program Format: On-Campus
STEM approved: No
Total credits required: 31

3.4.1 MS-HSRP Program Guiding Statements

> *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*

Health services research is a multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and cost of health care, and ultimately our health and well-being. Health services research aims to provide timely, reliable, and continuously-improved evidence base to guide health care decisions made by clinicians, patients and families, executives and agencies, policymakers, and payers or purchasers. Our MS program in Health Services Research and Policy in the Department of Public Health Sciences is a 31-credit course of study designed to provide students with the knowledge and skills needed to conduct high quality health services and policy analysis.

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 (or econometric) analysis, economic theories, 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

3.4.2 MS-HSRP Program of Study Sheet

Current MS-HSRP students can use the below program of study worksheet and view the approved list of electives on the program website (https://www.urmc.rochester.edu/education/graduate/masters-degrees/health-services-research-policy/curriculum.aspx). Electives can be tailored toward an individual's research focus and are identified accordingly.

COURSE NUMBER	COURSE TITLE	CREDITS	CREDITS COMPLETED
PM 421	Intro to US Healthcare System	3	
PM 445	Intro to Health Services Research	3	
PM 415	Principles of Epidemiology	3	
PM 410	Intro to Data Management and Analysis	3	
PM 464	Introduction to Regression Analysis	3	
IND 501	Ethics	1	
	Elective	3	
	Elective	3	
	Elective	3	
PM 460	Master's Essay	6	
	Total	31	

3.4.3 MS-HSRP Thesis Project

Purpose/Background

A Public Health Sciences (PHS) Capstone Project is a requirement of all Master's 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 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. Use of course assignments to satisfy the capstone requirement, with no additional work, is prohibited.

Topic

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

Committee Chair and Committee Members

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

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.

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.

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 (https://www.rochester.edu/ohsp/education/certification/initialCertification.html). 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**).

PHS Master's ILE Essay / Thesis Committee
Member Agreement Form

Form to be used for program (please circle): MPH, MS-CI, MS-EPI, MS-HSRP

Student Name (print)**: _____** **Date: _____**

A PHS Master's committee is comprised of 3 members: **#1 Committee Chair** (must have PHS primary faculty appointment), **Member #2** (must have PHS primary faculty appointment), **Member #3 (external)**. The external member can be any URMC faculty (PHS secondary, or other URMC faculty appointment) or other qualified individuals *with special permission of the Master's Program Director and PHS Associate Chair* (if applicable, obtain initial here: Program Director: _____; PHS Associate Chair: _____)

Committee chair (Must be PHS primary faculty)
I agree to serve as committee chair for the above named student's Master's ILE essay / thesis subject to the following stipulations:

Initial one	Authorship expectations for any publication(s) that may result from this project
	I will serve as chair if I am listed as the *senior author on all publications* resulting from this project.
	I will 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.
	I will serve as chair and have *no preferences* regarding authorship decisions.
	Other:

Committee Chair:_____
              (print name and sign)   Date

Committee Member #2 (Must be PHS primary faculty)
I agree to serve on the Master's ILE Essay / Thesis Committee for the above named student subject to the stipulations stated above.

Committee Member
#2:_____
              (print name and sign)   Date

Committee Member #3 (External)

I agree to serve on the Master's ILE Essay / Thesis Committee for the above named student subject to the stipulations stated above.

Committee Member
#3:_____
              (print name and sign)   Date

Thesis Proposal:

Before the actual research project starts, the final research proposal, including the background, study objectives, and methods, is presented Research Proposal Presentations:

Before the actual research project starts, the final research proposal, including the background, study objectives, and methods, is presented and defended publicly. The goal of the presentation is to obtain feedback about the study objectives and proposed methodology from additional faculty and students. The presentation should last no more than 50 minutes to leave ample time for discussion. To set a date, first verify availability of committee members, then secure a presentation date with the Graduate Program Administrator.

Send an electronic version of the proposal abstract to the Administrator 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.

Thesis Proposal Requirements

The final thesis proposal document should have the following sections:

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. *Department of Public Health Sciences*
    e. *University of Rochester School of Medicine and Dentistry*
    f. *Year of Final Defense (not month or day)*
2. *Table of contents*
3. *Abstract*
    a. *The 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 Chapters providing review of the literature for topics relevant to the thesis**
6. **Specific Aims**
7. **Methods – separately described by Aim**
    a. **Study design and study population**
    b. **Outcome**
    c. **Exposure**
    d. **Statistical Analyses**
    e. **Power**
8. **Clinical or Public Health Significance**
9. **References**
10. **Tables**
11. **Figures**
12. **Appendix**
    a. **Study materials (surveys etc)**

Students should use the following margins: 1 l/2" from the left side and 1 l/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.

Send an electronic version of the proposal abstract to the Administrator 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.

3.4.4 MS-HSRP Contact Information

Quratulain A. Majoka, MBA, PHS Graduate Programs Administrator
Phone (585) 275-7882
Email: Annie_majoka@urmc.rochester.edu

Yue Li, PhD, Program Director for MS-HSRP
Phone: (585) 275-3276
Email: yue_li@urmc.rochester.edu

(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

3.4.5 MS-HSRP Thesis Project Planning Guidance

Steps	Involvement	Description
1. Feasibility Inquiry	Student & Advisor	• Idea discussion
2. General Topic Identification	Student & Advisor	• Development of idea into topic
3. Identification of proposed Committee Chair	Student & Advisor	
4. Research Committee Identified	Student, Advisor, proposed Committee Chair and other faculty	• Student secures agreement for involvement from suggested committee members
5. Topic & Committee Member Approval	Student & Program Director	• Brief abstract submitted for discussion, review and approval by Program Director
6. Committee Meeting	Student, Committee Chair and Committee Members	• Refine topic and research question • Layout methods • Prepare timeline
7. Project Proposal	Student, Committee Chair and Committee Members	• Preparation of proposal with review and feedback from Committee Chair and Members
8. Schedule Project Proposal Presentation	Student, Committee Chair, Committee Members	• Schedule presentation with assistance of Education Secretary (TBD)
9. Announcement of Project Proposal Presentation	Student & Graduate Programs Administrative Assistant	• Submission of abstract to Administrative Assistant one week prior to presentation • Notice posted within department and forwarded via email to all PHS faculty and students one week prior to presentation date
10. Project Proposal Presentation	Student, Committee Chair and Members, PHS faculty and students	• Student presents
11. Faculty Caucus	Student, Committee Chair and Members, other faculty	• Provided feedback and suggestions based on presentation
12. Project	Student, Committee Chair and Members and Consultants as necessary	• RSRB approval • Data collection • Data analyses • Essay write up (draft format)
13. Committee Meeting(s)	Student, Committee Chair and Members	• Review of progress and essay draft • Reworks based on feedback
14. First draft of thesis to Committee	Student	• March 1 for May graduation • June 15 for August graduation • November 1 for December graduation
15. Final Project (see guidelines)	Student, Committee Chair and Members, Graduate Programs Administrator	• Submission of final project to Committee Chair & Members for sign off • Submission of final project to Graduate Programs Administrator • Submission of final abstract with findings to Graduate Programs Administrative Assistant

Section 4. Doctoral Programs

Our doctoral programs are designed to actively prepare graduates for careers in public health, health services research, epidemiology, and clinical research. These programs take advantage of a unique setting within a leading School of Medicine and afford the opportunity for intensive, advanced training including theoretical and practice-based learning. Our programs draw students from a wide mix of disciplines and backgrounds. Students accumulate real-world skills, including critical thinking, community engagement, communication, problem-solving, and data management and analysis. Each program seeks to train scientists who are prepared to excel and lead in the ever-changing public health and clinical research environment.

We offer the following doctoral programs:

PhD in Epidemiology (PhD-EPI)
Program Director: Dr. David Rich

PhD in Health Services Research and Policy (PhD-HSRP)
Program Director: Dr. Yue Li

Section 4.1: PhD in Epidemiology (PhD-EPI)

Program website: https://www.urmc.rochester.edu/education/graduate/phd/epidemiology.aspx
Program Director: David Rich, ScD
PhD-EPI Program Format: On-Campus (Courses are In-person, Online, or Hybrid)
STEM approved: Yes

4.1.1 PhD-EPI Program Guiding Statements

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

4.1.2 PhD-EPI Program Requirements

- 61 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

4.1.3 PhD-EPI Suggested Class Schedule

YEAR 1 (Fall Semester)		YEAR 1 (Spring Semester)		Total
PM412 Survey Research	(3)	PM413 Field Epidemiology	(3)	
PM415 Principles of Epidemiology	(3)	PM416 Epi Methods	(3)	
BST463 Intro to Biostatistics	(3)	PM426 Social & Behavioral Med	(3)	
PM410 Intro to Data Management	(3)	PM464 Intro to Regression Anal	(3)	
Elective or Epi Content Course	(3)	Elective or Epi Content Course	(3)	
IND503 Ethics	(1)			
Total Semester Credits:	16	Total Semester Credits:	15	31
YEAR 2 (Fall Semester)		**YEAR 2 (Spring Semester)**		
BST448 Grantsmanship	(3)	BST465 Clinical Trials	(3)	
PM469 Multivariate Stats for Epi	(3)	PM472 Measurement & Evaluation	(3)	
Elective or Epi Content Course	(3)	PM414 History of Epidemiology	(3)	
Elective or Epi Content Course	(3)	PM510 Causal Inference in Epi	(3)	
Elective or Epi Content Course	(3)	Elective or Epi Content Course	(3)	
Total Semester Credits:	15	Total Semester Credits:	15	30
		TOTAL CREDITS		**61**

Epidemiology Content Courses (3 credits each) include:
PM 418 Cardiovascular Epidemiology (fall)
PM 424 Chronic Disease Epidemiology (spring)
PM 442 Nutritional Epidemiology (fall)
PM 451 Infectious Disease Epidemiology (fall)
PM 466 Cancer Epidemiology (spring)
PM 470 Environmental & Occupational Epidemiology (fall)
PM 489 Injury Epidemiology & Emergency Care Research Methods (fall)

4.1.4 PhD-EPI Comprehensive Examinations

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 one-day classroom setting.
- Oral examination is administered by the Executive Committee of the Program on one-day immediately adjoining the day of the written examination.

Student performance in the oral examination is independently scored by each committee member and these scores are averaged to one grade which represents 33% 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 67% 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, she/he may repeat the examination once following a minimum of six months of remedial preparation.

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 if a student fails the qualifying examination twice
- Any student not successfully completing the examination will be counseled to complete requirements for a Master of Epidemiology or one or more Certificates

4.1.5 PhD-EPI Teaching Assistantships
- Each student is required to serve as a Teaching Assistant for a minimum of two courses in the Epidemiology graduate program
- 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.

4.1.6 PhD-EPI Seminar Series
- All students are required to attend this weekly series
- The series includes student and faculty presentation of ongoing or completed research, as well as Journal Club presentations led by students

4.1.7 PhD-EPI 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 URMC clinical and basic science departments is encouraged
- The inclusion of primary data collection in the doctoral research is required and is a critical component of each project
- Candidates are required to make a formal oral presentation and defense of their planned thesis research investigation to the public and their Dissertation Advisory Committee. This presentation is open to any URMC faculty, student, and staff

- Candidates are required to draft a thesis proposal (using the format on the next page)
- 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
    - draft a thesis dissertation (using the format on the second to next page)
- The committee for the final defense will consist of:
    - The committee Chairperson must be at an Assistant Professor or higher level and must be an Epidemiology PhD Program faculty member. Faculty at the Assistant Professor level must have served as a member on such a committee of a completed dissertation research project prior to serving as committee Chairperson
    - One full-time faculty member of the rank of Assistant Professor or higher who is an Epidemiology PhD Program faculty member
    - Two "outside" members who hold a primary appointment in another department
    - All other requirements for completion of this process will follow the university's graduate student regulations and policies
- A Chair is appointed for each PhD oral defense exam to monitor and promote fairness and rigor in the conduct of the defense. At least 4 months prior to the defense, students with support from their advisor and/or program director, must identify a faculty member to serve as Chair for the oral defense. The Chair must be a current full-time tenure-track University of Rochester faculty member at assistant professor rank or higher who is external to the program, and without a significant scholarly relationship with the candidate or other committee members. Students must include the Chair in planning for specific dates and times for the defense.
- 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

4.1.8 PhD-EPI Contact Information

Quratulain A. Majoka, MBA, PHS Graduate Programs Administrator
Phone (585) 275-7882
Email: Annie_majoka@urmc.rochester.edu

David Rich, ScD, Program Director for MS-EPI
Phone: (585) 276-4119
Email: david_rich@urmc.rochester.edu

Thesis Research Proposal:

Before the thesis research project can start, the final research proposal, including the background, study objectives, and methods, is presented and defended publicly. The goal of the presentation is to obtain feedback about the study objectives and proposed methodology from additional faculty and students. The presentation should last no more than 50 minutes to leave ample time for discussion.

To set a date, first verify availability of committee members, then secure a presentation date with the Graduate Program Administrator.

Send an electronic version of the proposal abstract to the Administrator 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.

Thesis Proposal Requirements

The final thesis proposal document should have the following sections:

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. *Department of Public Health Sciences*
    e. *University of Rochester School of Medicine and Dentistry*
    f. *Year of Final Defense (not month or day)*
2. *Table of contents*
3. *Abstract*
    a. *The 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 Chapters for topics relevant to the thesis**
6. **Methods (separate chapters for each Aim)**
    a. **Study design and study population**
    b. **Outcome(s)**
    c. **Exposure(s)**
    d. **Statistical Analyses**
    e. **Power**
7. **Clinical or Public Health Significance**
8. **References**
9. **Appendix**
    a. **Study materials (surveys etc)**

Students should use the following margins: 1 l/2" from the left side and 1 l/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 proposal should be double-spaced.

Final Thesis Dissertation Formatting for Epidemiology PhD Students

All dissertation formatting should follow that required by the University of Rochester, described in http://www.rochester.edu/theses/ThesesManual.pdf. The text below describes the revised formatting required for all PhD Epidemiology dissertations, starting with students entering the PhD program in August of 2020.

This formatting is also separate from the PhD proposal document, *which will not change*.

The title page should have the format below

The (minimum) required PhD dissertation chapters will now be:
- Introduction
- Specific Aims
- Three individual chapters (or more), comprising at least 3 publishable papers written in the same format as a manuscript submitted for publication (each in its own chapter)
- Summary and Conclusions

Descriptions of Chapters are provided below.

Chapter 1 – Introduction: The first chapter will be a description of the main background themes that lead you to propose the research question(s) on which your dissertation is based. This should include sufficient biologic descriptions of your "disease outcome" and "exposure". This should also include the research gaps that your thesis will address, and the anticipated scientific, public health, and/or clinical significance of your research. Included in this chapter should also be a well-developed, scientifically grounded and justified theoretical framework that explicitly integrates and identifies all of the proposed aims. This should not be a copy of your thesis proposal document, but a substantially shorter and more concise summary of the most important background information from your proposal. Include a Reference section for just the Introduction.

Chapter 2 – Specific Aims: Chapter 2 will be a description of your specific aims. This should include the basic objective of each aim, being sure to include all outcomes and exposures for each analysis of that aim. Under each aim and sub-aim, include relevant hypotheses, as well as a basic description of any exploratory analyses to be conducted under each aim/sub-aim.

Chapters 3-5 (adding a Chapter 6 if there are 4 publishable papers instead of 3): Each publishable paper will be written with the following sections (as when writing a manuscript for publication). If a manuscript from the thesis is submitted for publication before the thesis defense date, that manuscript format can instead be applied in that chapter.
1. **Title page**: This should include a formal title and all authors with full names, degrees, and affiliation(s) given. This will be the only information on this page
2. **Abstract**: A structured abstract with section headers of Background, Objectives, Methods, Results, and Conclusions. This should be no more than 300 words and should be on a separate page from the title page.
3. **Abbreviations**: A page of abbreviations used and their definition
4. **Introduction**: This should include all background material necessary to justify the research question(s) and hypothesis(es). This material will be taken from the thesis proposal document, but *shortened considerably* to fit within the targeted manuscript length of 3500-4000 words.
5. **Methods**
6. **Results**
7. **Discussion**
8. **Conclusions:** The target length from the Introduction to the end of the Conclusions should be ≤4000 words.
9. **References**

10. **Tables** (should be included in the text of the paper where the table is referenced)
11. **Figures** (should be included in the text of the paper where the table is referenced)
12. **Supplemental Material:** The supplemental material can be used to include tables, figures, and descriptive text that is needed for the paper, but if included in the main paper would lengthen the paper beyond the targeted length ≤4000 words.

Chapter 6 or 7– Summary and Conclusions: Although each of the (minimum) 3 papers/chapters will summarize that thesis chapter's findings, and place them in the context of extant literature (which may include earlier chapters in this thesis), this chapter should provide an integrated summary of the hypotheses proposed by the thesis, the findings with regard to each hypothesis observed in the thesis, and discussion of how the thesis chapters are or are not consistent with each other and the field. This concluding chapter should provide some discussion of both the scientific importance and the public health or clinical significance of the findings. The chapter should discuss what research gaps were addressed directly by the thesis, and what research gaps still remain after this work. It should end with a discussion of the possible next steps and/or future studies for this line of research. Include a Reference section for just the Summary and Conclusions if needed.

(Example cover page format)

Title of Thesis

by

Your Name

Submitted in Partial Fulfillment of the Requirements for the Doctor of Philosophy Degree

Supervised by

(Chair of Committee **Only**)

Department of Public Health Sciences

School of Medicine and Dentistry

University of Rochester
Rochester, New York

20XX

Section 4.2: PhD in Health Services Research & Policy (PhD-HSRP)

Program website: https://www.urmc.rochester.edu/education/graduate/phd/health-services-research-policy.aspx
Program Director: Yue Li, PhD
PhD-HSRP Program Format: On-Campus
STEM approved: Yes

4.2.1 PhD-HSRP Program Guiding Statements

Since 1994, the PhD program in Health Services Research and Policy in the Department of Public Health Sciences has been highly successful in preparing students to become scholars for research, teaching, and public service careers in university, public policy, and governmental settings. Our PhD program has also been designated as a STEM (Science, Technology, Engineering and Mathematics) program since 2010. Set within a large medical center with all its clinical research resources and collaborative faculty, our program focuses on interdisciplinary application of the social and behavioral science disciplines to real world health issues such as the organization, financing, and delivery of health care; the quality and safety of care; health outcomes; and the management of population health.

Students in our program are offered a unique education at the forefront of health policy; health outcomes assessment; statistical, epidemiological, and quasi-experimental methodologies; analytics of large data sets; and economic evaluation. They enjoy an intimate learning environment in which they can easily interact with program faculty as well as develop strong collaborative ties to hospitals, clinical departments, and the Clinical and Translational Sciences Institute at the University of Rochester Medical Center. During the course of study in the program, our students regularly present posters and podium presentations at major conferences, and publish in high impact journals their research on quality, access, cost, and outcomes of health care services to inform policy and practice.

4.2.2 PhD-HSRP Program Expectations

Timeline and milestones.
All incoming first-year students are required to participate in Math Camp (see below) 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 below); 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; 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 and Teaching Assistantships.

After taking the comprehensive exams students are expected to begin formally developing their dissertation proposal. 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.

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.

4.2.3 PhD-HSRP 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

See below for the suggested schedule of courses for all PhD students—these are the courses the student must take, except as modified by necessity due to course availability or as determined by the Program 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.

Core Classes

- PM 410 - Intro to Data Management/Analysis with SAS and R
- PM 412 - Survey Research
- PM 421 - Intro to US Health Care System
- PM 422 - Quality of Care and Risk Adjustment
- PM 430 - Psychology in Health Services Research
- PM 431 - Advanced Methods in Health Services Research
- PM 445 - Introduction to Health Services Research and Policy
- PM 456 - Health Economics I
- PM 463 - Introduction to Mathematical Statistics, Part I
- PM 464 - Statistics II: Introduction to Regression Analysis
- PM 465 - Advanced Multivariate Analysis
- PM 472 - Measurement and Evaluation of Research Instruments
- PM 483 - Advanced Health Economics II
- PM 484 - Cost Effectiveness Research
- IND 490 - Human Values in Research Course
- IND 501 - Ethics and Professional Integrity in Research

Elective Classes

Fall Semester

SMD Graduate Education
- BST 413 - Bayesian Inference
- BST 479 - Generalized Linear Models
- PM 415 - Principles of Epidemiology
- PM 418 - Cardiovascular Disease Epidemiology and Prevention
- PM 419 - Recruitment and Retention of human Subjects in Clinical Research
- PM 451 - Epidemiology of Infectious Diseases
- PM 469 - Multivariate Stat Analysis
- PM 493 - Health Policy Lab

Simon School of Business
- HSM 420 - Business Economics of Health Care Industry

- HSM 430 - Health Science Management and Strategy
- HSM 451 - Health care Strategy and Business Plan Development
- HSM 454 - Leading Health Care Organizations

Goergen Institute for Data Science
- DSCC 420 - Intro to Random Processes
- DSCC 440 - Data Mining
- DSCC 461 - Database Systems
- DSCC 463 - Data Management System
- DSCC 465 - Introduction to Statistical Machine Learning
- DSCC 475 - Time Series Analysis & forecasting in Data Science

University of Rochester School of Nursing
- NLX 469 - Project Management in Health Care
- NLX 479 - Foundations of Healthcare Leadership

Spring Semester

SMD Graduate Education
- BST 413 - Bayesian Inference
- BST 426 - Linear Models
- BST 465 - Design of Clinical Trials
- PM 415 - Principles of Epidemiology
- PM 416 - Epidemiology Methods
- PM 426 - Social & Behavioral Medicine
- PM 438 - Grantsmanship
- PM 458 - Qualitative Health Research
- BST 465 - Design of Clinical Trials

Simon School of Business
- HSM 430 - Health Science Management and Strategy
- HSM 454 - Leading Health Care Organizations

Goergen Institute for Data Science
- DSCC 402 - Data Science at Scale
- DSCC 440 - Data Mining
- DSCC 461 - Database Systems
- DSCC 463 - Data Management System
- DSCC 465 - Introduction to Statistical Machine Learning
- DSCC 475 - Time Series Analysis & forecasting in Data Science

4.2.4 PhD-HSRP Suggested Schedule of Classes

Year 1 – Fall Semester

PM 412 - Survey Research (even years) or PM 430 - Psychology in HSR (odd years)	3 Credits
PM 421 - Intro to US Health Care System	3 Credits
PM 428 - Health Services Research Seminar	0 Credits
PM 445 - Introduction to Health Services Research and Policy	3 Credits
PM 463 - Introduction to Mathematical Statistics, Part I	3 Credits
IND 501 - Ethics and Professional Integrity in Research	1 Credit
PM 595 - PhD Research	3 Credits
Total	16 Credits

Year 1 - Spring Semester

PM 410 - Intro to Data Management/Analysis with SAS and R	3 credits
PM 428 - Health Services Research Seminar	0 credits
PM 464 - Statistics II: Introduction to Regression Analysis	3 credits
PM 472 - Measurement and Evaluation of Research Instruments	3 credits
PM 484 - Cost Effectiveness Research (even years) or Elective (odd years)	3 credits
PM 595 - PhD Research	4 credits
Total	16 Credits

Year 2 - Fall Semester

PM 412 - Survey Research (even years) or Psychology in HSR (odd years)	3 Credits
PM 428 Health Services Research Seminar	0 credits
PM 431 - Advanced Methods in Health Services Research	3 credits
PM 456 - Health Economics I	3 credits
Elective	3 credits
PM 595 - PhD Research	4 credits
Total	16 Credits

Year 2 - Spring Semester

PM 422 - Quality of Care and Risk Adjustment	3 credits
PM 428 - Health Services Research Seminar	0 credits
PM 430 - Cost Effectiveness Research (even years) or Elective (odd years)	3 credits
Elective (even years) or PM 465 – Advanced Multivariate Analysis (odd years) *	3 credits
PM 483 - Advanced Health Economics II	3 credits
PM 595 - PhD Research	4 credits
Total	16 Credits

*Note: Students not taking PM 465 year 2 of their spring semester will take it year 3 spring semester while working on their dissertation

Year 3 - Fall Semester

IND 490 - Human Values in Research Course	1 Credits

Table 1. PhD-HSRP Milestones

SCHEDULE OF REQUIREMEENTS AND MILESTONES

	Year 1													Year 2												Year 3												Year 4												Years 5 and 6
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Math camp	█																																																	
Courses		█	█	█	█	█	█	█	█	█	█			█	█	█	█	█	█	█	█	█				░	░	░	░	░	░	░	░	░																
Summer project/intern										█	█	█																																						
Comprehensive Exam																					■																													
TA requirements																						█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
RA requirements																						█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Proposal topic																											▓																							
Proposal theory/model																													▓																					
Proposal data identification																															▓																				
Proposal methods																																	▓																	
Schedule proposal																																		▓																
Propose																																			■															
Dissertation																																						█	█	█	█	█	█	█	█	█	█	█	█	█

Legend:
- █ Faculty advisor review
- ▓ (pink)
- ■ Determination of status in program

4.2.5 PhD-HSRP 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 1st 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.

4.2.6 PhD-HSRP 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; student participation is required.

- HSRP DOCTORAL STUDENT PROPOSALS AND DEFENSES. HSRP doctoral students' dissertation proposals and dissertation defenses.

- JOB CANDIDATE TALKS. Presentations by faculty job candidates in the Division.

4.2.7 PhD-HSRP Research Assistantships

After 20 months of Dean's funding, students are required to complete at least 24 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.

4.2.8 PhD-HSRP Teaching Assistantships

Students are required to gain experience as teaching assistants for two graduate 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.

4.2.9 PhD-HSRP 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: To examine student's abilities to integrate knowledge and methods learned across coursework in order to (1) identify and conceptualize an important health services research question, (2) develop testable hypotheses, and (3) propose rigorous empirical plans for hypothesis testing.

Structure: Five-day take-home exam.

Content: Usually questions that ask the student to integrate and use methods taught in individual courses, and/or paper on an assigned topic to demonstrate student's abilities 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.

4.2.10 PhD-HSRP 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.

Dates and Milestones

1. *<u>November 30</u>* (YR3)
   o Select an area of interest; synthesize and critically evaluate the current state of knowledge within this area.
   o Identify important gap(s) in current knowledge and isolate the research and/or policy question of interest.
   o Argue why the research question or phenomenon is important to explain, answer, or further investigate.
2. *<u>March 31</u>* (YR3)
   o Formulate a theory-based explanation or conceptual framework for the question of interest.
   o Argue why the explanation or framework is important for understanding the selected phenomenon or answering the selected question.
   o Develop a model that connects theory to data such that theory implied hypotheses are testable or theory implied quantities can be estimated.
   o Meet with core faculty to discuss the research or policy question and its importance.
   o Identify dissertation committee.
3. *<u>June 30</u>* (YR3)
   o Identify the required type of data and measurements.
   o Identify appropriate data collection and/or data generation procedures.
4. *<u>September 30</u>* (YR4)
   o Select appropriate methodology for the proposed analyses.
   o Draft written proposal and work with the committee to finalize.
5. *<u>December 31</u>* (YR4)
   o Complete written proposal
   o Obtain consensus of committee that the student is ready to propose.
   o Schedule doctoral proposal defense.
6. **<u>January 30th</u>** (YR4)
   o Doctoral dissertation proposals must be defended no later than January 30th of Year 4.

Any student who has not proposed by January of 30th 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 described below. Students are expected to defend their dissertation within two years of successfully passing the dissertation proposal.

4.2.11 PhD-HSRP Extensions.

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

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

<u>Progress extensions</u>. Students who do not propose by January 30th 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.

4.2.12 PhD-HSRP 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.

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.

4.2.13 PhD-HSRP 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, the student must provide the committee with an acceptable proposal document as outlined 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.

4.2.14 PhD-HSRP Dissertation

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;
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.

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.

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

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.

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.
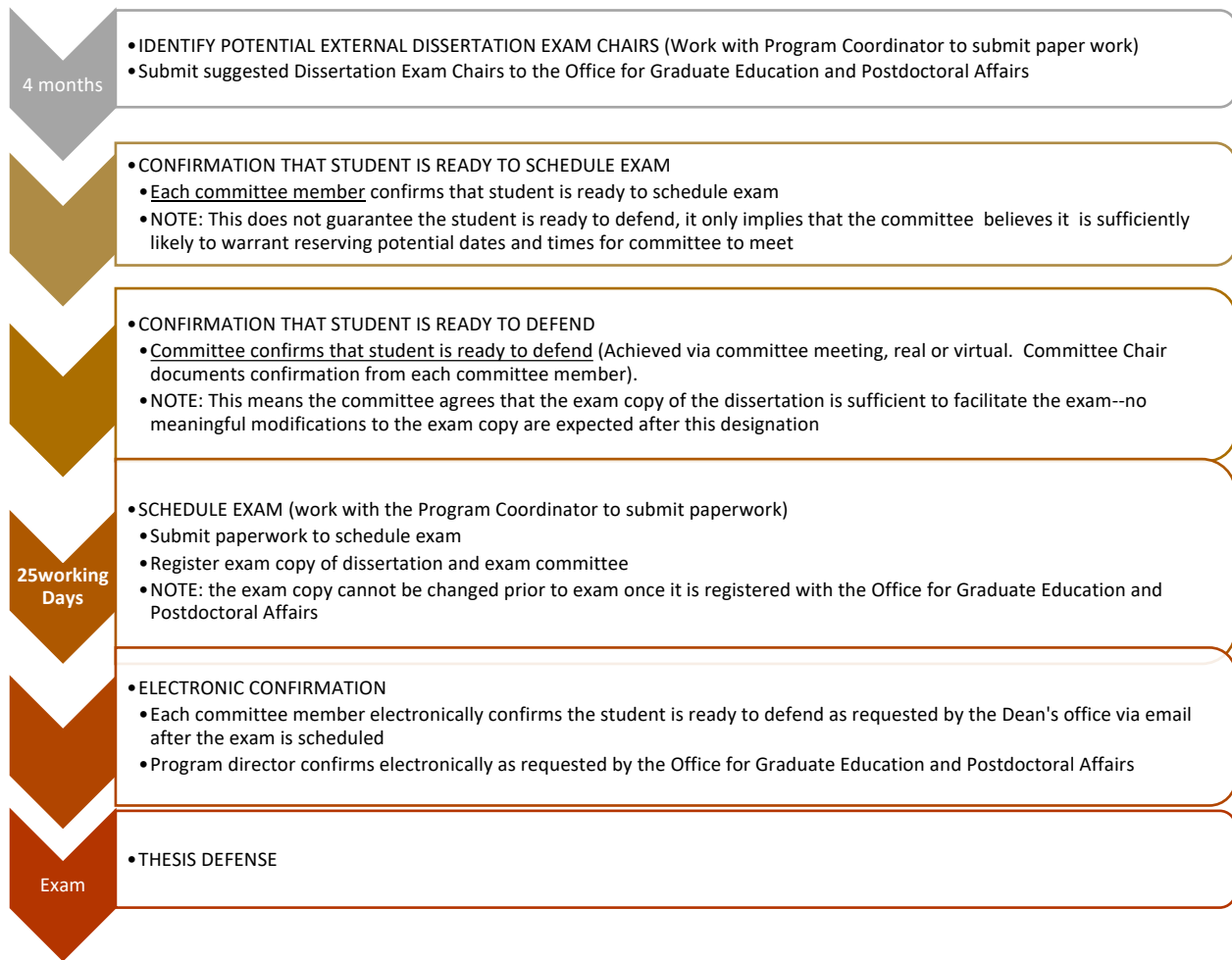
The three-paper format

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 approved by the committee.

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); a synthesized summary of the purposes, scopes, methods, and key results of the three paper; and a conclusion that integrates the findings of the three papers and discusses implications.
    b. The three sections for papers (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. An optional 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.
    d. All content and formatting requirements of the Graduate School must be followed.

4.2.15 PhD-HSRP Dissertation Defense.

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

4 months
- IDENTIFY POTENTIAL EXTERNAL DISSERTATION EXAM CHAIRS (Work with Program Coordinator to submit paper work)
- Submit suggested Dissertation Exam Chairs to the Office for Graduate Education and Postdoctoral Affairs

- CONFIRMATION THAT STUDENT IS READY TO SCHEDULE EXAM
  - Each committee member confirms that student is ready to schedule exam
  - NOTE: This does not guarantee the student is ready to defend, it only implies that the committee believes it is sufficiently likely to warrant reserving potential dates and times for committee to meet

- CONFIRMATION THAT STUDENT IS READY TO DEFEND
  - Committee confirms that student is ready to defend (Achieved via committee meeting, real or virtual. Committee Chair documents confirmation from each committee member).
  - NOTE: This means the committee agrees that the exam copy of the dissertation is sufficient to facilitate the exam--no meaningful modifications to the exam copy are expected after this designation

25 working Days
- SCHEDULE EXAM (work with the Program Coordinator to submit paperwork)
  - Submit paperwork to schedule exam
  - Register exam copy of dissertation and exam committee
  - NOTE: the exam copy cannot be changed prior to exam once it is registered with the Office for Graduate Education and Postdoctoral Affairs

- ELECTRONIC CONFIRMATION
  - Each committee member electronically confirms the student is ready to defend as requested by the Dean's office via email after the exam is scheduled
  - Program director confirms electronically as requested by the Office for Graduate Education and Postdoctoral Affairs

Exam
- THESIS DEFENSE

Selecting a defense chair

A Chair is appointed for each PhD oral defense exam to monitor and promote fairness and rigor in the conduct of the defense. At least 4 months prior to the defense, students with support from their advisor and/or program director, must identify a faculty member to serve as Chair for the oral defense. The Chair must be a current full-time tenure-track University of Rochester faculty member at assistant professor rank or higher who is external to the program, and without a significant scholarly relationship with the candidate or other committee members. Students must include the Chair in planning for specific dates and times for the defense.

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.

4.2.16 PhD-HSRP Contact Information

Quratulain A. Majoka, MBA, PHS Graduate Programs Administrator
Phone (585) 275-7882
Email: Annie_majoka@urmc.rochester.edu

Yue Li, PhD, Program Director for PhD-HSRP
Phone: (585) 275-3276
Email: yue_li@urmc.rochester.edu