Masters’ Programs:
- Public Health
- Clinical Investigation
- Health Services Research & Policy

Doctoral Programs:
- Epidemiology
- Health Services Research & Policy

Certificates:
- Advanced Certificate in Analytic Epidemiology
- Advanced Certificate in Clinical Research Methods
- Advanced Certificate in Trial-based Clinical Research
- Advanced Certificate in Health Services Research
- Advanced Certificate in Public Health
- Biomedical Data Science Certificate
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University of Rochester School of Medicine and Dentistry
Department of Public Health Sciences

Education Mission Statement

Our overall educational mission is to contribute to relevant programs at all levels of the institution including baccalaureate, MPH, MD and PhD training.

Values

The Department of Public Health Sciences at the University of Rochester School of Medicine and Dentistry recognizes the individual and the community as the basic foci of its efforts, while seeking to improve individual well-being through systematic community and population-based solutions. The combined commitment to education, research and service in the context of ethical/personal integrity is guided by the following core values:

I. Professional Conduct:
   A. Commitment to working in interdisciplinary contexts;
   B. Committing fiscal resources consistently with other values;
   C. Maintaining an atmosphere of gender, racial and cultural respect;
   D. Being open to input from consumers of the system; and
   E. Recognizing the community and population as the target of focus.

II. Research Conduct:
   A. Systematic application of appropriate research methods (quantitative and qualitative);
   B. Responsible and honest reporting results;
   C. Maintaining objectivity; and
   D. Protecting the rights and dignity of human participants.

III. Human Values:
   A. Compassion;
   B. Maximizing human health, wellbeing and optimal quality of life;
   C. Respecting diverse cultural contexts in research, education and community settings;
   D. Maintaining a balance between rights of individuals and community/population based approaches to health;
   E. Promoting social justice; and
   F. Addressing the needs of under-served populations.
DEPARTMENT OF PUBLIC HEALTH SCIENCES
ANALYTIC EPIDEMIOLOGY CERTIFICATE

Curriculum
An Advanced Certificate program is a post-Baccalaureate course of academic study designed for students and practitioners who seek to enhance their professional development. Certificates consist of 4 or 5 courses (12-15 credits). Up to 10 credits can be applied to a subsequent Master’s degree, if desired.

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>COURSE TITLE</th>
<th>WHEN OFFERED</th>
<th>CREDITS COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 410</td>
<td>Intro to Data Management &amp; Analysis</td>
<td>Fall, Summer</td>
<td></td>
</tr>
<tr>
<td>PM 415</td>
<td>Principles of Epidemiology</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>ONE OF THE FOLLOWING:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 401</td>
<td>Quantitative Methods</td>
<td>Fall, Summer</td>
<td></td>
</tr>
<tr>
<td>BST 463</td>
<td>Introduction to Biostatistics</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>ONE OF THE FOLLOWING:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 416</td>
<td>Advanced Epi Methods</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>BST 464</td>
<td>Linear Regression</td>
<td>Fall</td>
<td></td>
</tr>
</tbody>
</table>

Program Description
The advanced certificate in clinical research methods is designed to give individuals the knowledge and tools needed to conduct clinical and community-based research using a range of quantitative and qualitative methods.

Educational Objectives of the Program
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.
Curriculum
An Advanced Certificate program is a post-Baccalaureate course of academic study designed for students and practitioners who seek to enhance their professional development. Certificates consist of 4 or 5 courses (12-15 credits). Up to 10 credits can be applied to a subsequent Master’s degree, if desired.

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

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

Educational Objectives of the Program
To provide researchers and other interested individuals with a practical understanding of quantitative and qualitative research methods including case control studies, cohort studies, randomized clinical trials, surveys, and mixed methods research.
**Curriculum**
An Advanced Certificate program is a post-Baccalaureate course of academic study designed for students and practitioners who seek to enhance their professional development. Certificates consist of 4 or 5 courses (12-15 credits). Up to 10 credits can be applied to a subsequent Master’s degree, if desired.

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>COURSE TITLE</th>
<th>WHEN OFFERED</th>
<th>CREDITS COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 401</td>
<td>Quantitative Methods</td>
<td>Fall, Summer</td>
<td></td>
</tr>
<tr>
<td>PM 415</td>
<td>Principles of Epidemiology</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>BST 465</td>
<td>Design of Clinical Trials</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>ONE OF THE FOLLOWING:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 410</td>
<td>Introduction to Data Management &amp; Analysis</td>
<td>Fall, Summer</td>
<td></td>
</tr>
<tr>
<td>PM 419</td>
<td>Recruitment &amp; Retention of Human Subjects</td>
<td>Fall</td>
<td></td>
</tr>
</tbody>
</table>

**Program Description**
The advanced certificate in trial-based clinical research is designed to give individuals the knowledge and tools needed to conduct clinical research trials.

**Educational Objectives of the Program**
To provide researchers and other interested individuals with a practical understanding of quantitative research methods including case control studies, cohort studies, and randomized clinical trials.
DEPARTMENT OF PUBLIC HEALTH SCIENCES
HEALTH SERVICES RESEARCH CERTIFICATE

Curriculum
An Advanced Certificate program is a post-Baccalaureate course of academic study designed for students and practitioners who seek to enhance their professional development. Certificates consist of 4 or 5 courses (12-15 credits). Up to 10 credits can be applied to a subsequent Master’s degree, if desired.

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>COURSE TITLE</th>
<th>WHEN OFFERED</th>
<th>CREDITS COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 421</td>
<td>US Health Care System: Financing, Delivery, Performance</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 484</td>
<td>Medical Decision Making and Cost Effectiveness Research</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>TWO OF THE FOLLOWING:</td>
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</tr>
<tr>
<td>PM 401</td>
<td>Quantitative Methods</td>
<td>Fall, Summer</td>
<td></td>
</tr>
<tr>
<td>PM 415</td>
<td>Principles of Epidemiology</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 422</td>
<td>Quality of Care &amp; Risk Adjustment</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>PM 430</td>
<td>Psychology in Health Services Research</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 445</td>
<td>Intro to Health Services Research &amp; Policy</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 448</td>
<td>Health Policy</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PM 456</td>
<td>Health Economics I</td>
<td>Fall</td>
<td></td>
</tr>
</tbody>
</table>

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

Educational Objectives of the Program
To provide researchers and other interested individuals with a practical understanding of health services research methods including cost-effectiveness analysis, impact analysis, and implementation research.
Curriculum
An Advanced Certificate program is a post-Baccalaureate course of academic study designed for students and practitioners who seek to enhance their professional development. Certificates consist of 4 or 5 courses (12-15 credits). Up to 10 credits can be applied to a subsequent Master’s degree, if desired.

<table>
<thead>
<tr>
<th>REQUIRED COURSES</th>
<th>COURSE TITLE</th>
<th>WHEN OFFERED</th>
<th>CREDITS COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 401</td>
<td>Quantitative Methods</td>
<td>Fall, Summer</td>
<td></td>
</tr>
<tr>
<td>PM 415</td>
<td>Principles of Epidemiology</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 421</td>
<td>US Health Care System: Financing, Delivery, Performance</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 426</td>
<td>Social and Behavioral Medicine</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>PM 470</td>
<td>Environmental &amp; Occupational Epidemiology</td>
<td>Fall</td>
<td></td>
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</tbody>
</table>

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

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

DEPARTMENT OF PUBLIC HEALTH SCIENCES
BIOMEDICAL DATA SCIENCE CERTIFICATE
TOTAL CREDITS REQUIRED: 28

Curriculum
The CAS-BDS draws upon a range of courses and opportunities located throughout the University of Rochester, exposing students to a range of perspectives, nomenclatures, analytic approaches, and scientific cultures. Students enroll in the one-year program starting with a Summer Session and complete the CAS-BDS in one calendar year with a mentored team science project.

The Curriculum is fixed, which provides students with the fundamentals of biomedical data science, combined with the mentored project, non-credit offerings in programming and analytic languages, and training in Team Science.

<table>
<thead>
<tr>
<th>COURSE No.</th>
<th>COURSE TITLE</th>
<th>CREDITS</th>
<th>PREREQUISITE(S)</th>
<th>CREDITS Completed</th>
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<tbody>
<tr>
<td></td>
<td><strong>Summer 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 401</td>
<td>Quantitative Methods in Public Health Research</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>PM 402</td>
<td>Human Biology and Health Research</td>
<td>3</td>
<td>None (*students with prior clinical, biology, or medical experience/training may opt out)</td>
<td></td>
</tr>
<tr>
<td>PM 403</td>
<td>Research Team Science Seminar</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>CS 162</td>
<td>The Art of Data Structures</td>
<td>3</td>
<td>Lab required</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Programming workshops offered by the Center for Integrated Research Computing (CIRC) – completion of at least one seminar required</td>
<td>0</td>
<td>Offered in 4.5 hour seminars during the summer; Linux, Perl, Fortran, C++, Open MPI, PHI Optimization, CUDA, STATA, SAS, MATLAB, R</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Term credit total (required courses):</strong></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td></td>
<td><strong>Fall 1</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>PM 400</td>
<td>Data Science Practicum</td>
<td>1</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>PM 421</td>
<td>US Health Care System</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>PM 494</td>
<td>Introduction to Medical Informatics</td>
<td>3</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>CSC 440</td>
<td>Data Mining</td>
<td>4</td>
<td>None</td>
<td></td>
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<tr>
<td></td>
<td><strong>Term credit total:</strong></td>
<td></td>
<td></td>
<td>11&lt;</td>
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<tr>
<td></td>
<td><strong>Spring 1</strong></td>
<td></td>
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<tr>
<td>PM 400</td>
<td>Data Science Practicum</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 422</td>
<td>Quality of Care and Risk Adjustment</td>
<td>3</td>
<td>PM 421</td>
<td></td>
</tr>
<tr>
<td>BST 467</td>
<td>Applied Statistics in the</td>
<td>3</td>
<td>None</td>
<td></td>
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</tbody>
</table>
Mentored Project
Faculty offer pre-approved two-semester Big Data projects into which CAS-BDS students enroll at intake:

Sample Organizing Projects
Clinical
Work with a clinical researcher to analyze data from the Medical Center’s laboratory information system linked with electronic medical records to identify association of 25-hydroxyvitamin D levels with clinical presentation of Type 2 diabetes.

Health Services
Work with hospital quality improvement staff to analyze hospital electronic medical record data to identify clinical, demographic, and care determinants of hospital re-admission within 90 days for patients discharged with Chronic obstructive Pulmonary Disease (COPD).

Population Health
Work with a health economist to analyze regional and national Medicare claims data to compare costs and complications of hospital-based and home-based dialysis in the elderly.

Students in each project group (n=5 to 8) will meet for a Project Orientation at the beginning of the program and will participate in a weekly one hour project workshop with their mentor to sequentially develop the project and to apply their classroom learnings at each stage to the project’s implementation. Each project will include attention to: Specific Aim formulation, Background, Analytic plan development, Database creation and data analysis, and Reporting. Each Mentored Project culminates with a Project Presentation at the end of the one-year program.

A formal competition will solicit project team request proposals from faculty, reviewed and selected for program inclusion by the BDS Certificate Oversight Committee.
Masters’ Programs

Master of Public Health (MPH)

Master of Science Clinical Investigation (MS-CLI)

Master of Science Health Services Research & Policy (MS-HSRP)
MPH Program Mission Statement

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

The Institute of Medicine (iom.edu) defines public health as those activities we undertake collectively to ensure the conditions under which communities can be healthy. Currently, only 18% of the public health workforce has specific training in public health.

The MPH curriculum at the University of Rochester equips students with knowledge and skills in the five core discipline areas of public – epidemiology, social and behavioral medicine, biostatistics, environmental health and health policy and management – so they can become leaders in the field.

The Association of Schools of Public Health (aspph.org) core competencies project identified specific learning objectives for each of the core areas. These learning objectives are reflected in the course offerings here and are tracked to provide students with a comprehensive exposure to them.

Several interdisciplinary cross-over competencies are addressed within courses or through special workshops. These include communication and informatics, leadership, diversity and culture, program planning, systems thinking and professionalism.

MPH Program Learning Objectives/Competencies

At the conclusion of the Master of Public Health Degree program, a graduate should be able to:

Knowledge
- Formulate and answer questions related to health improvement and healthcare among diverse populations through statistical thinking as evidenced in student project work in methods classes;
- Understand different ways to measure the distribution of traits and diseases in populations, and the determinants of those distributions;
- Utilize concepts and theories of public health in addressing specific population health concerns in a community-based practice setting by using these to frame their Capstone Projects;
- Identify and discuss different social and behavioral factors which impact on human health and the use of health services.

Skills
- Employ statistical methods toward quantitative inferences;
- Apply epidemiologic principles and methods to problems in population health;
- Identify and analyze environmental factors and/or conditions that impact human health;
- Conduct a practical study of community health problems and interpret and summarize the appropriate literature as evidenced in their Capstone Project;
- Work collaboratively with communities to identify assets and problems, collect relevant data and devise and evaluate programs

Attitudes
- Portray high ethical and professional standards in public health practice and research activities
- Appreciate the cultural logic that informs the world views of diverse communities
DEPARTMENT OF PUBLIC HEALTH SCIENCES  
MASTER OF PUBLIC HEALTH (MPH) PROGRAM OF STUDY SHEET  
TOTAL CREDITS REQUIRED: 43

<table>
<thead>
<tr>
<th>COURSE NUMBER</th>
<th>COURSE TITLE</th>
<th>CREDITS</th>
<th>WHEN OFFERED</th>
<th>CREDITS COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 401*</td>
<td>Quantitative Methods</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 410*</td>
<td>Intro to Data Management &amp; Analysis</td>
<td>3</td>
<td>Fall or Summer</td>
<td></td>
</tr>
<tr>
<td>PM 415</td>
<td>Principles of Epidemiology</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 421</td>
<td>US Health Care System: Financing, Delivery &amp; Performance</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 426</td>
<td>Social &amp; Behavioral Medicine</td>
<td>3</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>PM 460</td>
<td>Masters Research Project/Paper</td>
<td>6</td>
<td>Fall or Spring</td>
<td></td>
</tr>
<tr>
<td>PM 470</td>
<td>Environmental &amp; Occupational Epidemiology</td>
<td>3</td>
<td>Spring</td>
<td></td>
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<tr>
<td>IND 501</td>
<td>Ethics in Professional Integrity-Clinical</td>
<td>1</td>
<td>Fall</td>
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PLUS ONE OF THE FOLLOWING

<table>
<thead>
<tr>
<th>COURSE NUMBER</th>
<th>COURSE TITLE</th>
<th>CREDITS</th>
<th>WHEN OFFERED</th>
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</thead>
<tbody>
<tr>
<td>PM 450</td>
<td>MPH Practicum</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>PM 452</td>
<td>Community Health Improvement Practicum</td>
<td>3</td>
<td>Fall</td>
</tr>
</tbody>
</table>

ELECTIVES

- See Elective on page 2       3       Fall or Spring
- See Elective on page 2       3       Fall or Spring
- See Elective on page 2       3       Fall or Spring
- See Elective on page 2       3       Fall or Spring
- See Elective on page 2       3       Fall or Spring

TOTAL CREDITS 43

*Needs to be taken simultaneously.
<table>
<thead>
<tr>
<th>COURSE NUMBER</th>
<th>COURSE TITLE</th>
<th>CREDITS</th>
<th>WHEN OFFERED</th>
<th>CREDITS COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 412 ^</td>
<td>Survey Research</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 413 #</td>
<td>Field Epidemiology</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 414</td>
<td>History of Epidemiology</td>
<td>3</td>
<td>Fall (odd years)</td>
<td></td>
</tr>
<tr>
<td>PM 416</td>
<td>Epidemiologic Methods</td>
<td>3</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PM 417</td>
<td>Molecular Epidemiology</td>
<td>3</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PM 418 &gt;</td>
<td>Cardiovascular</td>
<td>3</td>
<td>Fall</td>
<td></td>
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<tr>
<td>PM 419</td>
<td>Recruitment &amp; Retention of Human Subject</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 420</td>
<td>American Health Policy &amp; Politics</td>
<td>3</td>
<td>Fall</td>
<td></td>
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<tr>
<td>PM 422 ¥</td>
<td>Quality of Care &amp; Risk Adjustment</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 424</td>
<td>Chronic Disease-Epi</td>
<td>3</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>PM 425</td>
<td>Health Promotion &amp; Preventive Medicine</td>
<td>3</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>PM 430</td>
<td>Psychology in Health Services Research</td>
<td>3</td>
<td>Fall</td>
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<tr>
<td>PM 442</td>
<td>Nutritional Epidemiology</td>
<td>3</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PM 443</td>
<td>Maternal &amp; Child Health</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 445</td>
<td>Intro to Health Services Research &amp; Policy</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 448</td>
<td>Health Policy Analysis</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 451</td>
<td>Infectious Disease Epidemiology</td>
<td>3</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>PM 458</td>
<td>Qualitative Health Care Research</td>
<td>3</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>PM 461</td>
<td>Program Evaluation for Public Health</td>
<td>3</td>
<td>Summer</td>
<td></td>
</tr>
<tr>
<td>PM 469</td>
<td>Multivariate Models for Epi</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 472</td>
<td>Measurement &amp; Evaluation of Research Instruments</td>
<td>3</td>
<td>Spring</td>
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<td>PM 484</td>
<td>Medical Decision Making &amp; Cost Effectiveness Research</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 486</td>
<td>Medical Ecology</td>
<td>3</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>PM 487</td>
<td>Fundamentals of Science, Technology &amp; Health Policy</td>
<td>2</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PM 488</td>
<td>Experimental Therapeutics</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 489</td>
<td>Injury Epi &amp; Emergency Care Research Methods</td>
<td>3</td>
<td>Fall</td>
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</tr>
</tbody>
</table>

Pre-requisites

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

Individuals eligible for this program must have a post-graduate degree in medicine or another health-related discipline.

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

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

**Master of Science in Clinical Investigation Competencies**

At the conclusion of the MS-CLI 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.
### GENERAL INFORMATION
Electives can be tailored toward individual's research focus and are identified accordingly.

<table>
<thead>
<tr>
<th>COURSE NUMBER</th>
<th>COURSE TITLE</th>
<th>CREDITS</th>
<th>PROPOSED SEMESTER</th>
<th>CREDITS COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 401*</td>
<td>Quantitative Methods</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 410*</td>
<td>Intro to Data Management &amp; Analysis</td>
<td>3</td>
<td>Fall &amp; Summer</td>
<td></td>
</tr>
<tr>
<td>PM 415</td>
<td>Principles of Epidemiology</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>IND 501</td>
<td>Ethics in Professional Integrity-Clinical</td>
<td>1</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>BST 465</td>
<td>Design of Clinical Trials</td>
<td>4</td>
<td>Spring</td>
<td></td>
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<tr>
<td></td>
<td>Masters Research Project/Paper</td>
<td>6</td>
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</table>

**PLUS ONE OF THE FOLLOWING**

<table>
<thead>
<tr>
<th>COURSE NUMBER</th>
<th>COURSE TITLE</th>
<th>CREDITS</th>
<th>PROPOSED SEMESTER</th>
<th>CREDITS COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 413 or PM 416</td>
<td>Field Epidemiology</td>
<td></td>
<td>Fall 2016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advanced Epi Methods</td>
<td>3</td>
<td>Spring 2016</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advanced Biostatistics Course</td>
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</table>

**OPTIONAL WORKSHOPS AS NEEDED**
List of training opportunities may be found at [http://www.urmc.rochester.edu/ctsi/education/](http://www.urmc.rochester.edu/ctsi/education/)

**ELECTIVES**

<table>
<thead>
<tr>
<th>ELECTIVES</th>
<th>CREDITS</th>
<th>PROPOSED SEMESTER</th>
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<tbody>
<tr>
<td>Elective Table 1</td>
<td>3</td>
<td>Fall or Spring</td>
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<tr>
<td>Elective Table 2</td>
<td>3</td>
<td>Fall or Spring</td>
</tr>
<tr>
<td>Elective Table 3</td>
<td>3</td>
<td>Fall or Spring</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS**

32

*Needs to be taken simultaneously with PM 410

Reviewed by Advisor: _____________________________ Date: ________________
<table>
<thead>
<tr>
<th>COURSE NUMBER</th>
<th>COURSE TITLE</th>
<th>CREDITS</th>
<th>WHEN OFFERED</th>
<th>CREDITS COMPLETED</th>
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<tbody>
<tr>
<td>PM 412 ^</td>
<td>Survey Research</td>
<td>3</td>
<td>Fall</td>
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<tr>
<td>PM 413 #</td>
<td>Field Epidemiology</td>
<td>3</td>
<td>Fall</td>
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<tr>
<td>PM 414</td>
<td>History of Epidemiology</td>
<td>3</td>
<td>Fall (odd yrs)</td>
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<tr>
<td>PM 416</td>
<td>Epidemiologic Methods</td>
<td>3</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PM 417</td>
<td>Molecular Epidemiology</td>
<td>3</td>
<td>Spring</td>
<td></td>
</tr>
<tr>
<td>PM 418 &gt;</td>
<td>Cardiovascular Disease Epidemiology &amp; Prevention</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 419</td>
<td>Recruitment &amp; Retention of Human Subject</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 420</td>
<td>American Health Policy &amp; Politics</td>
<td>3</td>
<td>Fall</td>
<td></td>
</tr>
<tr>
<td>PM 421</td>
<td>US Health Care System: Financing, Delivery, Performance</td>
<td>3</td>
<td>Fall</td>
<td></td>
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<tr>
<td>PM 422 ¥</td>
<td>Quality of Care &amp; Risk Adjustment</td>
<td>3</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PM 424</td>
<td>Chronic Disease-Epi</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 425</td>
<td>Health Promotion &amp; Preventive Medicine</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 426</td>
<td>Social &amp; Behavioral Medicine</td>
<td>3</td>
<td>Fall</td>
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<tr>
<td>PM 430</td>
<td>Psychology in Health Services Research</td>
<td>3</td>
<td>Fall</td>
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<tr>
<td>PM 442</td>
<td>Nutritional Epidemiology</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 443</td>
<td>Maternal &amp; Child Health</td>
<td>3</td>
<td>Fall</td>
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<tr>
<td>PM 445</td>
<td>Intro to Health Services Research &amp; Policy</td>
<td>3</td>
<td>Fall</td>
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<tr>
<td>PM 448</td>
<td>Health Policy Analysis</td>
<td>3</td>
<td>Fall</td>
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<tr>
<td>PM 451</td>
<td>Infectious Disease Epidemiology</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 452</td>
<td>Community Health Improvement Practicum</td>
<td>3</td>
<td>Fall</td>
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<tr>
<td>PM 458</td>
<td>Qualitative Health Care Research</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 461</td>
<td>Program Evaluation for Public Health</td>
<td>3</td>
<td>Summer</td>
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<tr>
<td>PM 466</td>
<td>Cancer Epidemiology</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 469</td>
<td>Multivariate Models for Epidemiology</td>
<td>3</td>
<td>Spring</td>
<td></td>
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<tr>
<td>PM 472</td>
<td>Measurement &amp; Evaluation of Research Instruments</td>
<td>3</td>
<td>Spring</td>
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<tr>
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<td>Medical Decision Making &amp; Cost Effectiveness Research</td>
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<td>Spring</td>
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<tr>
<td>PM 486</td>
<td>Medical Ecology</td>
<td>3</td>
<td>Spring</td>
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<tr>
<td>PM 488</td>
<td>Experimental Therapeutics</td>
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<td>Fall</td>
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<tr>
<td>PM 489</td>
<td>Injury Epi &amp; Emergency Care Research Methods</td>
<td>3</td>
<td>Fall</td>
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</tbody>
</table>

Pre-requisites

- Principles of Epidemiology PM 415
- Principles of Epidemiology PM 415
- Principles of Epidemiology PM 415 -or- Introduction to Epidemiology PH 103
- Introductory courses in Epidemiology and Statistics
MS-HSRP Program Mission Statement

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

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

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

MS-HSRP Program Learning Competencies

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

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

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Pre-requisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 445</td>
<td>Introduction to Health Services Research and Policy</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>PM 421</td>
<td>U.S. Health Care System: Financing, Delivery and</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Performance</td>
<td></td>
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<tr>
<td>PM 463</td>
<td>Statistics I: Introduction to Mathematical Statistics</td>
<td>3</td>
<td>Calculus</td>
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<tr>
<td>PM 456</td>
<td>Health Economics I</td>
<td>3</td>
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<td>IND 503</td>
<td>Ethics in Research</td>
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### Year One - Spring Term

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<th>Course Title</th>
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<tbody>
<tr>
<td>PM 412</td>
<td>Survey Research</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>PM 472</td>
<td>Measurement &amp; Evaluation of Research Instruments</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td>PM 448-PM 484</td>
<td>Health Policy Analysis (odd years only) and Decision Making and</td>
<td>3</td>
<td>None</td>
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<tr>
<td></td>
<td>Cost Effectiveness (all years)</td>
<td></td>
<td>One graduate level statistics course</td>
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<tr>
<td>PM 464</td>
<td>Introduction to Regression Analysis</td>
<td>3</td>
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<td><strong>Total Credits</strong></td>
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### Year Two - Fall Term

<table>
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<tr>
<td>PM 422</td>
<td>Quality of Care and Risk Adjustment</td>
<td>3</td>
<td>Calculus and PM 421</td>
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<tr>
<td>PM 460</td>
<td>Master's Essay</td>
<td>6</td>
<td>None</td>
</tr>
<tr>
<td>PM 415-PM 416</td>
<td>Principles of Epidemiology and Epidemiologic</td>
<td>3</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Methods (depending on previous coursework)</td>
<td></td>
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<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>12</strong></td>
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</tbody>
</table>
Masters Capstone Project Guidelines

Purpose/Background

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

Requirements

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

Departmental Specifications for Students

Topic:

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

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

Committee Chair:

Consult with your advisor on identification of a Project Chair.

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

Committee Members:

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

Committees shall consist of at least three members:

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

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

Approval

Submit a description of your proposed research topic and proposed committees members for review and approval by the Program Director.
Research proposal presentations:

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

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

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

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

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

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

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

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

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

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

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

Investigations Involving Human Subjects:

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

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

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

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

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

Contact Information:

James G. Dolan, MD, Masters Program Director  
Phone: (585) 276-5161  
Email: james_dolan@urmc.rochester.edu

Pattie Kolomic, Graduate Programs Administrator  
Phone: (585) 275-7882  
Email: Pattie_kolomic@urmc.rochester.edu

Elaine Topeck, Secretary IV  
Phone: (585) 275-6806  
Email: Elaine_topeck@urmc.rochester.edu

Departmental specifications for committee members

Committee chair

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

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

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

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

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

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

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

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

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

**Thesis Requirements**

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

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

**Formatting**

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

**Text:**

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

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

### IMPORTANT STEPS TOWARDS CAPSTONE PROJECT COMPLETION

<table>
<thead>
<tr>
<th>Steps</th>
<th>Involvement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feasibility Inquiry</td>
<td>Student &amp; Advisor</td>
<td>Idea discussion</td>
</tr>
<tr>
<td>2. General Topic Identification</td>
<td>Student &amp; Advisor</td>
<td>Development of idea into topic</td>
</tr>
<tr>
<td>3. Identification of proposed Committee Chair</td>
<td>Student &amp; Program Director</td>
<td></td>
</tr>
<tr>
<td>4. Research Committee Identified</td>
<td>Student, Advisor, Program Director, proposed Committee Chair and other faculty</td>
<td>Student secures agreement for involvement from suggested committee members</td>
</tr>
<tr>
<td>5. Topic &amp; Committee Member Approval</td>
<td>Student &amp; Program Director</td>
<td>Brief abstract submitted for discussion, review and approval by Program Director</td>
</tr>
<tr>
<td>6. Committee Meeting</td>
<td>Student, Committee Chair and Committee Members</td>
<td>Refine topic and research question</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Layout methods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prepare timeline</td>
</tr>
<tr>
<td>7. Project Proposal</td>
<td>Student, Committee Chair and Committee Members</td>
<td>Preparation of proposal with review and feedback from Committee Chair and Members</td>
</tr>
<tr>
<td>8. Schedule Project Proposal Presentation</td>
<td>Student, Committee Chair, Committee Members, Graduate Programs Administrator</td>
<td>Schedule presentation with assistance of Elaine Topeck, Administrative Assistant, <a href="mailto:Elaine_topeck@urmc.rochester.edu">Elaine_topeck@urmc.rochester.edu</a></td>
</tr>
<tr>
<td>9. Announcement of Project Proposal</td>
<td>Student &amp; Graduate Programs Administrative Assistant</td>
<td>Submission of abstract to Administrative Assistant one week prior to presentation</td>
</tr>
<tr>
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<td>Notice posted within department and forwarded via email to all PHS faculty and students one week prior to presentation date</td>
</tr>
<tr>
<td>10. Project Proposal Presentation</td>
<td>Student, Committee Chair and Members, PHS faculty and students</td>
<td>Student presents</td>
</tr>
<tr>
<td>11. Faculty Caucus</td>
<td>Student, Committee Chair and Members, other faculty</td>
<td>Provided feedback and suggestions based on presentation</td>
</tr>
<tr>
<td>12. Project</td>
<td>Student, Committee Chair and Members and Consultants as necessary</td>
<td>RSRB approval</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data collection</td>
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<td>Data analyses</td>
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</tbody>
</table>
| **13. Committee Meeting(s)** | Student, Committee Chair and Members | • Essay write up (draft format)  
• 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 |
KEY DATES & DELIVERABLES

May Graduation:

March 1 - First draft of the thesis must be submitted to your ENTIRE committee. Note this deadline applies to the report of the completed project, not your project proposal.

April 15 - Final completed hard copy of the thesis with completed committee sign-off form to the Graduate Program Administrator

August Graduation:

June 15 - First draft of your essay must be submitted to your ENTIRE committee. Note this deadline applies to the report of the completed project, not your project proposal.

August 1 - Final completed hard copy of the thesis with completed committee sign-off form to the Graduate Program Administrator

December Graduation:

November 1 - First draft of your essay must be submitted to your ENTIRE committee. Note this deadline applies to the report of the completed project, not your project proposal.

December 15 - Final completed hard copy of the thesis with completed committee sign-off form to the Graduate Program Administrator

The Master’s graduation ceremony is usually the second Saturday in May. Consult the academic calendar at: www.rochester.edu/provost/ir/calendar.html
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
Department of Public Health Sciences

Doctoral Programs

Epidemiology

Health Services Research & Policy
EPIDEMIOLOGY PhD PROGRAM

Mission Statement

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

PROGRAM GOALS

- Foster scholarly achievement in the field of epidemiology in an environment of interdisciplinary and collaborative research at the University of Rochester;
- Train graduate students to become independent research investigators and educators;
- Provide trainees with a unique set of skills and perspectives that can be applied in all areas of clinical and population research;
- Promote research and service at the local, state and national level, thereby contributing to improving the health of all U.S. communities; and
- 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; and
- 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; and
- Understand the methodological commonalities and differences across specialized areas of epidemiologic and population health research.
PROGRAM REQUIREMENTS

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

SUGGESTED SCHEDULE OF CLASSES

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

**TOTAL RECOMMENDED COURSE CREDITS** 64

Epidemiology Content Courses (3 credits each) include:

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

COMPREHENSIVE EXAMINATIONS

A predetermined objective system of grading both the oral and written qualifying examination is established. Student performance in the oral examination is independently scored by each committee member and these scores are averaged to one grade which represents 30% of the overall qualifying examination grade (0-100%). Each written examination is independently scored by two faculty reviewers. If the scores differ by more than 10% or if the two grades result in a differing decision regarding the pass/fail status of the student, that written exam is graded by a third reviewer. The scores are then averaged and this grade represents 70% of the overall grade. The weighted average of the oral and written exams represents the student’s final qualifying examination grade. A cut-off score for passing has been established, determining successful completion of the examination. Students will receive formal notification of pass/fail status but will not receive the actual grade. If a student does not pass the exam, he may repeat the examination once following a minimum of six months of remedial preparation.
Written and oral qualifying examinations are required upon completion of a minimum of 55 credit hours of coursework.

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

Completion (pass) status

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

TEACHING ASSISTANTSHIPS

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

SEMINAR SERIES

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

DISSERTATION RESEARCH

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

- Program faculty will provide the primary source of research opportunities for students to share in during their training, as well as serving as the foundation for dissertation research.
- Collaboration with faculty across URMC clinical and basic science departments is encouraged.
- The inclusion of primary data collection in the doctoral research will be a critical component of each project.
- Candidates are required to make a formal oral presentation of their planned research investigation to their respective Dissertation Advisory Committee. This presentation is open to any URMC faculty and staff.
- Each student will be strongly encouraged to seek pre-doctoral funding to support the dissertation research.
- At the completion of the research investigation the student will be required to present and defend his/her research methodology and findings at a public forum.
- The committee for the final defense will consist of the dissertation committee.
  - The committee Chairman must be at the Assistant Professor or higher level and must hold a primary appointment in the Division of Epidemiology. Faculty at the Assistant Professor level must have served as a member on the committee of a completed dissertation research project prior to serving as committee Chairman
  - Other members will include at least one full-time faculty member of the rank of Assistant Professor or higher who holds a primary appointment in the PHS and one or two “outside” members who hold a primary appointment in another department.
  - All other requirements for completion of this process will follow the regulations outlined in the Official Bulletin for Graduate Studies.

- Award of Degree
  - A degree candidate upon meeting all degree requirements will be recommended for the degree at the next meeting of the Board of Trustees
  - Degrees are approved by the Board of Trustees at its regular meetings in October, February and May.
  - Degrees are conferred annually at the University’s Graduate Commencement in May
Vision/Mission Statement

To produce inter-disciplinary researchers who translate theory into clinically-relevant and policy-relevant explanations and applications for health care issues.

PhD CORE OBJECTIVES/COMPETENCIES

- Understand and communicate knowledge regarding the healthcare system and current areas of health care and health policy research;
- Understand and communicate key theories underlying current explanations for healthcare issues and phenomena;
- Identify important and innovative healthcare questions;
- Create policy-relevant, theory-based explanations for healthcare phenomena and identify corresponding testable implications;
- Create models that facilitate the investigation of research questions;
- Identify, develop and implement the proper study designs, data collection and acquisition approaches and analytic methods required to answer research questions;
- Integrate research findings into the current body of knowledge;
- Effectively work in cross-disciplinary teams;
- Responsible conduct of research.

PROGRAM REQUIREMENTS

- 60 hours of required formal coursework and 30 credit hours of dissertation research as mandated by the University of Rochester Graduate Studies Program.

SUGGESTED SCHEDULE OF COURSES

- Immediately prior to the start of Year 1 courses all incoming students participate in a two week mathematics and statistics refresher course.
HEALTH SERVICES RESEARCH AND POLICY PHD PROGRAM CURRICULUM

<table>
<thead>
<tr>
<th>COURSE</th>
<th>OFFERED</th>
<th>PROGRAM YEAR</th>
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<tbody>
<tr>
<td>PM445 Introduction to Health Services Research</td>
<td>Fall</td>
<td>1</td>
</tr>
<tr>
<td>PM421 US Healthcare System</td>
<td>Fall</td>
<td>1</td>
</tr>
<tr>
<td>PM428 Health Services Research Seminar</td>
<td>Fall</td>
<td>1</td>
</tr>
<tr>
<td>PM463 Stat 1 – Mathematical Statistics</td>
<td>Fall</td>
<td>1</td>
</tr>
<tr>
<td>PM 430 Psychology in HSR</td>
<td>Fall</td>
<td>1</td>
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<tr>
<td>IND 503 Ethics</td>
<td>Fall</td>
<td>1</td>
</tr>
<tr>
<td>PM456 Health Economics</td>
<td>Fall</td>
<td>2</td>
</tr>
<tr>
<td>PM 422 Quality Assessment and Risk Adjustment</td>
<td>Fall</td>
<td>2</td>
</tr>
<tr>
<td>PM 420 Politics &amp; Policy US Healthcare System</td>
<td>Fall</td>
<td>2</td>
</tr>
<tr>
<td>Methods elective</td>
<td></td>
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<tr>
<td>PM464 Stat 2 – Regression</td>
<td>Spring</td>
<td>2</td>
</tr>
<tr>
<td>PM 412 Survey Research</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>PM428 Health Services Research Seminar</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>PM 472 Measurement and Evaluation</td>
<td>Spring</td>
<td>2</td>
</tr>
<tr>
<td>PM 483 Advanced Economics</td>
<td>Spring</td>
<td>2</td>
</tr>
<tr>
<td>PM 484 Decision Analysis &amp; Cost Effectiveness</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>PM 448b Policy Analysis</td>
<td>Spring</td>
<td>1</td>
</tr>
<tr>
<td>PM 465c Stat 3 - Advanced Multivariate Analysis</td>
<td>Spring</td>
<td>2</td>
</tr>
<tr>
<td>Math Campd</td>
<td>Summer</td>
<td>0</td>
</tr>
</tbody>
</table>

b. Taught every odd year
c. Taught every odd year
d. Math Camp is a two-week course prior to formal start of first semester.

For course descriptions go to: Course Offerings

COMPREHENSIVE EXAMINATION

- Taken at the end of May in a student’s second year.
- Emphasizes:
  - Integration of student’s knowledge in HSR methods
  - Student’s ability to analyze complex conceptual structures, synthesize ideas into systems of concepts and demonstrate ability to reason to conclusions providing arguments for claims
- Successful completion of this examination allows student to proceed to the preparation and defense of a doctoral theses.

DOCTORAL THESIS

- Students must successfully complete the required courses and the comprehensive exam before proposing a doctoral thesis.
- Supervision of the thesis involves a Committee.
- See Official Bulletin Regulations Concerning Graduate Study and Department Policy.
- Proposal may not be scheduled until committee agrees at a formal meeting with the student.
- At least ten business days must elapse between formal meeting and proposal schedule date.
- Proposal and final defense are followed by a public lecture open to the academic community.
GRADUATE RESEARCH WORKSHOPS AND DISSERTATION SEMINARS
All students must attend bi-weekly Graduate Research Workshops (PM 428). Students who have not yet proposed their doctoral thesis are also required to attend monthly dissertation seminars. These are informal, but required gatherings, to provide an additional forum to address and further students’ educational goals.

Graduate Research Workshops (PM 428)
- Held every other Friday
- Provide doctoral students with a friendly environment in which to present their work for discussion as well as to obtain presentation experience.
- All students in their second year and above are required to present once each year.

Dissertation Seminars
- Held monthly (dates and times to be announced).
- Designed to educate students with regard to the dissertation process, teach students how to identify research areas, how to focus on the appropriate research questions, how to choose a committee and to discuss other dissertation-related issues.
- All students who have not proposed their doctoral thesis must attend these seminars.

HSR Seminar
- Held on alternate Fridays from the Graduate Student Workshop
- Involves Departmental faculty as well as guest speakers from outside the Department
- Doctoral students are required to attend

TEACHING ASSISTANTS
- Doctoral students are required to be teaching assistants for a minimum of two courses.
- Typically for courses offered in the Health Services Research & Policy doctoral program.

RESEARCH ASSISTANTS
- Offers students the opportunity to carry out supervised research with departmental faculty or other qualified faculty or researchers
- Primary objective is to develop and/or enhance research skills and knowledge in preparation for a health-related research career
- A fifteen month requirement for doctoral students
General Information

PHS Education Policies
Course Offerings
Faculty
CONTINUATION OF ENROLLMENT

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

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

Students must register for each semester during this time, except during the summer sessions. The continuation of enrollment fee for 2015 - 2016 academic year is $1,050 per semester.

COURSE WAIVERS

All requests must be made at the time of initial registration in a degree program, using the approved form entitled Petition for Course Waiver.

ELECTIVE COURSES

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

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 their Program Director as to whether or not a certain course is appropriate.

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

INCOMPLETE GRADES

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

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

The grade must be submitted to the Dean in a memo within one week of the completion date. If contract is not fulfilled or 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.

INDEPENDENT STUDY

Special Topics with Title (PM 494) courses in the MPH program

Grade A-E

Rationale and Benefits to the Department and Students

Given the tremendous heterogeneity of the MPH student body, the Independent Study exists as a special mechanism to create opportunities for advanced students to explore and expand on topics, methods, and skills introduced in the regular MPH course work.

Independent Study course work may be pursued during any term and thus will allow for MPH/Fellowship candidates to complete the MPH degree in a timely fashion before their Fellowship ends.

The Independent Study also has potential to lead to cross departmental collaboration through shared data. Any primary data collection that grows out of the Independent Study can be made available to other MPH students for secondary analysis, thus expand the opportunities for other students’ capstone projects.
Independent Study Proposal

Once a student has decided on an independent study topic and secured approval from the Program Director and the agreement of a faculty mentor (with approval from the Program Director), the student should submit a brief (one or two pages) written proposal for approval of the PM 494 course. The project must be independent of the work for your thesis – no overlap.

- This proposal should describe: 1) the topic; 2) the faculty mentor(s); 3) the work to be done; 4) the number of requested credits; and 5) the mechanism(s) for evaluation of the student’s performance.
- The proposal will be reviewed and the student notified in writing by the Program Director if the proposal is accepted for independent study credit.
- The proposal will remain in the student’s academic file as a record of the student’s independent study activity.

The Master's student wishing to do an independent study course (Independent Study) should first discuss their ideas with the Program Director. He/she will review the Independent Study for appropriateness for public health research or practice, feasibility, relationship to student’s prior course work in the MPH program, and relevance to their future career plans. The Program Director will also work with the student to identify an appropriate mentor or mentors. Faculty mentors need not be in PHS, but must have had the training and experience in public health topic and/or methods.

A student may only take one Independent Study course during their program of study. The maximum number of credits for an Independent Study is six. There are two different approaches for students in establishing an Independent Study:

*Research Skill Development:* One mechanism of study is to expand on research topics or themes explored in existing course work or facilitating more in-depth exploration of a focused public health topic. Examples include:
  - Quality Improvement Measures and Methods
  - Cohort study design and implementation
  - Implementing a random control trial

*Public Health Practice:* Another mechanism of study to fulfill the Independent Study is the study of public health practice as mediated through medical/health systems not currently covered in existing MPH course work. This course should be directly related to the students’ intended focus of study building a foundation of expertise related to the students’ long-term career plans. For example:
  - Public health and disabilities
  - WIC home visiting programs
  - Group visits for Parkinson’s patients

*Project Evaluation*

All independent study projects must include mechanism for evaluation of the student’s work. Specifically, a long (15-20 pages) or several short (8-10 pages) research papers. Students must also give their independent study a title, for instance, “National Health Plans and Insurance in Japan, Canada, and Great Britain,” in order that the subject matter for the PM 494 to appear on the student’s official transcript.

**LEAVE OF ABSENCE**

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

In order to declare a leave of absence, a student must complete and sign the appropriate form and pay a $60 registration fee per semester.
MAXIMUM TIME
An MPH candidate must complete all the requirements for the degree within five years from the time of his/her initial matriculation into the graduate program. PhD candidates have a maximum of seven years to complete degree requirements. Students must maintain continuous enrollment for each term after matriculation.

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

MINIMUM GRADE
Minimum grades for courses or research work carrying graduate credit are B- or S. C is considered to be an unsatisfactory (poor) grade.
- One C grade would be cause for academic probation for a period of one year
- Two C grades would be cause for dismissal from the graduate program.

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

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

PROGRAM OF STUDY
A program of study is submitted to the Office of the Associate Dean for Graduate Studies. This program, to be formulated with the assistance of the faculty advisor and approved by the Dean, is expected to form a consistent plan of work pursued with a definite aim.

TRANSFER CREDIT POLICY
Of the School of Medicine and Dentistry's minimum required 96 credit hours for the Doctor of Philosophy degree, no more than 30 credit hours may be accepted as transfer credit for work previously taken at the University of Rochester or at another university. All transfer hours, whether taken at the University of Rochester or at another university, must be approved by the Senior Associate Dean for Graduate Education prior to matriculation.

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

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

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

Course Transfer Credit Petition Form
TUITION AND FEES

Tuition in the School of Medicine and Dentistry for the 2015 – 2016 academic year is $1,510 per credit hour. Most courses in the Department of Public Health Sciences are three credits, carrying a total cost of $4,530 for 1 course. Students taking courses outside of the Department must pay the tuition rate of the particular college offering the course(s) to be taken.

All full-time students must pay a Health Fee. The standard health option for 2015-2016 is $2,988/year. Students with other health insurance may choose to waive the University’s policy, but they must still pay the $528 mandatory health insurance fee if they are full-time.
**PRIMARY FACULTY**

**Jacob Adams, MD, MPH**  
Associate Professor  
Office: SRB 3.305  
Phone: 585-275-5951  
Research Activities  
- Cardiovascular risk in childhood cancer survivors  
- Cardiovascular and cancer risk in those exposed to chest irradiation  
- Patient Safety and Healthcare Quality Improvement

**Amina Alio, MA, PhD**  
Assistant Professor  
Office: SRB 3.208  
Phone: 585-275-0482  
Research Activities  
- Maternal Child Health  
- Paternal Involvement in Perinatal Health  
- Health Disparities  
- Community Engagement  
- Global Health  
- Program Evaluation

**Robert C. Block, MD, MPH, FACP, FNLA**  
Associate Professor  
Office: SRB 3.306  
Phone: 585-275-3356  
Research Activities  
- The effects of omega-3 fatty acids on risk of cardiovascular disease  
- The effects of omega-3 fatty acids, and their metabolites, on platelet function  
- The emerging role of lipidomics on reducing cardiovascular disease risk  
- The effects of potent lipid mediator products of fatty acids on cardiovascular disease  
- The identification of those with familial hypercholesterolemia and means of enhancing their health via therapeutics and the use of the Self-Determination Theory  
- The effects of interactive electronic education tools on reducing cardiovascular disease risk

**Shubing Cai, PhD**  
Assistant Professor  
Office: SRB 3.162  
Phone: 585-275-6617  
Research Activities  
- Long Term Care  
- End of life Care  
- Financial Incentives  
- Health Disparities  
- Quality of Care  
- Program Evaluation
Nancy Chin, PhD, MPH  
Associate Professor  
Office: SRB 3.134  
Phone: 585-275-9780

Research Activities
- Social class gradient health
- Women’s position in society and its impact on their health and the health of their children
- Health in mountain communities
- Deaf community initiatives

James Dolan, MD  
Associate Professor  
Office: SRB 3.175  
Phone: 585-276-5161

Research Activities
- Medical decision making
- Shared medical decision making
- Clinical decision support systems based on multi-criteria decision theory
- Risk communication

Ann Dozier, RN, PhD  
Interim Chair  
Associate Professor  
Office: SRB 3.216  
Phone: 585-276-3998

Research Activities
- Maternal Child Health/Women’s Health
- Program Evaluation
- Recruitment and Retention into Clinical Research
- Global Health
- Survey Design/Development

Diana Fernandez, MD, MPH, PhD  
Associate Professor  
Office: SRB 3.314  
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Research Activities
- Obesity
- Weight gain prevention interventions
- Pregnancy-related weight gain
- Nutritional epidemiology
Elaine Hill, PhD  
Assistant Professor  
Office: SRB 3.180  
Phone: 585-276-6892  
Research Activities  
- Environmental exposures and birth outcomes  
- Fetal Origins  
- Infant health linked to educational outcomes  
- Hospital Management and Quality of Care  
- Quasi-experimental methods  
- Using “Big Data” for systems approaches  
- Hydraulic fracturing  
- Structural modeling  
- Nutrition and obesity

Orna Intrator, PhD  
Professor  
Office: SRB 3.136  
Phone: 585-276-6892  
Research Activities  
- Nursing home care quality  
- Medical staff organization in nursing homes  
- Community-based long term care  
- Hospitalizations as a quality measure  
- Geriatric and extended care health services utilization of Veterans  
- Utilization of multiple health systems  
- Managing “Big Data” for health services research  
- Statistical modeling of joint outcomes

Todd Jusko, MS, PhD  
Assistant Professor  
Office: SRB 3.239  
Phone: 585-273-2849  
Research Activities  
- Environmental epidemiology  
- Environmental determinants of children’s immune function and neurobehavioral development  
- Global health

Yue Li, PhD  
Associate Professor  
Office: SRB 3.178  
Phone 585-275-3276  
Research Activities  
- Outcome assessment and risk adjustment  
- Quality report cards  
- Nursing home quality and policies  
- Racial disparities  
- Mental illness and healthcare quality
Camille Martina, PhD  
Research Assistant Professor  
Office: SRB 3.224  
Phone: 585-273-3874  

Research Activities  
- Program Evaluation  
- Mentoring and career development of underrepresented minorities in biomedical/behavioral academic institutions  
- Prenatal exposures to in pregnant women to endocrine disrupting chemical compounds in home and work environments  
- Lifestyle behaviors and development of Allergy and Asthma  
- Environmental health education  
- Inter-professional medical education  
- Team Science  
- Academic success of urban underserved students through the concept of habitus (social and cultural capital)

Scott McIntosh, MA, PhD  
Associate Professor  
Office: SRB 3.228  
Phone: 585-275-0511

Research Activities  
- Tobacco cessation in special populations  
- Technology/Web assisted risk behavior intervention  
- Internet training for physicians and health care professionals  
- Population based community health interventions

Deborah Ossip, MS, PhD  
Professor  
Director, Smoking Research Program  
Office: SRB 3.230  
Phone: 585-275-0528

Research Activities  
- Global Health: Tobacco use in the Dominican Republic  
- Tobacco quit lines  
- Primary care interventions for tobacco use  
- Smoking intervention for special populations: rural, mid-life and older, adolescent, economically disadvantaged, minority  
- Maintenance of treatment effects in childhood obesity  
- Health behaviors in Deaf/Hard of Hearing college students  
- Breastfeeding among low-income women  
- Technology-assisted behavior change

David Rich, ScD, MPH  
Associate Professor  
Office: SRB 3.304  
Phone: 585-276-4119

Research Activities  
- Environmental Epidemiology  
- Cardiorespiratory and Reproductive Health Effects of Air Pollution and other environmental toxicants
Christopher Seplaki, MS, PhD  
Associate Professor  
Office: SRB 3.238  
Phone: 585-273-1549  
Research Activities  
  • Aging, Disability and the Environment

Helena Temkin-Greener, MS, PhD, MPH  
Professor  
Office: SRB 3.163  
Phone: 585-275-8713  
Research Activities  
  • Quality of care and long-term care  
  • End-of-life and palliative care  
  • Measures of organizational performance  
  • Long-term care delivery and financing

Edwin van Wijngaarden, MS, PhD  
Associate Professor  
Office: SRB 3.313  
Phone: 585-275-1985  
Research Activities  
  • Occupational and Environmental Epidemiology  
  • Child Development  
  • Cognitive Aging

Peter Veazie, MS, PhD  
Associate Professor  
Office: SRB 3.164  
Phone: 585-273-5464  
Research Activities  
  • Patient and provider judgment and decision making  
  • Psychology of judgment and decision making in health and healthcare  
  • Risk perception and risk tolerance  
  • Adherence behavior  
  • Decision aids  
  • Help seeking and avoidance of care  
  • Quality of life and cost-effectiveness
PROFESSOR EMERITUS

Barker, William, MD
Professor Emeritus
Office: SRB 3.126
Phone: 585-275-3357
Research Activities
- Stroke, Pneumonia, Hip Fracture, Hypertension Congestive Heart Failure.
- Comparative Developments in Health Services for the Elderly and Career Development in Geriatrics in Great Britain and the U.S.
- Functional Decline Associated with Influenza, Pneumonia and Other Illnesses of Older Persons.
- Curriculum Development in Immunization in Medical Education
- Vaccination Delivery Strategies in Managed Care Organizations

Kunitz, Stephen, MD, PhD
Professor Emeritus
Office: SRB 3.125
Phone: 585-275-1545
Research Activities
- Political culture, income equality, and mortality in the United States

Zimmer, James G., MD
Professor Emeritus
Office: SRB 3.126
Phone: 585-275-2831
Research Activities
- Aging and Long Term Care