DEPARTMENT OF HEALTH POLICY AND MANAGEMENT (GRAD)

Contact Information
Department of Health Policy and Management
http://www.sph.unc.edu/hpaa

Health Policy and Management is a department within the Gillings School of Global Public Health.

SHOU-YIH DANIEL LEE, Chair

The Department of Health Policy and Management offers three master’s degrees, two doctoral degrees, and one graduate-level certificate program.

Master of Public Health (M.P.H.) (Residential)
The M.P.H. is a professional degree intended for individuals who hold doctoral-level professional training (J.D., M.D., D.D.S., Ph.D., etc.). Students gain an understanding of the public health perspective and an introduction to central health policy and management knowledge and competencies. The degree is suitable for individuals who have an interest in either health care management or health policy.

Master of Healthcare Administration (M.H.A.)
The M.H.A. is a professional degree for individuals wishing to pursue management careers in health systems, hospitals, consulting firms, managed care organizations, insurance companies, medical group practices, government agencies, or other healthcare settings. The M.H.A. degree provides strong preparation in the management disciplines, a comprehensive understanding of the health care sector, and professional development. Students are encouraged to take elective courses in particular areas of interest.

Master of Science in Public Health (M.S.P.H.)
The M.S.P.H. is a professional degree that prepares individuals for careers in health policy analysis, health services research, program planning, program evaluation and advocacy at local, state, federal, and international levels. Graduates work in both public and private sector organizations. Students obtain a comprehensive understanding of the health care system and receive in-depth training in health policy analysis, health services research methods, evaluation, and professional development. Students are encouraged to take elective courses in particular areas of interest.

The Executive Master’s Program (Distance Education)
The Department of Health Policy and Management provides graduate-level education to employed public health professionals and health care administrators, offering the M.P.H. and the M.H.A. degrees through its Executive Master's Program. This nationally ranked program provides master's degree study to full-time health professionals throughout the United States and beyond. The two-year program consists of six brief, but intensive, sessions on the Chapel Hill campus, faculty-guided, Internet-based distance learning using real-time conferencing, and applied leadership integrative simulations to test concepts learned. The M.H.A. program is CAHME accredited.

Doctor of Philosophy (Ph.D.)
The Ph.D. program in Health Policy and Management is designed to provide students with the competencies, academic foundation, and research experience to become independent and creative health services/health policy researchers. All students take required courses in health services research, research design, quantitative methods, and health policy. In addition, students develop expertise in a minor area. Current minors include decision sciences and outcomes research, economics, financial management, health policy and politics, quality and access, and organization and implementation science. Students must pass written comprehensive examinations after completing coursework, then present and defend a dissertation proposal and the final dissertation based on original research. The Ph.D. program is designed to be completed in four years.

Doctoral Program in Health Leadership (Dr.P.H.)
UNC-Chapel Hill’s doctoral program in health policy and management prepares mid-career professionals for senior-level positions in organizations working domestically and internationally to improve the public’s health. The three-year, cohort-based distance program targets individuals working full time with substantial leadership responsibilities in communities, organizations, and institutions. Students must have a master’s or a doctoral degree before matriculating into the Dr.P.H. With the exception of three short visits to Chapel Hill (or an alternate site outside North Carolina or overseas) in each of years one and two, learning takes place in participants’ homes and offices, away from the UNC-Chapel Hill campus. Students connect to the faculty and their peers mainly via computer, making substantial use of technology that allows students and faculty members to share data and interact productively via live video and audio. The distance format allows working professionals to complete doctoral leadership training while continuing full-time employment, remaining in-country throughout the duration of their education.

Certificate Program in Community Preparedness and Disaster Management
The professional certificate program in community preparedness and disaster management is designed to provide students, as well as community leaders in emergency services (fire, law enforcement, EMS, 911 communications), public health, emergency management, health services, veterinary services, and all who prepare for and respond to disasters with the opportunity to enhance their knowledge of disaster management systems used to combat natural and man-made disasters, including terrorism. Residential students may take just one course, or opt for all three courses to complete the certificate.

Professors
Peggye Dilworth-Anderson (308)
Marisa E. Domino (279), Health Economics
Jessica Lee (312), Access to Care for Children, Evidence-Based Practice of Dentistry
Jonathan Oberlander
George Pink (309), Integrated Health Care, Health Services Accounting and Finance, Financial Performance Measurement, Executive Compensation, Nursing Cost Analyses
Bryce ReeveSally Stearns (150), Health Economics, Health Policy
Morris Weinberger (300), Quality Management, Health Outcomes Research, Health Services Research
Bryan Weiner (277), Organization and Management of Community Health Partnerships

Professors of the Practice
Leah Devlin
Sandra Greene
Pam Silberman (249), Public Health Legal Issues

Associate Professors
Ethan Basch
Bruce J. Fried (172), Human Resources Management in Health Care, Mental Health Services Research, Health Services Management and Education, Canadian Health Systems
George Holmes
Kristin Reiter
Paula Song
Harsha Thirumurthy
Justin Trogdon
Stephanie Wheeler

Assistant Professors
Byron Powell
Timothy Carney
Stacie Dusetzina
Cleo Samuel
Chris Shea
Clinical Professors
Thomas Bacon
John Paul (320), Health Policy, Health Economics, Outcomes Related to Pharmaceutical Products

Clinical Associate Professors
Dean M. Harris (195), Health Law and Ethics for Health Administration
Rebecca Silfkin

Clinical Assistant Professors
Alyssa Damon
James V. Porto (134), Management and Information Systems, Public Budgeting and Finance
Jeffrey Simms
Steve Sloate
Margaret Thomas
Karl E. Umble
J. Bennett Waters (334)

Research Professors
Sheila Leatherman (286), Quality of Care, Health Systems Performance, International Health Policy
Joseph P. Morrissey (138), Health Services Research, Administrative Medicine, Community Mental Health
Richard Gary Rozier (29), Dental Public Health

Research Assistant Professors
Antonia Bennett
Sarah Birken
Kristen Hassmiller Lich

Research Associate
Catherine Rohweder

Adjunct Professors
Amy Albermethy
Stuart Altman
William K. Atkinson II (255), Health Care Administration
Edward Baker
Suzanne Babich
Dan Beauchamp
Deborah Bender
Hayden B. Bosworth
Fred T. Brown Jr. (282), Managed Care Networks
Young Moon Chae
Fred Cox
Samuel Cykert
Edward Dauer
Steven Garfinkel
Robert Grencyn
Emery Wayne Holden
Donald A. Holsworth
Joan Krause
Kathleen Lohr
Barbara Mark (318)
Jay Noren
Carmen Odom
John O’Donnell
Krista Perreira
Janet E. Porter
Thomas C. Ricketts (139), Rural Health Care, Primary Care, Regionalization of Services, Political Philosophy, Policy Implementation and Policy Development
Richard Saver
Betsy Sleath (254), Pharmacy Administration
Kevin Sowers
Jeffrey Swanson
Judith Tintinali (323)
Wendee Wechsberg (291), Clinical Addiction and Drug Treatment, HIV Projects
Jane Weintraub
Rebecca Wells

Adjunct Associate Professors
Mary A. Beck (164), Health Care Administration
Andrea K. Biddle (175), Health Care Access and Reform, Childhood Vaccination, Pharmaceutical Economics
Paul Brown
William Carpenter
J. Steven Cline
Travis Day
Nancy Henley
Fredrick Homan
George Jackson
Melissa Kaluzny (331)
Matthew Maciejewski
Patricia MacTaggart (324)
Michael Markowitz
Lauren McCormack
Lori McLeod
Julie Sakowski
Lucy Savitz
Richard P. Scoville (272), Management Information Systems in Health Care
Ashley Skinner
Daryl Wansink
Hugh Waters

Adjunct Assistant Professors
Oscar Aylor (268)
Nicole Bates
Christopher Beadles
Diane Bloom
Colleen Bridger
Carolyn Carpenter (329)
Daniel Carter Rachel Caspar
Dorothy Cilenti
Michaela Dinan
Spencer Dorn
Lynn Dressler
Shellie Ellis
Jeff Federspiel
Erin Fraher
Kimberley Geissler
Laura Gerald
Benjamin Gilbert
Susan Helm-Murtagh
Susan L. Hogue (290), Health Outcomes Research
Suan Hogue
Dionysios Kavalieratos
Lisa Koonin
Leah Lullig
Egil Marstein
Lukasz Mazur
Aaron McKethan
Felicia Mebane
Benjamin Meier
Larry Melton
Kathleen Miller
Gary S. Nestler
Matthew Nielson
Stephen Orton
Michael Park
Stephanie Poley
David D. Potenziani (298), Management Information Systems in Health Care
Andrea Radford
Adam Searing
Thomas Stanley
Daniel Stevens
Scott Stewart
Karen Sitzenberg
Michael Stobbe
Kathleen Thomas
Laurel Trantham
Debbie Travers
Emily Weaver
Gary R. West
John Wiesman

Adjunct Instructors
Edwin Alcorn
Dawn Carter (281), Strategic Planning and Marketing
J. Mike Collins
Robert Crawford
Donna Dinkin
Randall J. Egseqian
Franklin Farmer
Eric Griffin
John Grinnell
Douglas A. Johnston (174), Health Law
Lawrence K. Mandelkehr (244), Database Design for Health Care
Donald R. Markle
Ervin Maynard
Anne McGeorge
Aimee McHale
Paul Morlock
Gary Palmer
Michael Patterson
Robert Patterson
William F. Pilkinson
Eugene Pinder
Patricia M. Pozella
Erica D. Rentz
Harry Reynolds
Marjorie Satinsky
Frederick Sexton
Robert Stevens (333)
Jeffery Strickler
Franklin Walker
Cameron Wolfe

Lecturers
William B. Gentry (321)
Jay Levy
Sanford D. West

Professors Emeriti
Edward Brooks
James P. Dixon
Laurel Files
Patricia Z. Fischer
William S. Flash
William T. Herzog
Sagar Jain
Arnold Kaluzny
Kerry Kilpatrick
Peggy Leatt
Robert A. Loddengaard
Curtis P. McLaughlin
Harry T. Phillips
Morris Schaefer
William N. Zelman
HPM

Advanced Undergraduate and Graduate-level Courses

HPM 420. Community and Public Health Security: Disasters, Terrorism, and Emergency Management. 3 Credits.
This course examines systems for emergency management at federal, state, and local levels. The roles of emergency management, health services, and public health in disaster management are also reviewed. Every other week, evening online sessions required with instructors.
Grading status: Letter grade.

HPM 422. Emergency Management I: Analytic Methods. 3 Credits.
Introduction of analytical tools to assess, evaluate, map, and investigate disasters (including biological outbreaks). These tools will be used to improve planning and evaluation of disaster management programs. Every other week, evening online sessions required with instructors.
Grading status: Letter grade.

HPM 423. Emergency Management II: Disaster Management. 3 Credits.
Explores issues of preparedness, response, recovery, mitigation, and research in disaster management. Students will participate in evacuation decision making, volunteer management, and the development of a disaster exercise. Every other week, evening online sessions required with instructors.
Grading status: Letter grade.

HPM 435. Marketing for Not-for-Profit Organizations. 3 Credits.
Permission of the instructor. Application of basic principles of marketing and marketing decision models to problems in health care and other not-for-profit organizations.
Grading status: Letter grade.

HPM 470. Statistical Methods for Health Policy and Management. 3 Credits.
Introduction of linear model approach to analysis of data in health care settings. Topics include probability distributions, estimation tests of hypotheses, methods in multiple regression, and analysis of variance and covariance.
Grading status: Letter grade.

HPM 472. Program Evaluation. 3 Credits.
Concepts and methods of the program evaluation paradigm as applied in health administration.
Grading status: Letter grade.

HPM 496. Readings in Health Policy and Management. 0.5-3 Credits.
Directed readings or research. Written reports are required.
Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.
Grading status: Letter grade.

HPM 522. Aging, Family, and Long-Term Care: Cultural, Ethnic, and Racial Issues. 3 Credits.
Current issues pertaining to the health and well being of older Americans, and how such issues influence family dynamics and choices about long-term care. Critical topics on chronic illness, family and community caregiving, ethnicity/culture, and socioeconomic status will be covered in the course.
Grading status: Letter grade.

HPM 532. Health Care Consulting. 3 Credits.
This course will provide students with a working knowledge of the various forms of health care consulting, including internal consulting. Students will enhance their analytical, presentation, teamwork, and project management skills.
Grading status: Letter grade.

HPM 550. Medical and Science Journalism. 3 Credits.
Prepares students to work as medical and science journalists. The course emphasizes writing skills in all delivery formats and interpreting medical, health, and science information for consumers.
Grading status: Letter grade
Same as: MEJO 560, HBEH 660.

HPM 551. Medical and Science Video Storytelling. 3 Credits.
Students work in teams to produce, shoot, script, and report medical, environmental, and science stories for broadcast on "Carolina Week", the award-winning, student-produced television newscast.
Grading status: Letter grade
Same as: MEJO 561, HBEH 561.

HPM 552. Science Documentary Television. 3 Credits.
Students work in teams to conceive, produce, and script mini-documentaries on science and environmental topics for broadcast on North Carolina Public Television.
Grading status: Letter grade
Same as: MEJO 562, HBEH 562.

HPM 560. Media and Health Policy. 3 Credits.
Introduces students to news media organizations and their role in health policy development. Students will learn how to evaluate media content and strategies and to effectively communicate via mass media.
Grading status: Letter grade.

HPM 563. Advanced Health Policy Analysis. 3 Credits.
The course is for master's and doctoral students interested in health policy. The course is intended to go beyond an introduction to policy analysis to a discussion and exploration of theories of policy analysis in a context of competing democratic ethics and values.
Grading status: Letter grade.

HPM 565. Global Health Policy. 3 Credits.
Coursework will focus on public policy approaches to global health, employing interdisciplinary methodologies to understand selected public health policies, programs, and interventions. For students who have a basic understanding of public health.
Gen Ed: GL.
Grading status: Letter grade
Same as: PLCY 565.

HPM 571. Health and Human Rights. 3 Credits.
Course focuses on rights-based approaches to health, applying a human rights perspective to selected public health policies, programs, and interventions. Students will apply a formalistic human rights framework to critical public health issues, exploring human rights as both a safeguard against harm and a catalyst for health promotion.
Gen Ed: PH, GL.
Grading status: Letter grade
Same as: PLCY 570.

HPM 600. Introduction to Health Policy and Management. 3 Credits.
This course provides an overview of the United States health care system. Students will explore the system's organization, financing, management, resources, and performance. For each topic, they will analyze relevant legislation and discuss current issues. Students will develop skills in policy research and analysis, health care system evaluation, and basic financial literacy.
Grading status: Letter grade.

HPM 601. Issues in Health Care. 1 Credit.
Lectures on current topics in health care.
Grading status: Letter grade.
HPM 602. Concurrent Practice. 1-3 Credits.
Permission of the program director. Supervised activities in an approved health organization, to include one or more specific projects, approved by HPM faculty member and directed by an approved preceptor/mentor in the organization.
Grading status: Letter grade.

HPM 605. Practice Application Journaling I. 0.5 Credits.
This course is the first of six field-based Journal Practica in which students monitor their learning processes, identify where knowledge and skills learned in courses are helpful and relevant to areas of their professional responsibility, and apply that knowledge and those skills to actual work situations.
Repeat rules: May be repeated for credit. 1 total credits. 2 total completions.
Grading status: Letter grade.

HPM 606. Practice Application Journaling II. 0.5 Credits.
This course is the second of six field-based journal practica in which students monitor their learning processes, identify where knowledge and skills learned in courses are helpful and relevant to areas of their professional responsibility, and apply that knowledge and those skills to actual work situations.
Repeat rules: May be repeated for credit. 1 total credits. 2 total completions.
Grading status: Letter grade.

HPM 607. Practice Application Journaling III. 0.5 Credits.
This course is the third of six field-based journal practica in which students monitor their learning processes, identify where knowledge and skills learned in courses are helpful and relevant to areas of their professional responsibility, and apply that knowledge and those skills to actual work situations.
Repeat rules: May be repeated for credit. 1 total credits. 2 total completions.
Grading status: Letter grade.

HPM 608. Practice Application Journaling IV. 0.5 Credits.
This course is the fourth of six field-based journal practica in which students monitor their learning processes, identify where knowledge and skills learned in courses are helpful and relevant to areas of their professional responsibility, and apply that knowledge and those skills to actual work situations.
Repeat rules: May be repeated for credit. 1 total credits. 2 total completions.
Grading status: Letter grade.

HPM 609. Practice Application Journaling V. 0.5 Credits.
This course is the fifth of six field-based journal practica in which students monitor their learning processes, identify where knowledge and skills learned in courses are helpful and relevant to areas of their professional responsibility, and apply that knowledge and those skills to actual work situations.
Repeat rules: May be repeated for credit. 1 total credits. 2 total completions.
Grading status: Letter grade.

HPM 610. Practice Application Journaling VI. 0.5 Credits.
This course is the sixth and final of six field-based journal practica in which students monitor their learning processes, identify where knowledge and skills learned in courses are helpful and relevant to areas of their professional responsibility, and apply that knowledge and those skills to actual work situations.
Repeat rules: May be repeated for credit. 1 total credits. 2 total completions.
Grading status: Letter grade.

HPM 611. Public Health Concepts in a Systems Context. 3 Credits.
This course develops systems reasoning in health policy and management students through the application of systems techniques and systems thinking to core public health concepts in health policy and management, environmental health, epidemiology, and health behavior and health education.
Grading status: Letter grade.

HPM 620. Implementing Health Informatics Initiatives. 3 Credits.
Focuses on implementing informatics programs and projects in health organizations. Informatics initiatives aim to facilitate effective information use for the purpose of improving the quality of health services and/or efficiency of processes. Therefore, these initiatives have implications for various stakeholder groups, including consumers, practitioners, administrators, and policy makers.
Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.
Grading status: Letter grade.

HPM 625. Diagnosis and Design of Multilevel Intelligence for a Smart Health System. 3 Credits.
Examines how both public health surveillance and health care delivery performance monitoring systems serve as drivers/enablers of health system situational awareness and intelligence. Students will gain knowledge of the methods used to evaluate the use of health systems intelligence in multilevel decision making. This course is intended as a nontechnical introduction to applied health systems informatics.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics; 12 total credits. 4 total completions.
Grading status: Letter grade.

HPM 630. IHI Course in Healthcare Quality Improvement. 1.5 Credit.
The IHI Certificate demonstrates an investment in further education and a strong knowledge base in quality improvement. Upon completion of this course, students will have met the requirements for the IHI Open School Certificate and participated in two in-person sessions.
Grading status: Letter grade.

HPM 634. Public Health Issues in Community Preparedness and Disaster Management. 3 Credits.
Examines conventional public health constructs of community preparedness and disaster management. Includes a review of traditional and emerging literature. Emphasizes conceptual development and application of adaptive leadership strategies.
Grading status: Letter grade
Same as: PWAD 634.

HPM 640. LEAN/Six Sigma I for Health Policy and Management. 1 Credit.
This course is an introduction to Lean Six-Sigma. Students will be exposed to continuous quality improvement (CQI) methods based on Toyota Production System (TPS or Lean) and Six-Sigma philosophy, methods, and tools.
Grading status: Letter grade.
HPM 641. LEAN/Six Sigma II for Health Policy and Management. 1 Credit.
This project-based course explores the phases of Six-Sigma approach to continuous quality improvement: define, measure, analyze, improve, and control (DMAIC). The overall objective of this course is to help students understand the challenges and pitfalls involved in completing a DMAIC project to drive change at organizational, unit, and individual levels.
Requisites: Prerequisite, HPM 640.
Grading status: Letter grade.

HPM 660. International and Comparative Health Systems. 3 Credits.
Methods of comparing health systems, examinations of related national health systems, and analysis of related high prevalence health issues.
Grading status: Letter grade.

HPM 664. Globalization and Health. 3 Credits.
Globalization--its economic, environmental, political, technological, institutional, and sociocultural dimensions--historically and currently contributes to beneficial and adverse effects on population, community, and family and individual health.
Grading status: Letter grade.

HPM 690. Special Topics in Health Policy and Management. 0.5-3 Credits.
Special topics course for health policy and management undergraduate students.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics; 3 total credits. 2 total completions.
Grading status: Letter grade.

HPM 691H. Honors Research. 3 Credits.
Required preparation, approved cumulative grade point average by the end of the junior year. Readings and seminars for undergraduates showing potential and talent for research. Students will design an independent research project, write a proposal, and complete an IRB application toward partial completion of an honors thesis.
Gen Ed: EE-Mentored Research.
Grading status: Letter grade.

HPM 692H. Independent Honors Research. 3 Credits.
Permission of the instructor. Students collect data, analyze and report findings, and make recommendations to complete an honors thesis and present findings in presentation/poster format.
Requisites: Prerequisite, HPM 691H.
Gen Ed: EE-Mentored Research.
Grading status: Letter grade.

HPM 697. B.S.P.H. Capstone. 3 Credits.
The capstone course is an "integrative exercise" for B.S.P.H. students prior to graduation. It is intended to simulate the integration of various disciplines--finance, human resources, ethics, policy, operations, and information technology--into a comprehensive and practical framework. Students work with healthcare organizations to solve financial or operational problems.
Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.
Grading status: Letter grade.

Graduate-level Courses

HPM 701. Professional Training I. 1 Credit.
Restricted to HPM majors. Supervised professional training (fee is $500).

HPM 702. Professional Training II. 1 Credit.
Restricted to HPM majors. Supervised professional training (fee is $500).

HPM 703. Professional Training III. 1-15 Credits.
Restricted to HPM majors. Supervised professional training (fee is $500).

HPM 705. Healthcare Management Skills Development Workshop I. 0.5 Credits.
This course is the first of two workshops for students in the Executive Master's Program. These workshops are designed to provide students exposure to key cross cutting skills that will be used in the program. These skills also are essential for effective healthcare management.

HPM 706. Healthcare Management Skills Development Workshop II. 0.5 Credits.
This course is the second of two workshops for students in the Executive Master's Program. These workshops are designed to provide students exposure to key cross cutting skills that will be used in the program. These skills also are essential for effective healthcare management.

HPM 710. Health Law. 3 Credits.
An introduction to law and the legal system as it relates to the delivery and financing of health care.

HPM 711. Research Management and Ethics in Health Policy. 1 Credit.
This course is aimed at doctoral and M.S.P.H. students with interests in research management and ethics. Using cases and examples, the first part of the course focuses on major management and leadership issues, while the second part deals with ethically relevant matters.

HPM 712. Leadership and Ethics. 2 Credits.
This course is based on the notions that leadership and ethics are intertwined and that good leaders behave ethically. There is often no one right way to lead effectively. Also, there are few firm rules or principles that guide ethical decision making, and there is much room for debate.

HPM 713. Hospital Functions and Operations. 2 Credits.
This course provides exposure to the knowledge and skills required to solve the most pressing operational problems found across departments within today's complex health care institutions.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 714. Advanced Spreadsheet Modeling for Business. 3 Credits.
This course focuses on using advanced features of Microsoft Excel to create efficient spreadsheet models of common and complex business problems. It challenges students to use critical thinking and analysis to find effective solutions to real-life situations.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 715. Health Economics for Policy and Management. 3 Credits.
Provides training in the theory of health economics and applies this theory to important issues in health policy and management.
Requisites: Prerequisite, BIOS 660; Permission of the instructor for nonmajors.
HPM 715L. Microeconomics Lab. 1 Credit.
Permission of the instructor for nonmajors. Applications of health economics theory to current health care policy.
Requirements: Corequisite, HPM 715.

HPM 716. Implementing Global Health Interventions. 3 Credits.
The course objective is to develop, implement, and test a solution to improve health care or public health delivery, using a model called the Model for Improvement (or MFI). The model uses three questions to scope the improvement project and four steps, Plan-Do-Check-Act, to implement and test solutions.
Same as: PUBH 716, MHCH 816.

HPM 717. Gillings Global Implementation Lab - Field Supplement. 2 Credits.
Interdisciplinary, field-based graduate course for teams of students to apply knowledge and experience to design/implement systematic solutions to improve the delivery of public health services in partnership with organizations around the world. Students develop general insights, learn effective implementation practices, and acquire evidence-based applied experience.
Requirements: Co-requisite, PUBH 716.
Same as: PUBH 717, MHCH 818.

HPM 718. Mental Health Services Research and Policy. 3 Credits.
This course is an introduction to mental health services research and policy. Topics include the financing of mental health services, supply of services, quality measures, assessing need, and barriers to care. The course includes seminar presentations by local and nationally recognized experts in mental health services research and discussion sessions.
Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.

HPM 720. Management of Human Resources in Health Organizations. 3 Credits.
Emphasis is on clarifying concepts of human resources management and identifying the importance of human resources in health organizations.
Requirements: Prerequisite, HPM 730; permission of the instructor for students lacking the prerequisite.

HPM 722. Global Perspectives on Ethical Issues in Health Policy and Management. 3 Credits.
Introduction to ethical issues in health policy and management, including rationing, managed care, clinical research, organizational ethics and compliance programs, administrative ethics, and bioethical issues such as assisted suicide.

HPM 725. Health Care Strategy and Marketing. 3 Credits.
This course introduces students to strategic planning and marketing in health services organizations. Students develop practical skills such as assessing the internal and external environment, competitor analysis, and evaluating strategic alternatives in different health care settings. It also explores the role the governing board plays in strategy development and management.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 728. Leadership and Workforce Management Strategies in Healthcare Organizations. 4 Credits.
This course provides an introduction to leadership and management in healthcare organizations, with a particular focus on strategic human resources management. Modules include: self-development; organizational design and governance; power, politics and conflict; human resource processes; and organizational change and innovation.

HPM 730. Leadership and Management of Health Care Organizations. 3 Credits.
Overview of organizational theory and empirical findings appropriate to the design and behavior of health care organizations. Topics include the design of the organization, its performance, and its relationship to the environment.

HPM 734. Approaches to Business Plan Development. 1 Credit.
Approaches to Business Plan Development ('Capstone Prep') is a one-credit course to introduce and jumpstart the Spring Semester Capstone business plan process necessary for HPM 735.

HPM 735. Advanced Concepts and Applications in Health Policy and Management. 3 Credits.
Required preparation, completion of master's core (can be concurrent). Restricted to HPM graduate students. Integrating and building upon the HPM master's core, this comprehensive course focuses on organization policymaking and administration from the perspective of the CEO and top management.
Requirements: Prerequisite, HPM 734.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 738. Health Operations Management. 3 Credits.
Operations management (OM) involves the day-to-day management of an organization, by focusing on the analysis, design, planning and control of work processes in order to create value for clients. All organizations must manage their work processes, however surprisingly many do not have a systematic or rigorous approach to managing them.
Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.

HPM 740. Health Care Financial Accounting. 2 Credits.
This introduces concepts of financial accounting to the non-accountant user of financial information. Basic accounting transactions, financial report preparation, concepts of accrual vs. cash accounting, not-for-profit health care accounting, and the analysis of health care organization financial reports.

HPM 741. Management Accounting for Health Administrators. 3 Credits.
Permission of the instructor for non-MHA majors. Covers selected topics in managerial accounting applied to health care.
Requirements: Prerequisite, HPM 740; permission of the instructor for students lacking the prerequisite.

HPM 742. Health Care Finance I. 3 Credits.
This course focuses on financial management, analysis and decision-making and the use of spreadsheets to help make better financial decisions. The course includes the healthcare environment, basic financial management concepts, capital acquisition, and cost of capital, capital structure, and capital budgeting.
Requirements: Prerequisites, HPM 740 and HPM 741.

HPM 743. Health Care Reimbursement. 1 Credit.
This online course in health care reimbursement is designed to provide students with relevant and current information about health care reimbursement methods and the complexities around it. After completion of the course, students should have an operational knowledge of health care reimbursement theory and practice.
HPM 744. Health Care Finance II. 2 Credits.
Focusing on capital allocation, financial condition analysis and forecasting, and other topics. Course is the conclusion to a five-course sequence in healthcare financial management. Each builds on the prior course with the intent of providing a comprehensive foundation in the concepts and practice of healthcare financial management.
Requisites: Prerequisites, HPM 740, 741, 742.

HPM 746. Introduction to Financial and Managerial Accounting for Healthcare Organizations. 4 Credits.
Focusing on learning and applying key financial and managerial accounting tools and concepts to healthcare problems. Provides a broad introduction to key concepts, issues, tools, and vocabulary useful for policymakers and administrators. Topics include: reading and analyzing healthcare financial statements, recording transactions, budgeting, full costing, incremental costing, and responsibility accounting.
Repeat rules: May be repeated for credit. 8 total credits. 2 total completions.

HPM 747. Health Care Finance. 4 Credits.
The course focuses on financial management and analysis. The course includes the healthcare environment, basic financial management concepts, capital acquisition, cost of capital and capital structure, and capital allocation. After completion of the course, students should be able to apply financial management concepts in real world healthcare settings.
Requisites: Prerequisite, HPM 746.

HPM 748. Economic Principles, Health Insurance & Behavioral Economics in Health. 3 Credits.
This course provides students with an opportunity to investigate topics of healthcare policy and insurance from a finance and economics perspective. The course covers contemporary health policy topics in great depth and with a focus on economic and financial analysis as a tool to evaluate healthcare policies and proposed new legislation.
Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.

HPM 750. Introduction to Dental Public Health. 3 Credits.
Permission of the instructor. Survey of the theory and practice of dental public health, with an emphasis on basic knowledge and skills necessary for planning and evaluating dental public health programs.

HPM 751. Dental Public Health Practice. 3 Credits.
Permission of the instructor. Emphasis on knowledge of community measures for prevention and control of oral diseases, understanding the scientific basis for their use, and designing and evaluating prevention programs for a specific population.

HPM 752. Oral Epidemiology for Health Policy and Management. 3 Credits.
Focusing on the epidemiology of oral diseases and the implications and uses of this knowledge for dental health policymaking and administration of dental programs.
Requisites: Prerequisite, EPID 600 or HPM 750; permission of the instructor for students lacking the prerequisite.

HPM 754. Health Care in the United States Structure and Policy. 3 Credits.
This core course is designed to provide students with an overview of the structure, systems, and policies of health care delivery in the United States. The goal is to increase students’ knowledge and abilities to analyze and address health care issues from both management and policy perspectives.

HPM 755. Introduction to Health Policy and Politics. 3 Credits.
This course addresses the major political institutions and policy processes that shape health policy, principally at the federal level.
Requisites: Prerequisite, HPM 564; permission of the instructor for students lacking the prerequisite.

HPM 757. Health Reform: Political Dynamics and Policy Dilemmas. 3 Credits.
This course focuses on the political and policy dynamics of health care reform.

HPM 758. Underserved Populations and Health Reform. 3 Credits.
Students will gain an understanding of how the changes in the health care market affect care for underserved populations and will develop strategies to ensure that the needs of these populations are met.

HPM 759. Health Policy Analysis and Advocacy for Health Leaders. 2 Credits.
The course will familiarize students with the history of health reform in the U.S., explore issues in health policy, and analyze the impact of health politics on policymaking.

HPM 760. Healthcare Quality and Information Management. 3 Credits.
Integrates essential methods and principles in healthcare quality and information management. Emphasis on use of information to measure and improve quality. Will include presentations, individual/group projects, exercises, and group discussion.

HPM 761. Quality and Utilization Management. 3 Credits.
Evolution and current status of health care quality management systems and programs for utilization control. Includes discussion of alternative quality assurance methods, hospital accreditation, and government programs.
Requisites: Prerequisite, HPM 564 or 754.

HPM 762. Quality of Care. 3 Credits.
The quality of health care in the US has garnered significant attention. This course will examine 1) the current state of the quality of care in the US, 2) approaches to assess quality of care, and 3) strategies that have been implemented or proposed to improve the quality of care.

HPM 765. Cancer Prevention and Control Seminar. 3 Credits.
An interdisciplinary overview of cancer prevention and control. Emphasis on projects and activities from perspectives of epidemiology, health behavior and education, and health policy and management. Appropriate research design and methodologies are covered.
Same as: EPID 772, HBEH 765.

HPM 766. Making Equity a Priority in Cancer Care Quality. 3 Credits.
This course examines recent work on defining, measuring, and improving cancer care quality, with special emphasis on inequities along the cancer care continuum and approaches for prioritizing equity in cancer care quality. Cancer care inequities according to race/ethnicity, socioeconomic status, and geography will especially be highlighted.

HPM 767. Disseminating Evidence and Innovation in Cancer Care. 3 Credits.
This course introduces the concepts, theories, and methods of disseminating research evidence and innovations to improve quality in cancer care.

HPM 768. Informed Decision-Making in Cancer Care. 3 Credits.
This course will examine clinical decision-making in cancer care from the perspectives of providers, patients, and families.
HPM 769. Cancer Outcomes Research Seminar. 1 Credit.
The Cancer Outcomes Research Program (CORP) offers a weekly seminar for faculty, students, and fellows/trainees interested in multidisciplinary cancer outcomes research. Guest speakers’ topics include Quality of Care, Patient-reported Outcomes (PROs), Comparative Effectiveness, Health Informatics, Cancer Disparities, Decision Making, Dissemination/Implementation, and Health Economics, as related to cancer outcomes.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 770. Introduction to Spreadsheet Modeling & Decision Analysis Tools for Improving Health Care Management. 3 Credits.
Review of the systems analysis process in healthcare systems. Deterministic and random models, mathematical programming, queueing, simulation, forecasting, and measurement. Emphasis on model formulation and computer solution of decision models.

HPM 771. Introduction to Regression Models for Health Services Research. 3 Credits.
This course provides an introduction to regression models used in health services research. We will discuss both ordinary least squares regression models, in which the dependent variable is continuous, and logit models, in which the dependent variable is binary. Stata software will be used for examples and assignments.

HPM 772. Techniques for the Economic Evaluation of Health Care. 3 Credits.
This course provides an investigation of the theory, methods, and application of economic evaluation to health care. Topics include methods used to structure an economic evaluation, measure and summarize health outcomes and estimate their value to patients or to the public, and identify resources used and estimate their costs.
Requisites: Prerequisite, EPID 600.

HPM 773. Introduction to Program Evaluation for Public Health and Health Care Settings I. 1 Credit.
This 1-credit course is the first course in a 2-course introduction to program evaluation in public health and health care. We discuss key concepts in planning, conducting, and reporting evaluations. Through a project in the spring semester follow-up course, HPM 774, students apply the concepts to their work.
Repeat rules: May be repeated for credit. 2 total credits. 2 total completions.

HPM 774. Introduction to Program Evaluation for Public Health and Health Care Settings II. 2 Credits.
This 2-credit course is a continuation of a 2-course introduction to program evaluation in public health and health care. Building on key concepts taught in HPM 773, the Requisites: prerequisite, students complete a project to apply the concepts to their work.
Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.

HPM 775. Analytic Techniques in Health Policy and Management. 3 Credits.
This course covers a variety of analytic techniques and methodologies basic to more advanced analysis of decision problems in health administration.

HPM 776. Healthcare Quality and Information Management. 2 Credits.
The HPM 776/777 and 776/778 course sequences integrate essential methods and principles in healthcare quality and information management, emphasizing use of information to measure and improve quality.
Repeat rules: May be repeated for credit. 4 total credits. 2 total completions.

HPM 777. Health Information and Quality Applications. 2 Credits.
The HPM 776/777 and 776/778 course sequences integrate essential methods and principles in healthcare quality and information management, emphasizing use of information to measure and improve quality.
Repeat rules: May be repeated for credit. 4 total credits. 2 total completions.

HPM 778. Public Health Information and Quality Application. 1.5 Credit.
The HPM 776/777 and 776/778 course sequences integrate essential methods and principles in healthcare quality and information management, emphasizing use of information to measure and improve quality.
Repeat rules: May be repeated for credit. 3 total credits. 2 total completions.

HPM 779. Advanced Analytics and Operations Research. 4 Credits.
Healthcare administrators face a range of decisions: some strategic, some financial, others operational. Through your program of study, you are developing analytical and conceptual skills that will help you to make better decisions when the time comes.
Repeat rules: May be repeated for credit. 8 total credits. 2 total completions.

HPM 781. Seminar in Comparative Effectiveness Research. 1 Credit.
The course provides an overview of substantive and methodological issues in CER, including randomized controlled trials; inferences from observational studies; literature syntheses; decision sciences/decision modeling; dissemination and implementation science; cross-cutting skills (e.g., strengths and limitations of administrative and clinical databases and electronic health records for CER).

HPM 783. Introduction to Healthcare Data and Applied Informatics. 3 Credits.
Explore and analyze healthcare data across the claims processing lifecycle. Using case studies and SAS software as a platform, gain skills for data management, analysis, and reporting to access healthcare utilization and patient outcomes, improve clinical practice, manage healthcare operations, gauge quality and performance, report financial metrics, and conduct research.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 785. Advanced Decision Modeling. 3 Credits.
This course covers advanced decision modeling methods in health care, including probabilistic sensitivity and value of information analysis, economic evaluation using clinical trial data, and discrete event simulation and agent-based/system dynamics modeling techniques. The course teaches analytical techniques and interpretation as well as state-of-the-art best practices.
Requisites: Prerequisite, HPM 772.
Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.
HPM 786. Introduction to Participatory Systems Science in Health: Methods Overview. 3 Credits.
This course introduces systems science methods and their uses for promoting health. Topics include an overview of systems science methods and the breadth of health-related applications. Students learn how to identify complex problems for which different types of systems science methods are useful.
Repeat rules: May be repeated for credit. 6 total credits. 2 total completions.

HPM 789. Master's Paper Development. 1 Credit.
Second-year M.S.P.H. or first-year M.P.H. students only. Broad topics related to the development and management of a research project are covered. The major goal is the development and completion of a proposal to be submitted for an independent master's paper.

HPM 790. Advanced Health Policy Analysis Health Policy Development, Health Policy Advocacy. 3 Credits.
The course is for master's and doctoral students interested in health policy. The course is intended to go beyond an introduction to policy analysis to a discussion and exploration of theories of policy analysis in a context of competing democratic ethics and values.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 793. Health Policy and Management Internship. 1-2 Credits.
Restricted to HPM majors. Supervised field experience in approved health agencies. (Internship fee: $450.)
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 794. Patient-Reported Outcomes Measurement and Application in Healthcare Research and Practice. 3 Credits.
Patient-reported outcomes (PROs) include measures of health status, quality of life, and satisfaction with healthcare. This course provides an overview of the PRO measurement and research field, and discusses how to design and evaluate a PRO measure and best practices for integrating PRO in clinical research and healthcare settings.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 795. Introduction to Healthcare: Organizations and Policy. 4 Credits.
This course introduces students to the structure and systems of healthcare by examining policy issues surrounding choices for healthcare financing, organization, payment, regulation, and public health. The goal is to increase students’ knowledge and abilities to analyze and address healthcare issues from both management and policy perspectives.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 804. Introduction to Healthcare Database Research. 3 Credits.
Course will provide foundational knowledge for using administrative health care claims and other relational data for health services research. Students will learn to: manage large databases in SAS, identify key variables in administrative data, and design and implement a study protocol.
Same as: DPOP 804.

HPM 810. Leadership in Health Law and Ethics. 2 Credits.
Course is designed to provide learners with an introduction and overview of critical issues relating to law, ethics, and public health.

HPM 815. Graduate Health Economics Seminar. 1 Credit.
Permission of the instructor. Discussion of recent papers in health economics. Students must have solid knowledge of graduate microeconomics theory and econometrics.

HPM 820. Organizational Leadership Theory and Practice. 2 Credits.
Focus is on the behavioral, power-influence, trait, and situational approaches to leadership. Addresses core leadership principles plus leadership-followership theory, transformational and strategic leadership, and creating change.

HPM 823. Leadership in Global Health Systems. 2 Credits.
Analyzes health systems from a global perspective. Health systems vary widely in their structures and performance, but there is substantial similarity in issues faced. Evaluates health systems from a system improvement perspective, by focusing on health system analysis and reform. Focuses on ethical issues of health leadership in global perspective.

HPM 830. Translational Health Disparities: Research, Practice & Policy. 3 Credits.
This course will focus on the concepts, principles, methods, and applications of health disparities science, practice, and policy. It will integrate principles and practice of community engagement. Experts from diverse disciplines will give lectures on health disparities research, practice, and policy. Student teams will work on real life case studies.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 860. Population Perspectives for Health. 1 Credit.
A review of how the population perspective is used to create programs and social change for health in the United States.

HPM 871. Seminar in Teaching Health Policy and Management. 1 Credit.
Problems and processes of teaching health policy and management, including supervised practicum experience.

HPM 872. Selected Topics in Health Policy and Management: Advanced Seminar. 3 Credits.
Permission of the instructor. Integrated study of selected theory and research as it relates to the organization and delivery of health services. Separate seminars are developed to correspond to the doctoral student’s specific interests and needs.

HPM 873. Policy Seminar in Health Policy and Management. 1 Credit.
Seminar on policy issues in health policy and management.

HPM 874. Advanced Research Seminar in HPM. 1 Credit.
This seminar will develop core competencies through a: (1) journal club to develop competencies in research design and expose students to diverse content and methodologies; and (2) professional development series.

HPM 880. HPM Mathematical and Statistical Tutorial. 1 Credit.
Review of mathematical and statistical concepts used in HPM 881-883. Introduction to statistical programming language.
Repeat rules: May be repeated for credit. 1 total credits. 2 total completions.

HPM 881. Linear Regression Models. 3 Credits.
Equivalent background in probability theory/statistics for student lacking the prerequisite. Required preparation, matrix algebra, derivatives, logs/exponentials, and Stata. This course is an introduction to linear regression models. Topics include least squares regression, multicollinearity, heteroscedasticity, autocorrelation, and hypothesis testing.
Requisites: Prerequisite, BIOS 660.
HPM 882. Advanced Methodology in Health Policy and Management. 3 Credits.
This course is an introduction to linear regression models. Topics include linear algebra, least squares regression, multicollinearity, heteroscedasticity, autocorrelation, and hypothesis testing. 
Requisites: Prerequisites, HPM 496 and 796.

HPM 883. Analysis of Categorical Data. 3 Credits.
This course is an introduction to the analysis of categorical data using maximum likelihood and other non-linear techniques and specification tests. Topics include models in which the dependent variable is not continuous, including logit, probit, censored data, two-part, and count models.
Requisites: Prerequisites, HPM 881 and 882; permission of the instructor for students lacking the prerequisites.

HPM 884. Overview to Health Services Research/Health Policy. 3 Credits.
Pre-doctoral standing or permission of the instructor. This course provides an overview of the field of health services research and health policy. It introduces basic components of the research process, including literature synthesis, development of a research question and hypothesis, and use of conceptual models to guide research questions.

HPM 885. Health Services/Health Policy Research Methods. 3 Credits.
This course explores how to develop answerable, policy-relevant, ethical research questions; operationalizes questions with actionable specific aims' and identify optimal research design for answering a particular question. It introduces primary data collection methods (e.g., interviews, focus groups, surveys) and secondary data sources (e.g., administrative claims, medical, records).
Requisites: Prerequisite, HPM 884.

HPM 886. Advanced Health Services Research Methods Applications. 3 Credits.
This course focuses on applications of research methods that are relevant to health services and health policy researchers. Skills and topics covered in HPM 884 and HPM 885.
Requisites: Prerequisites, HPM 884 and 885.

HPM 890. Special Topics in HPM. 0.5-3 Credits.
Course reserved for special topics in HPM for graduate-level students only.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics; 3 total credits. 2 total completions.

HPM 893. Public Health Informatics Practicum. 2 Credits.
Course will help students: conduct research, develop public health informatics tools/projects, and further develop professional skills and knowledge essential in the public health informatics field. Students will participate in weekly (2 hr) informatics discussions with practicum preceptors and have an opportunity to meet and interact with successful health informatics professionals.
Repeat rules: May be repeated for credit; may be repeated in the same term for different topics.

HPM 930. Doctoral Seminar in Organization Theory and Health Service Organizations. 3 Credits.
Permission of the instructor for nondoctoral students. Review and application of selected developments in organization theory to health services research.

HPM 940. Leadership in Health Informatics. 2 Credits.
This two credit hour course introduces health leaders to the new field of health informatics. Topics include approaches to managing information and applying it to improve the delivery of health services in diverse settings.
Repeat rules: May be repeated for credit. 4 total credits. 2 total completions.

HPM 945. Dissertation Planning and Preparation. 2 Credits.
Part of a sequence to guide students in planning, development, and implementation of Dr.P.H. dissertations. Designed to prepare students to identify appropriate research topics, plan the approach, organize, and write.

HPM 946. Dissertation Planning and Preparation II. 1 Credit.
The purpose of this course is to build on students’ progress on work initiated in HPM 945 and continue to guide students through the steps necessary to complete a dissertation proposal. In collaboration with faculty, learners will assess the current state of their proposals and complete revisions and additional refinements, culminating in dissertations that are ready to be defended by fall of the third year in the program.
Repeat rules: May be repeated for credit. 2 total credits. 2 total completions.

HPM 947. Dissertation Planning and Preparation III. 1 Credit.
The purpose of this course is to build on students’ progress on work initiated in HPM 946 and continue to guide students through the steps necessary to complete a dissertation proposal. In collaboration with faculty, learners will assess the current state of their proposals and complete revisions and additional refinements, culminating in dissertations that are ready to be defended by fall of the third year in the program.
Repeat rules: May be repeated for credit. 2 total credits. 2 total completions.

HPM 950. The Research Process. 1 Credit.
The course introduces doctoral students to the world of scientific and policy inquiry. It emphasizes the goal, structure, and content of the dissertation that will be written in the latter part of the program.

HPM 951. Literature Reviews and Appraisal. 2 Credits.
This course is the second in a sequence of courses in research design and methods in the executive Dr.P.H. program. The course explores the nature and process of scientific inquiry in the field of public health, establishing a foundation for methodological exploration, and focusing on the process of developing researchable questions.

HPM 952. Community Involvement in Research. 1 Credit.
Relevant literature and guest speakers will highlight cases depicting different levels of community involvement in public health research.

HPM 953. Practice Based Research. 2 Credits.
Designed to provide Dr.P.H. students with grounding in basic quantitative and qualitative research techniques used in health services research. Topics include types of research designs, measurement scales and coding nomenclatures, analytical techniques for quantitative data, research techniques for primary data collection, research opportunities with secondary data, and qualitative research methods.

HPM 955. Health Strategy. 2 Credits.
The purpose of this class is to enhance participants' behavioral complexity as leaders. Examines several major approaches to organizational strategy. Topics include diversification, transaction cost economics, agency theory, the resource-based view of the firm, and processes of strategic decision making.
HPM 956. Fundamentals of Research Analysis. 3 Credits.
This course will provide students with "hands-on" experience in qualitative, quantitative, and policy analytical techniques.

HPM 957. Leading Sustainable Change: Operating Beyond the Board Room. 2 Credits.
The course will help students understand and master what successful top organizational leaders must do to create change, both within and outside their organizations.
Repeat rules: May be repeated for credit. 4 total credits. 2 total completions.

HPM 958. Financial Leadership in the Era of Sarbanes-Oxley. 3 Credits.
Dr.P.H. students only. Understand the major concepts of the Sarbanes-Oxley Act and be able to apply them to their own organizations whether public or nonpublic, for profit or not-for-profit.

HPM 959. Strategic Management in Health Leadership. 2 Credits.
The purpose of this class is to enhance participants' competence in leading within complex and dynamic systems.

HPM 962. Marketing and Public Relations for Health Leaders. 2 Credits.
This course is one of a series of leadership courses in the executive Dr.P.H. Its main purpose is to help students understand public health from the perspective of external audiences.

HPM 963. Program Evaluation for Health Leaders. 2 Credits.
This course is one of a series of research courses in the executive Dr.P.H. Its main purpose is to help students understand the purposes of evaluation.

HPM 992. Master's (Non-Thesis). 3 Credits.

HPM 994. Doctoral Research and Dissertation. 3 Credits.