

Master of Public Health Akamai University

*The ultimate goal of primary health care is better health for all.
World Health Organization (2008) identified five key elements to achieving that goal:*

Universal coverage reforms - reducing exclusion and social disparities in health

Service delivery reforms - organizing health services around people's needs

Public policy reforms - integrating health into all sectors

Leadership reforms - pursuing collaborative models of policy dialogue

Stakeholder reforms - Increasing stakeholder participation

In past decades, the world has made great progress toward global health. Life expectancy has increased in certain parts of the world by 30-40 years in the 20th Century with deadly diseases like smallpox being totally eradicated. Nevertheless, certain diseases like cancer, HIV/AIDS, tobacco addiction, cardiovascular diseases, obesity, and malnutrition are still grave challenges facing health professionals in the 21st century.



On a global scale, nearly half the world population (2.8 billion people) live on less than \$2 a day and over a billion have entered this century without having benefited from health revolution of 20th century. There is clearly a growing need to reduce the burden of disease and the mortality and morbidity suffered by the poor. There is a need to counter threats resulting from economic crises, an unhealthy environment and risky behavior. There is a need to develop more effective healthcare systems and to invest in the expanding knowledge base that made possible the health revolution of the 20th century.

To contribute toward overcoming these challenges, Akamai University has established the Center for Global Health and Wellness, which is committed to the development of professionals who can address the health challenges of 21st century and play leadership roles in improving the human condition throughout the world. We have a commitment to the furtherance of public health and alternative healthcare with a global perspective. I encourage you to join us in achieving this worthy mission.

James Wear, Ph.D.
Program Director

Program Audience

The study of human health has been one of the principal endeavors of higher education since its inception. Today, the practical study of the healing arts involves a wide range of disciplines, experiences, and theoretical frameworks. The studies offered through the Akamai University Master of Public Health (MPH) Program can help students prepare for numerous career fields including health research, public health administration, health safety management, occupational and industrial hygiene, environmental health, hospital administration, disease prevention and control, international health, public health policy, community health education, and life sciences.

Entry Requirements

As prerequisites for acceptance to the MPH program, applicants should have completed the equivalent of a recognized baccalaureate degree in an appropriate field of study and have several years of meaningful career experience. Applicants are expected to be proficient in collegiate English language skills have access to a computer, email and the Internet and academic library resources for the full extent of their program.

It is assumed that students applying to this program have a background in the physical or biological sciences and are familiar with standard theories and practices associated with scientific investigation. It is also assumed that students seeking admissions to this program will have demonstrated professional experience and expertise in health studies with some professional or academic experience in either laboratory or field research or applied issues.

Degree Requirements in Master of Public Health (MPH)

Students in the Master of Public Health Program will complete a minimum of 40 credits above the baccalaureate level including the comprehensive examinations and thesis project. The coursework requirements include the Core studies in the major, a major concentration, and research preparation coursework. MPH students complete a comprehensive examination at the conclusion of the academic coursework; they prepare a formal thesis proposal, complete the thesis project, and prepare the manuscript for faculty review. Master's students also complete an oral review of the thesis project at the conclusion of the physical manuscript review. The program requirements are summarized as follows:

- Core Elements of the Academic Major (18 credits minimum)
- Major Concentration (9 credits minimum)
- Research Preparation (3 credits)
- EXM 880: Comprehensive Examination (2 credits)
- RES 885: Thesis Proposal (2 credits)
- RES 890: Thesis Project (4 credits)
- EXM 895: Oral Review of Thesis (2 credits)

Core Elements of the Academic Major

Participants complete core elements of study comprised 18 credits, selected from the subjects listed below:

Required (18 credits): Selected from among the classes listed below

- PHA 500: Graduate Readings in Public Health (3 credits)
- PHA 501: Principles of Epidemiology (3 credits)
- PHA 502: Public Health Practices (3 credits)
- PHA 503: Health Policy (3 credits)
- PHA 504: Principles of Environmental Health (3 credits)
- PHA 505: Disease Prevention and Management (3 credits)
- PHA 506: Environmental Health and Disease Prevention (3 credits)
- PHA 507: Recognizing and Preventing Occupational Diseases (3 credits)
- PHA 509: Health Promotion (3 credits)
- PHA 545: Leadership in Healthcare Organizations (3 credits)

Major Concentrations

Participants complete a major concentration comprised of nine credits of specialized studies selected from one the following fields of inquiry:

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| Public Health Administration | Management Information Systems for Healthcare |
| Hospital Administration | Healthcare Facilities Management |
| Healthcare Safety Management | Environmental Health |
| Complementary and Alternative Medicine | Disease Prevention and Control |
| Integral Health Studies | Applied Health Science |
| Health Policy and Management | Toxicology |
| International Health | Community Health Education |

Required (9 credits): Selected from one of the concentrations, as outlined below

Hospital Administration

- PHA 546: Health Care Finance and Budgeting (3 credits)
- PHA 548: Health Care Human Resource Management (3 credits)
- PHA 550: Health Care Management Information Systems (3 credits)
- PHA 551: Medical Staff Administration (3 credits)
- PHA 552: Marketing for Health Care (3 credits)
- PHA 555: Quantitative Analysis for Health Care (3 credits)
- PHA 531: Continuous Quality Improvement in Health Care (3 credits)
- PHA 540: Administration of Healthcare Facilities (3 credits)

Healthcare Safety Management

- PHA 560: Quality Assurance in Healthcare Facilities (3 credits)
- PHA 564: Fire Safety in Healthcare Facilities (3 credits)
- PHA 565: Quality Improvement and Safety Motivation (3 credits)

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PHA 566: Industrial Hygiene and Infection Control in Healthcare Facilities (3 credits)

PHA 567: Accident Investigation (3 credits)

PHA 571: Risk Management and Job Safety Analysis (3 credits)

PHA 574: Healthcare Safety Management (3 credits)

PHA 585: Occupational Safety Management(3 credits)

Healthcare Facilities Management

PHA 558: Clinical Engineering (3 credits)

PHA 559: Healthcare Facility Construction, Maintenance and Repair (3 credits)

PHA 561: Heating, Ventilation and Air-Conditioning (3 credits)

PHA 576: Facility Management in Healthcare (3 credits)

PHA 577: Strategic Planning in Facility Management (3 credits)

PHA 579: Environmental Management in Healthcare Facilities (3 credits)

PHA 580: Equipment Management in Healthcare (3 credits)

PHA 581: Utilities and Energy Management (3 credits)

Applied Health Science

PHA 586: Health Science Principles (3 credits)

PHA 587: Biochemistry (3 credits)

PHA 588: Human Genetics (3 credits)

PHA 590: Principles of Medicinal Chemistry (3 credits)

PHA 594: Pharmacology (3 credits)

Toxicology

PHA 595: General Principles in Toxicology (3 credits)

PHA 596: Clinical Toxicology (3 credits)

PHA 597: Forensic Toxicology (3 credits)

PHA 598: Advanced Toxicology (3 credits)

Public Health Administration

PHA 512: Public Health Surveillance (3 credits)

PHA 515: Drug Development and Monitoring Drugs (3 credits)

PHA 517: National Healthcare Delivery (3 credits)

PHA 526: Management of Public Health Organizations (3 credits)

PHA 529: Marketing Public Health (3 credits)

PHA 530: Legal Aspects of Public Health (3 credits)

PHA 534: Role of Multinational Corporations in Public Health (3 credits)

Complementary and Alternative Medicine

CAM 501: Essentials of Energy Medicine (3 credits)

CAM 504: Complementary and Alternative Medicine (3 credits)

CAM 699: Research in Complementary Medicine (3 credits) AND

CAM 580: Mind-Body Medicine III: Integrative Healthcare (3 credits)

CAM 505 Medical Terminology (2 credits)

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Integral Health Studies

- IHS 502: The Integral Meta-Model (3 credits)
- CAM 504: Complementary and Alternative Medicine (3 credits)
- IHS 508: Integral Healthcare and Lifestyle (3 credits)
- IHS 514: Integral Psychology (3 credits)
- IHS 551: Inner Practicum and Transformational Practice (3 credits)

Health Policy and Management

- PHA 515: Drug Development and Monitoring Drugs (3 credits)
- PHA 520: Ethical Issues in Healthcare (3 credits)
- PHA 521: Legal Issues in Healthcare (3 credits)
- PHA 525: Introduction to Health Policy (3 credits)
- PHA 538: Principles of Healthcare Management (3 credits)

International Health

- PHA 517: National Healthcare Delivery (3 credits)
- PHA 522: History of Healthcare (3 credits)
- PHA 526: Management of Public Health Organizations (3 credits)
- PHA 534: Role of Multinational Corporations in Public Health (3 credits)
- PHA 536: Comparative Study of Healthcare Systems (3 credits)

Environmental Health

- PHA 563: Environmental Audit in Healthcare Facilities (3 credits)
- PHA 566: Industrial Hygiene and Infection Control in Healthcare Facilities (3 credits)
- PHA 513: Environmental Protection Policies (3 credits)

Disease Prevention and Control

- PHA 592: Disease Prevention and Human Nutrition (3 credits)
- PHA 511: Pharmaceutical Issues in Disease Prevention (3 credits)
- PHA 515: Drug Development and Monitoring Drugs (3 credits)

Community Health Education

- PHA 525: Introduction to Health Policy (3 credits)
- PHA 529: Marketing Public Health (3 credits)
- PHA 533: Human Development and Health Care (3 credits)
- PHA 592: Disease Prevention and Human Nutrition (3 credits)

Management Information Systems in Healthcare

- PHA 583: Information Management in Healthcare (3 credits)
- PHA 518: Computers and Healthcare (3 credits)
- PHA 520: Ethical Issues in Healthcare (3 credits)
- PHA 527: Health Care Financial Management (3 credits)
- PHA 532: Management Information Systems in Health Care (3 credits)

Research Preparation (Required: 3 credits minimum)

Master's students must pursue studies providing advanced research knowledge necessary for success in their final projects (thesis or major project in lieu of thesis). At least three semester credits of research preparation coursework is required and this might focus upon quantitative and qualitative methods or participatory action research techniques including subject selection, research design, and statistical analysis, as appropriate to each student's proposed project.

Through this requirement, students learn to effectively define applied problems or theoretical issues and articulate the rationale for the study. They should learn to present an effective scholarly review of the academic literature and implement quantitative, qualitative or participatory action methods for evaluating academic issues.

Required: Minimum of three credits selected from among the following:

RES 504: Introductory Research Statistics (3 credits)

RES 506: Advanced Research Statistics (3 credits)

RES 508: Qualitative Research (3 credits)

RES 510: Participatory Action Research (3 credits)

RES 512: Effective Data Analysis (3 credits)

RES 520: Social Science Research Methods (3 credits)

RES 525: Biostatistics in Healthcare (3 credits)

Comprehensive Examination (Required: 2 credits)

Once students have completed the coursework elements of their degree, they will be asked to schedule the Comprehensive Examination. The primary mentor and a faculty member representing the secondary academic area conduct both the written and oral components of the examination. The written portion is open book style with selected essay questions requiring creative responses that reach for the higher levels of cognition. Your answers are expected to draw from both the primary and secondary competencies of your program with proper referencing of the scholarly literature. The oral component of the examination is normally completed by telephone conference and is intended to allow detailed investigation of your written responses.

Required: EXM 880: Comprehensive Examination (Required: 2 credits)

Thesis Proposal (Required: 2 credits)

You are expected to prepare a formal proposal related to your concept for research under the direction of your primary faculty advisor and according to University expectations. At a minimum, your research proposal should clarify the thesis statement and methodology (including the data gathering instruments and data analysis techniques) and provide an effective overview of the scholarly literature that sets the foundation for the thesis. Your research proposal should also include a brief manuscript outline that demonstrates how you will present in written form the various elements of the research project.

Required: RES 885: Thesis Proposal (Required: 2 credits)

Thesis Project (Required: 4 credits)

Following approval of your thesis proposal, you will begin your research project. Your thesis may take the form of a traditional research project or it may be a major scholarly project of the type appropriate to the discipline. Whichever approach to the thesis is chosen, the resulting project must demonstrate mastery of a body of knowledge in the major field of study, be your original work and represent a meaningful contribution to the betterment of the human condition or an improvement to the professional field.

Your thesis research may be conducted via quantitative, qualitative, or participatory action research. The body of your thesis manuscript, structured according to a set of approved manuscript guidelines, should exceed 75 double spaced, typewritten pages. If your thesis takes the form of a scholarly project, it must follow the guidelines provided by the University for such projects.

Required: RES 890: Thesis Project (Required: 4 credits)

Oral Review of Thesis (Required: 2 credits)

Once you have prepared the thesis manuscript, you will be asked to schedule the formal review process. Your primary faculty advisor and a faculty member representing the secondary academic area will conduct both the formal physical review of the thesis manuscript and the oral review of thesis.

The physical review of the thesis manuscript usually takes the review committee four to six weeks. Each reviewer will prepare questions and commentary relative to your underlying review of the literature, the thesis methodology, the mechanics of your project, and your presentation of the findings, conclusions and recommendations.

The Oral Review of Thesis is conducted under the direction of your primary faculty advisor with the assistance of one qualified member of the faculty. The examination is carried out by telephone conference call and is designed to allow detailed investigation of your thesis. The faculty reviewers explore with you issues related to your thesis including methodology, review of literature and interpretation of the findings.

One outcome of the thesis review process is a set of final expectations directing you through the remaining tasks for completing the thesis manuscript. Once your final manuscript is approved, you will submit the formal document to an approved bindery and later ship the bound thesis to the University for permanent archival storage.

Required: EXM 895: Oral Review of Thesis (Required: 2 credits)

Primary Faculty

James O. Wear, Ph.D., CCE, CHSP, FASHE
Program Director

Deryl Gulliford, Ph.D.
Hospital Administration

Mary Jo Bulbrook, Ed.D.
Complementary and Alternative Medicine

Christopher Johannes, Ph.D.
Complementary and Alternative Medicine
and Integral Health Studies

Rosemary Cook, BPS
Complementary Medicine, Chinese
Medicine, Ayurveda

Michael J. Cohen, Ed.D.
Ecotherapy

Mansoor Quli Khan, MBBS, Ph.D., MD
Public Health, Disease Prevention, Applied
Health Science

Stephen Cox, MPA
Behavioral Medicine, Health Education and
Promotion

Daniel Eckstein, Ph.D.
Behavioral Medicine, Health Education and
Promotion

Vijay P Gupta, Ph.D., DFM, MBBS
Applied Health Science and Toxicology

Mohammad MU Kabiraj, Ph.D.
Applied Health Science

Stanley Krippner, Ph.D.
Energy Medicine

Stephen Lentz, Ph.D.
Environmental Health

Anthony R. Maranto, Ph.D.
Environmental Health

Lisa Mertz, Ph.D.
Energy Medicine

Jim Morningstar
Behavioral Medicine, Health Education and
Promotion

Anthony Payne, N.M.D., Ph.D., MD(HC)
Ayurveda, Chinese Medicine, Herbal
Medicine

Rayapudi M. Rao, B.Pharm., M.Pharm.,
D.B.A., Ph.D.
Applied Health Science

Seamus Phan, Ph.D.
Complementary Healthcare

Arif Hussain Shah, Ph.D.
Applied Health Science, Toxicology,
Disease Prevention and Control

Richard K. Tweneboah, Ph.D.
Health Administration and Complementary
Medicine

Henry Zeidan, Ph.D.
Applied Health Science

The Thesis Committee

Formation of Thesis Committee

Master's students have a Thesis Committee of two qualified graduate faculty appointed to oversee and govern the student's program structure, progress of studies, comprehensive examinations and thesis project.

Responsibilities of Thesis Committee

The responsibilities of the Thesis Committee, under the leadership of the Committee Chair, are as follows:

- Directing the preparation and approval of the student's plan for study, clarifying the timeline for study and the assignment of faculty to provide instruction and to assist with the functions of the Thesis Committee.
- Providing direction regarding the student's foundational studies, core studies, specialization, and research preparation coursework.
- Providing leadership by integrating appropriate research preparation coursework or assignments within the plan for study, distributing the coursework to appropriate faculty for instruction and advisement.
- Providing leadership for the written and oral components of the student's comprehensive final examination, in unity with the other Committee members
- Providing oversight, direction, and mentorship during the conduct of the student's research project and manuscript preparation, in unity with the other Committee members
- Providing leadership for the physical and oral reviews of the research manuscript, in unity with the other Committee members.
- Assist the student in making formal changes in the plan study and timeline for completion, by written addendum, as needed to assure effective progress throughout the program of study.
- Providing final approval for the student's Thesis and overall degree program and cooperate fully in building the appropriate archival records for the University of record.

Committee Appointment Schedule

- The Committee Chair is appointed immediately following the Master's student's registration and continues in charge of the student's program until final completion is recorded at the school of record. While the secondary and tertiary members of the Thesis Committee are identified and confirmed at the onset of the program, and listed in the plan of study, they become active later, just prior to the activities for which they are asked to participate.
- The Secondary Committee Member becomes active one month prior to the commencing the written component of the Comprehensive Examination and continues with the student's program until final completion is recorded at the school of record.

Building the Student's Plan for Study

Immediately following registration, Master's students begin work with their assigned Committee

Chair in structuring their formal plan for study. The process determines and formalizes the elements of the student's Master's program and the timeline for completion. The plan for study includes the following essential elements:

- The designation of the degree major for the Study Plan
- The identification of the school contacts and contact information for the schools participating in the delivery of the Master's program.
- Identification of the required array of coursework for each element of the program.
- Identification of the secondary and tertiary members of the Thesis Committee.
- Appointment and notification of the course module instructors
- Acceptance of transfer courses for the student's program.
- The timeline for completion of the degree program.

These activities require active participation in program planning by the student and may take considerable time to complete the dialogue and exchange of information. Students are strongly advised to discuss in detail the elements in the plan for study including the coursework, the examinations, and elements of research including the manuscript guidelines.

Once all of the decisions have been made concerning the plan for study, the student and Committee Chair sign the formal document. Copies of the document are sent to the University headquarters for entry to the permanent student record. The plan for study is then distributed to the participating schools and becomes the document that determines effective progress toward the degree. When the expectations laid out in the plan for study have been successfully accomplished, the student is recommended for the degree by the Committee Chair. Students are alerted that the University can make no commitment to inclusion of course modules and assignment of instructors to a student program until after the plan for study has been fully processed and approved.

Course Module Descriptions

Core Elements of the Academic Major

PHA 500: Graduate Readings in Public Health (3 credits)

Graduate students pursue detailed readings in the theories, principles and practices in public health. Readings in the field of public health include public health administration, disease prevention and control, health education and promotion, human nutrition, health policy, global health, environmental health, and occupational health. Public health programs also cover bioethics in healthcare, managed care, child health, international health, healthcare for the elderly, mental hygiene, population dynamics and public health, reproductive health in developing countries, and study of aging.

PHA 501: Principles of Epidemiology (3 credits)

The course gives students an exposure to basic concepts and principles of epidemiology. Students will learn how to find distribution of disease in populations, determine the causes of disease in the populations, and possible use of interventions, if any. The course provides analytical skills towards evaluation and control of epidemics and other health problems in

populations. The course develops in general epidemiological approach to finding disease and initiating intervention.

PHA 502: Public Health Practices (3 credits)

This is an overview course pertaining to public health practice. There are certain public health issues (i.e. operational, policy, management, legal, regulatory), which public health practitioners face on a daily basis. This course examines those issues and more. Local, state, and federal, agencies are involved in public health. The practitioner needs to know how to coordinate the activities of these agencies. Then there is the element of health marketing and public health advocacy, which comes into play in terms of convincing and changing public opinions about some public health issues. The issue of cost, access, and quality of care is always there. The uninsured and underinsured, ethnic groups health care, minority health care are issues of concern as well.

PHA 503: Health Policy (3 credits)

The course will give an overview of the field of health policy and management. It will examine some of the major health policy issues like, cost, access, quality of care, underinsured, uninsured. Then it will examine the politics of health policy in the United States. How different interest groups (i.e. providers, insurers, managed care organizations) play their role in the development of health policies. The main focus of the course will be on health policy issues in the United States although certain international health issues facing other countries will also be examined.

PHA 504: Principles of Environmental Health (3 credits)

The course deals with basic scientific principles involved in environmental health. IT examines multiple of issues affecting human health by physical, chemical, biological, or psycho-social modifications of external environment. The courses will focus on natural and synthetic agents, which pollute air, water, food, soil, and the environment in general. The course will discuss the basic scientific principles developed by chemistry, toxicology, physiology, epidemiology, and molecular biology, behavioral and management sciences, and apply these principles to solve environmental health problems. Some policy issues for environmental protection will also be discussed.

PHA 505: Disease Prevention and Management (3 credits)

This course is a guide to clinical preventive services. The course critically examines evidence for and against scores of preventive services available, and recommends interventions that are effective. The course looks into the health consequences of personal behavior (including the use of drugs, alcohol, tobacco, poor diet, lack of physical activity, for example), and recommends services available to correct such behavior. The course recommends preventive interventions (screening, immunizations, counseling) for clinical and public health practitioners. This course is beneficial to primary care clinicians, including physicians, nurses, nurse practitioners, physician assistants, public health professional and allied health professionals.

PHA 506: Environmental Health and Disease Prevention (3 credits)

The course deals with different environments including personal, indoor, outdoor, community, region, or worldwide. It develops a correlation between effects and impacts of these environments and discusses their long-term and short-term effects on individuals and

populations. The course covers a wide range of topics including, occupational hazards, radioactive and hazardous waste, ionizing radiation, unhealthy food-water, environmental pollution, pest control, industrial waste, risk assessment, environmental monitoring, natural and man made disasters. It discusses environmental health problems and how to prevent diseases caused by them.

PHA 507: Recognizing and Preventing Occupational Diseases (3 credits)

Besides knowing about occupational hygiene and occupational disorders, occupational health specialists need to learn about preventive strategies, economics, ergonomics, and production systems. In recent times, the safe and healthy work environment has become an integral part of quality assurance. The course relies upon preventive and social approaches to occupational health. It deals with toxicological modeling in industrial hygiene, the epidemiological approach to study occupational disorders, the importance of psychological conditions for many types of disorder, and specialist knowledge about women and work. It gives an overview of the necessity for an increased awareness of a safe work environment.

PHA 509: Health Promotion (3 credits)

The course emphasizes the knowledge and skills required to reduce behavioral risks. It also covers those elements that engage people more actively in their community affairs, and will enable graduates to participate effectively in the making of health and social policy, in demanding enforcement of regulations on environmental pollutants, and in organizing advocacy for new laws and regulations for an improved environment. Individual risk reduction and education of the electorate for risk reduction are both important, and the course places emphases on both.

PHA 545: Leadership in Healthcare Organizations (3 credits)

This course defines leadership, addresses its importance in modern healthcare and presents the essential qualities, which characterize the effective leader. Suggestions for applying these principles in "real world" management are included.

Major Concentrations

PHA 511: Pharmaceutical Issues in Disease Prevention (3 credits)

The course surveys the " Problem Drugs". There are tens of thousands of drugs on the world market today. Most of them are ineffective and some are not even safe. The course examines the public health consequences of these drugs, and surveys a wide variety of drugs including antibiotics, anti-diarrhoeals, analgesics, cough and cold remedies, contraceptives, hormones, psychotropic drugs, growth stimulants and vitamin supplements. The course determines the impact on children, women, and the elderly. It highlights unethical marketing practices of multinational corporations. It offers recommendations to help transform the thinking of health professionals including physicians, pharmacists, policy makers, and students. It also investigates strategies for developing consumer awareness about this problem.

PHA 512: Public Health Surveillance (3 credits)

Public Health Surveillance is essential to disease prevention. It can recognize new diseases and identify upward or downward trends in known diseases. The course differentiates surveillance

from public health practice or analytical epidemiological studies; and gives a methodological overview of the subject. The course discusses surveillance systems used in evaluating program effectiveness. It also presents examples of surveillance. Finally, the course deals with disease surveillance at local and state levels, and surveillance techniques used in developing countries.

PHA 513: Environmental Protection Policies (3 credits)

The course deals with air pollution policy, water pollution policy, hazardous waste disposal policy, toxic substance policy, and monitoring enforcement of compliance with regulations. It evaluates the overall effectiveness of environmental regulations, and identifies trends likely to influence future environmental policy. Finally, the course deals with international concerns of global warming, for example, ozone depletion.

PHA 515: Drug Development and Monitoring Drugs (3 credits)

The course surveys the policies and procedures used by Multinational Corporations in the development and marketing of drugs, especially in the developing countries. It examines questionable marketing practices used by the Multinational Corporations (MNCs) in developing countries. Ethical marketing guidelines developed by international watch groups will be discussed. In addition, the safety of drugs will be examined.

PHA 516: Health Care Management (3 credits)

This is a survey course, describing different health services organizations, which go into the total health care system as input. Health care delivery is the output of this complex system. In the process, numerous factors involving technology, human resources, environment, legal/ethical issues, financial resources, market competition, government regulations, access and quality of care, patient outcomes, etc. The health care managers of today and tomorrow have to learn management techniques like: organizational theory, strategic planning, inter-organizational linkages, managing people, labor relation, occupational safety, acquisitions, mergers, provider/payer compensations, and provider/patient satisfaction. The course covers all that and more.

PHA 517: National Healthcare Delivery (3 credits)

This course gives an overview of the health care system in the United States. The health care system in United States is the most fragmented and complex health care system in the world. It is also the most expensive system in the world. But also, it is the most inadequate system, covering only partially, the people it is suppose to cover. Approximately 40 million people have no health coverage at all. Approximately the same number of people is not covered adequately. The rapid shift to managed health care is making it more difficult to understand the process of health care in America. The course will examine how scores of agencies/programs, numerous funding sources, multitude of insurance plans, and different provider set ups, work. It will also examine various mechanisms through which providers are paid, and services are delivered. To understand this health care delivery system is an education in itself. The course will try to do that.

PHA 518: Computers and Healthcare (3 credits)

Basic computer literacy is introduced with emphasis on computer use by the health care manager. Students explore the application of computer technology to the health care and health insurance industry.

PHA 520: Ethical Issues in Healthcare (3 credits)

Students investigate how the practice of ethics interfaces with health services. The ethical concerns of contemporary issues such as abortion, premature births, the use of life support systems, AIDS, and drug and alcohol abuse are just a few of the issues that will be addressed.

PHA 521: Legal Issues in Healthcare (3 credits)

Students explore the legal process in the United States as it relates to the health care community. An overview of the legal issues that impact the management decisions of the health services administrator is provided. Special emphasis is placed on understanding public accountability and liability, the rights of patients, and the current legal problems faced by health care workers. Supplemental readings are provided related to the law in the student's home country.

PHA 522: History of Healthcare (3 credits)

Healthcare and its delivery have changed through out history but have accelerated with the growth of technology. The impact of various technologies in equipment and facilities will be studied. A report will be written from a literature review on a particular segment of the history of healthcare and the impact of technology. The first part of the course gives analysis, history, evolution, and development of the field of public health. "It traces the history of health and community from Greco-Roman world to public health in Middle Ages. It covers the health of people and diseases in Mercantilism and Absolutism period (1500-1750 AD); health in the period of Enchantment and Revolution (1750-1830); Individualism and the Sanitary Movement (1830-1875); the Bacteriological Era and its aftermath". In the second part, the course provides two long historical movements for the development of American Medicine. First, " the rise of professional society, and second, the transformation of medicine into an industry, and the growing though still unsettled, role of corporations and the state".

PHA 523: Manager Health Care (3 credits)

The course will discuss main principles of managed care including cost, access and quality of care. It will also discuss various forms of managed health care organizations, the various kinds of incentives these provide to the provider as well as members. Main features of managed care, i.e. promotion of wellness, prevention of disease, early detection of disease, patient education, etc., will be discussed as well.

PHA 525: Introduction to Health Policy (3 credits)

The course will discuss major health policy issues facing health care systems in both public and private sector. The main focus of the course will be the health policy issues in the United States, but also will present health policy issues in international scene as well. The course will survey the evolution of different health care systems, the interest groups, the source of their financing, the quality of care, and access to care under those systems.

PHA 526: Management of Public Health Organizations (3 credits)

This is a survey course, describing different health services organizations, which go into the total health care system as an input. Health care delivery is the output of this complex system. In the process, numerous factors involving technology, people, environment, legal/ethical issues, use of financial resources, market competition, government regulations, access and quality of care, patient outcomes, etc., are involved. The health care managers of to-day and tomorrow have to

learn management techniques like: organizational theory, strategic planning, inter-organizational linkages, issues concerning managing people, labor relations, occupational safety, acquisitions, mergers, provider/payer compensation, and provider/patient satisfaction. This course covers all that and more.

PHA 527: Health Care Financial Management (3 credits)

The course provides student with framework of basic financial management principles which non-financial managers need to know for health care managerial functions. Students will learn how to prepare operating budgets, capital budgets, negotiating budgets, performance reports, financial statements. It will also help student develop skills in financial analysis and management decision making.

PHA 529: Marketing Public Health (3 credits)

This course will help students learn basic skills and concepts of marketing and how to use those skills in strategic planning in health care. Integrating marketing principles with public health practice will help to implement and enhance the effectiveness of certain initiatives. Marketing principles, if applied sensibly, can help change public opinion for certain public health issues. The health care professional can use these "Madison Avenue Technique," to bring about social change for the good of the community and populations. This course introduces a new paradigm in public health vis-à-vis marketing, promotion, and advocacy.

PHA 530: Legal Aspects of Public Health (3 credits)

This course is designed for non-attorney health professionals to acquire working knowledge of law and legal system in the United States. The course describes health related statutory laws, rules, regulations, and guidelines which health managers need to know to manage health care facility. The course specifically deals with tort law, criminal aspects of health care, contracts and antitrust laws, corporate liability, nursing and law, professional liability, information management and health care, patient consent, legal reporting obligations, patients rights and responsibilities, malpractice insurance, end of life issues, issues of procreation, and others.

PHA 531: Continuous Quality Improvement in Health Care (3 credits)

Total Quality Management/Continuous Quality Improvement has come to light as a paradigm shift for quality assurance in the industrial world during 1970s. The fundamental principles used to improve and maintain quality of a "product," in the industrial/consumer world has direct parallelism in health care industry as well. The high quality health care delivery (the product), encompasses many ingredients like planning, organizing, and leading continuous quality improvement, involving clinicians, information systems, diagnostic laboratories, public health organizations, academic health centers, community health centers, patient outcomes, provider/patient satisfaction, management decision making, and economic analysis, etc., all this involve interdisciplinary approach. The course uses the concepts from operations management, organizational behavior theory, health services research, and translates into health continuous quality improvement in health care delivery.

PHA 532: Management Information Systems in Health Care (3 credits)

The focus of the course is to give students basic concepts, methodology, and applications of management systems in an integrated health care delivery. The course provides theories,

technology, applications, and future of health information systems. It also gives students view how these systems can generate high quality cost-effective way of delivering health care.

PHA 533: Human Development and Health Care (3 credits)

Human development and Public Health go hand in hand, especially in developing countries. The focus of this course is to study the process of human development vis-à-vis public health. Human development brings about economic development and empowerment, which in turn brings about improved public health. This course will deal with selected case studies of certain developing countries.

PHA 534: Role of Multinational Corporations in Public Health (3 credits)

Multinational Corporation, as well as non-governmental agencies have traditionally played a major role in the Public Health field. The MNCs have provided new technology and products to the developing countries via technology transfer in health and pharmaceutical fields. The international non-governmental and professional agencies (NGOs) have delivered health services to the populations where local governments could not take care of the health needs of their own people. Such help has been rendered in epidemics, natural disasters, civil unrest, for example, in a timely manner. This course will study the piece-meal efforts of all of these organizations, and we will endeavor to develop a working model for 21st century, where different agencies can coordinate their efforts to eradicate certain diseases and to prevent the others.

PHA 536: Comparative Study of Healthcare Systems (3 credits)

This is a survey course of health care delivery systems in USA, Canada, UK, Sweden, Germany, China, Australia, Poland, India, etc. After the survey students should be able to develop a model most suitable for health care delivery in their own country, or even suggest a model for USA.

PHA 537: The Health Care System (3 credits)

This course presents an overview of the health care system of the student's own country from an historical perspective. Students investigate the health care system as it exists today including links between hospitals, private practice, health care workers, physicians, extended care facilities, and government hospitals. The major difficulties confronting the health care system in a given country should receive special attention.

PHA 538: Principles of Healthcare Management (3 credits)

Students are introduced to the history, principles, and challenges of management. A broad spectrum of management issues are reviewed and related to the health service environment. Important issues in planning and development, leadership, organizational behavior, and personnel management receive special consideration.

PHA 540: Administration of Healthcare Facilities (3 credits)

Students explore readings in managing health care facilities focusing on hospitals. The course covers principles, practices, structure, and delivery of health services.

PHA 547: Health Care Budgeting (3 credits)

This course continues the discussion of healthcare finance and emphasizes practical aspects of budgeting for department managers, VPs and CEOs. Prerequisites: PHA 532

PHA 548: Health Care Human Resource Management (3 credits)

This course covers key concepts of HR as applied to the healthcare administration setting. Concepts include conflict management, managing teams, negotiating, alliances, harassment and others. Prerequisites: none.

PHA 550: Health Care Management Information Systems (3 credits)

This course explains the design and use of healthcare information systems, including managed care software, Internet applications, computer-based records, quality assurance, management decision making and forecasting. Prerequisites: none.

PHA 551: Medical Staff Administration (3 credits)

This course discusses principles and practices of medical staff management, credentialing, working with physicians and contract issues. Prerequisites: none.

PHA 552: Marketing for Health Care (3 credits)

This course covers marketing tools and techniques. Many successful examples from "real world" healthcare organizations are included. Strategic marketing, advertising, promotion, market research and buyer behaviors are all addressed. Prerequisites: none.

PHA 555: Quantitative Analysis for Health Care (3 credits)

This course teaches effective use of quantitative analysis techniques for management decision making in healthcare. Common software applications are addressed. Prerequisites: none.

PHA 556: Codes and Standards in Healthcare (3 credits)

A study of the building codes, fire codes, healthcare codes and standards that are applicable to healthcare facilities. This will be tailored to the country of the student, but will involve comparison of codes and standards in other countries. The applicable codes and standards in the student's country will be reviewed and interpreted to apply to a healthcare facility. A comprehensive report will be written.

PHA 557: Injury Prevention (3 credits)

Injury can be studied as a disease. Finding the causes of occurrence, identifying those at risk, and intervening to prevent injury can reduce death and disability. The course develops strategies to prevent a variety of injuries. Injury affects all segments of the population, but the poor and minorities bear a disproportionate burden of injury. The course studies underlying causes of injury in terms of social, environmental, and economic conditions for this disparity. Injuries are an enormous public health problem, and they kill more than 150,000 Americans each year. Alcohol and drugs play a role in nearly half of these deaths. Changing social attitude and personal behavior are challenges which public health professionals face. The course recommends, among other things, community-based intervention to prevent or reduce injury.

PHA 558: Clinical Engineering (3 credits)

Clinical engineering is the engineering discipline that relates to patient care. The maintenance of medical equipment and its safe use is part of clinical engineering. After reading texts and articles on clinical engineering, a report will be written for a case study to develop a clinical engineering program.

PHA 559: Healthcare Facility Construction, Maintenance and Repair (3 credits)

The development of a project and cost estimating is required for maintenance, repair and construction of the healthcare physical facility. The project planning must consider how patient care can continue to be given in an effective and safe manner. A construction project will be developed from a case study including a project management plan. A maintenance and repair project will be developed through discussion with administrative and clinical staff in a healthcare facility.

PHA 560: Quality Assurance in Healthcare Facilities (3 credits)

A study of how ISO 9000 can be applied to assure quality facility management and quality healthcare. Quality improvement can improve the facility management and reduce costs. A report will be prepared to show a healthcare facility could become ISO 9000 registered. The report will be based on a real institution.

PHA 561: Heating, Ventilation and Air-Conditioning (3 credits)

The heating, ventilation and air conditioning (HVAC) is a complicated part of healthcare facility management. It has to take into account such things as infection control, TB and special units such as operating rooms and nurseries. A study will be completed with a paper discussing the special HVAC problems of a healthcare facility from a case study.

PHA 562: Telecommunications and Healthcare (3 credits)

Telecommunications is rapidly changing inside a healthcare facility as well how it connects to the outside world. The lines between telephones, television and computers are blurring to the world of telemedicine and telemaintenance. The facility manager is responsible for the wires and interfaces required making all this work. Through literature search and interviews a paper will be developed on the history and future of telecommunications and telemedicine. A telecommunications system will be developed for a healthcare facility from a case study.

PHA 563: Environmental Audit in Healthcare Facilities (3 credits)

The environment of buildings and grounds can result in a sick building due to poor air quality and grounds that contain hazardous waste. An environmental audit is required to determine where the problems are and non-compliance with regulations. A paper will be written with an environmental audit of a healthcare facility with recommendations for corrective action.

PHA 564: Fire Safety in Healthcare Facilities (3 credits)

Study of fire chemistry, means of fire extinguishment, means of egress and fire prevention measures to include automatic sprinkler systems. This study will include codes that apply to healthcare facilities. The study will be accomplished from reading texts and journal articles and discussion with fire professionals. Codes will be reviewed as applicable to student's country and

the International fire Protection Association. A fire prevention and protection plan will be developed for a healthcare facility to take into account patients, employees and visitors.

PHA 565: Quality Improvement and Safety Motivation (3 credits)

Motivation is the key to a good safety program and adult learning is driven by motivation. In many areas of safety there are mandatory training requirements and some can be accomplished with the use of technology. Motivation and adult learning concepts will be studied by literature review. Different training modalities including the use of technology will be reviewed and a paper written on the best approach for different safety training requirements. Quality improvement is another important concept for safety. Through quality improvement accidents and lost time injuries can be reduced. A paper will be developed by applying quality improvement concepts to show how accidents and lost time injuries can be reduced.

PHA 566: Industrial Hygiene and Infection Control in Healthcare Facilities (3 credits)

Study of recognition methods, evaluation techniques and control of environmental hazards, which may effect the employee's health and efficiency. The study will be accomplished from reading texts and journal articles and discussion with industrial hygienists. In addition, students will investigate issues of infection control in healthcare facilities. Infection is a unique hazard for the healthcare industry. With the advent of AIDS and the increasing occurrence of TB, infection control has become important to employees as well as patients. Through reading texts and journal articles, a paper will be written describing the causes and routes of infection and control measures. Solutions to problems in industrial hygiene and infection control will be developed from case studies.

PHA 567: Accident Investigation (3 credits)

Accident investigation requires skill to determine the causative factors of accidents and the implementation of controls of these causative factors to prevent recurrence of accident reports will be written for accident investigations based on case studies or actual situations. Through reading and discussion with safety professionals a paper will be written to describe how to accomplish an accident investigation.

PHA 570: Historical Perspectives in Safety Management (3 credits)

Safety has changed though out history as mankind has developed an understanding of the hazardous nature of materials and an appreciation for human life. Ethical and legal aspects of safety have developed with codes and standards. From a literature review a paper will be written on the history of safety with emphasis on a particular area or time frame.

PHA 571: Risk Management and Job Safety Analysis (3 credits)

Risk management in healthcare institutions is mostly related to patient incidents and loss control through insurance and legal issues. As safety issues have become more important with regard to employees, risk management programs are working with employee safety. Through a literature search and discussion with healthcare risk managers, a paper will be developed describing how a risk management programs functions. Safety professionals must also understand and apply the basic principles of Job Safety Analysis to integrate safety into the performance of specific jobs. The Job Safety Analysis can be incorporated into a standard job analysis. Job Safety Analyses

will be written for case studies. From reading texts and journal articles a paper will be written analyzing the major methods for Job Safety Analysis.

PHA 572: Economics of Safety Management (3 credits)

Management is frequently not totally supportive of a safety program because of the cost. The savings as a result of fewer accidents, less lost time and more productive employees must be demonstrated. Through a literature search, a paper will be written analyzing the cost benefits of a safety program. This paper will include direct and indirect cost and savings.

PHA 574: Healthcare Safety Management (3 credits)

Healthcare institutions must have safety management for employees, visitors, volunteers and their patients. Unsafe acts, equipment failures, fire hazards and other dangerous conditions such as radiation and electrical hazards may have serious consequences that make safety a high priority. Students will explore safety issues related X-rays and radioisotope, lasers and microwaves, and equipment which may cause microshock, macroshock and electromagnetic interference. Through reading texts and discussion with safety personnel, a paper will be developed describing the various safety hazards in a healthcare facility and the controls used.

PHA 576: Facility Management in Healthcare (3 credits)

A facility manager in a healthcare facility must be aware of the facility structure and equipment support for the delivery of healthcare. The changes in healthcare delivery and technology require changes in the facility and its management. Through a literature search and visits with healthcare providers a paper will be developed to discuss how facility management must change to support healthcare delivery.

PHA 577: Strategic Planning in Facility Management (3 credits)

Facility management for a healthcare facility must be driven by a strategic plan and have a formal business plan. A business plan will be developed for facility management in a healthcare institution from a case study. This plan must be driven by a strategic plan that supports the institutions strategic plan.

PHA 579: Environmental Management in Healthcare Facilities (3 credits)

Housekeeping is an important aspect to healthcare facility management. Infection control has to be considered as well as the physical appearance to patients and visitors. Environmental services are impacting with new finishing materials and cleaning technology. Through a literature search, papers will be written on Environmental Management Services and changing technology and on the impact to patient care.

PHA 580: Equipment Management in Healthcare (3 credits)

The medical equipment and the physical plant equipment represent a major investment and cost of operations for a healthcare facility. Safe and effective patient care depends on the operation of the equipment. A good equipment management program starts with the purchase of equipment and ends with disposal of the equipment. A paper will be written describing an equipment management plan for a healthcare facility that will meet accreditation requirements, compliance requirements and minimizing the cost of operation without impacting patient care.

PHA 581: Utilities and Energy Management (3 credits)

Utilities and energy is a significant cost for a healthcare facilities operation. Good energy management is a way to reduce costs but it must not interfere with or reduce patient comfort and care. An energy management plan will be developed for a health care facility considering changing technology and distribution of utilities.

PHA 583: Information Management in Healthcare (3 credits)

A healthcare delivery system is driven by automated information and facility management must assure that the system is working and secured. Technology is developing rapidly so patient records are merged from equipment readouts and automated doctors and nurses notes. Students develop a scholarly paper through interviews and literature search to show how information systems are developing in healthcare and how they are managed and secured.

PHA 585: Occupational Safety Management(3 credits)

The course is based on the premise that "machines do not cause accidents, people do. One needs to change human behavior to bring about safety in the work place. It requires a change of culture and team effort.

PHA 586: Health Science Principles (3 credits)

The course deals with certain basic concepts and principles, which form the basis of health sciences. The scientific principles relate to general biotechnology, therapeutic biotechnology, chemotherapy, structure/activity relationship, pharmaceuticals, enzymology of disease and therapy, genetics and gene-therapy, hormones and hormone-therapy, principles of diagnostic technology, nutrition, biochemistry of nutrition, receptors and pharmacological actions.

PHA 587: Biochemistry (3 credits)

This course deals with fundamentals principles of biochemistry, including process of life, biological molecules, amino acids, polypeptides, proteins, polysaccharides, sugars, lipids, enzymes and their properties, structure, and functions in biological systems.

PHA 588: Human Genetics (3 credits)

The course deals with the introduction and history of human genetics and fundamental concepts of genetics. It starts with basic cell biology, structure and function of genes and chromosomes. Then it goes into genetic variations and its origin and detection. It then explains autosomal dominant and recessive inheritance, sex-linked inheritance, clinical cytogenetics, biochemical genetics, immunogenetics, developmental genetics, gene mapping, and cloning, cancer genetics, multi-functional inheritance and common diseases, genetic screening, genetic diagnosis, and gene therapy. Finally, the course also deals with clinical genetics and genetic counseling

PHA 590: Principles of Medicinal Chemistry (3 credits)

The course deals with introduction and historical aspects of medicinals of plant origin, biopharmaceutical properties of drugs, structural features and pharmacological activity, theoretical aspects of drug design, receptors and drug action theory, drug metabolism, and various classes of drugs, both of natural and synthetic origin. Structure-Activity Relationship of various classes of drugs is also discussed in details as well as the drugs used for various diseases.

PHA 591: Metabolism (3 credits)

The course deals with basic concepts of metabolism in biological systems. Various forms of metabolism and metabolic pathways, including glycogen metabolism, citric acid cycle, electron transport and oxidative phosphorylation, carbohydrate metabolism, photosynthesis, lipid metabolism, amino acid metabolism, energy metabolism, and nucleotide metabolism are discussed. This course gives an over all view of biological transformations in living systems

PHA 592: Disease Prevention and Human Nutrition (3 credits)

The course deals with applying nutritional science to public health and disease prevention issues, including assessing community needs for nutritional services, reaching out to those at high risk, help develop community and state nutritional policies, serving women, infant and children, promoting the health of the adults. It also discusses providing nutritional services in primary care, planning and evaluating nutritional services, marketing nutritional programs and services, providing nutritional education, helping change eating habits for good nutrition, and safeguarding food supply. The course deals with various aspects of nutrition, including: foundations of community nutrition, nutrition policy and health care reform, food borne illnesses, nutrition for pre-schoolers, nutrition for school-age children, adults and their nutrition needs, primary prevention of diseases, secondary and tertiary prevention of diseases, i.e. coronary heart disease, cancer, diabetes mellitus, hypertension, obesity, osteoporosis, alcoholism, arthritis, and renal disease. The course gives up to date knowledge about nutrition and disease prevention.

PHA 593: Physiology (3 credits)

The course deals with basic concepts of human physiology, including cell physiology, body process and function, nervous system, muscle, cardiovascular system, respiratory system, gastrointestinal system, and endocrine system.

PHA 594: Pharmacology (3 credits)

The course deals with general principles of pharmacology, including pharmacokinetics and pharmacodynamics. More specifically, the course involves in the discussion of chemical mediators in pharmacology, drugs affecting major organ systems, drugs affecting the central nervous system, chemotherapy of infections, chemotherapy of malignant diseases, individual variations in drug actions, drug interactions, harmful effects of drugs, and gene therapy.

PHA 595: General Principles in Toxicology (3 credits)

The course begins with the history and scope of toxicology. It then goes into general principles of toxicology, including absorption, distribution, and excretion of toxicants, bio-transformation of toxicants, chemical carcinogenesis, genetic toxicology and teratogens. The course then leads to systemic toxicology, including toxic responses of toxins to blood, immune system, liver, kidney, respiratory system, nervous system, heart and vascular system, skin, reproductive system, and the eye. Lastly, course deals with the toxic effect of various toxic agents. The toxic agents discussed are pesticides, metals, solvents and vapors, radiation and radioactive materials, animal toxins, and plant toxins. The course also touches on environmental toxicology.

[Instructors: Dr. Vijay P. Gupta and others]

PHA 596: Clinical Toxicology (3 credits)

The course starts with the acquisition of knowledge regarding the mechanism of absorption, distribution, transformation and elimination of drugs. Then it goes on to pharmacokinetics and pharmacodynamic principles and the various factors responsible for the process. It covers various methods available for drug screening for patients poisoned with unknown drugs. The next step of this course expects the student to acquire the knowledge about the therapeutic drug monitoring, its principles and methodology available, common drugs to be monitored. Lastly the course covers the drug of abuse, drug addiction, drug dependence and drug overdose.

[Instructors: Dr. Vijay P. Gupta and others]

PHA 597: Forensic Toxicology (3 credits)

The course begins with the fair knowledge of laws relating to poisons, its sale and use. It then goes into various poisons used for human and animals and moves to classify the poisons on the basis of their characteristic and their availability in the domestic setup. The course covers the duties of the medical practitioner in cases of poisoning and the criteria of diagnosing poisoning in living as well as dead. The course then leads to acquire the knowledge of post-mortem findings in various poisoning cases, radioactive substances and their effects on human health and food poisoning. The course extends to issues like drug addiction, drunkenness, anesthetic deaths

PHA 598: Advanced Toxicology (3 credits)

The course begins with acquiring the knowledge about various analytical techniques used in the field of toxicology. Then it deals with the poisons responsible for genetic mutations. Further deals with chemical carcinogens and its mechanism. The course then leads to the knowledge to toxicity caused by trace elements and natural toxins. It further gives an insight into in-vivo and in-vitro testing techniques. Lastly it covers the mechanism of resistance and tolerance development to toxicants. [Instructors: Dr. Vijay P. Gupta and others]

Research Preparation

RES 504: Introductory Research Statistics (3 credits)

This course covers the basic statistical concepts, theory and methods in statistical research. Topics include variables, graphs, frequency distributions, measures of central tendency, measures of dispersion, probability theory, binomial, normal and Poisson distributions, statistical sampling theory, and statistical decision theory.

RES 506: Advanced Research Statistics (3 credits)

This course covers parametric and nonparametric hypothesis testing. Topics include sampling theory, Chi-square test, least squares regression, correlation theory, non-linear regression, analysis of variance, Student's t-test, and various methods in nonparametric analyses.

RES 508: Qualitative Research (3 credits)

This course provides detailed study of qualitative research methods. Topics survey historical and theoretical foundations of qualitative research, explore major qualitative research strategies, and build an understanding of the art and science of collecting, analyzing, and interpreting qualitative information. The course provides background on qualitative research, the politics and ethics of qualitative inquiry, and the major paradigms that inform and influence qualitative research.

RES 510: Participatory Action Research (3 credits)

This course provides the foundational principles of participatory action research. Topics survey theoretical foundations of action research, the methodology and applications of PAR in contemporary culture. Students assess the rigor and usefulness of participatory action research.

RES 512: Effective Data Analysis (3 credits)

This course examines modern scientific data analysis including the elements of effectiveness in study design, data gathering, processing of statistics and interpretation of findings.

RES 520: Social Science Research Methods (3 credits)

This course examines essential issues in social science research. Topics include assessment of data gathering techniques using selected case studies from journal articles. Students learn to measure attitudes and performance, use tests in data gathering, contrast and compare uses of statistical and qualitative methods, and evaluate focus group research

RES 525: Biostatistics in Healthcare (3 credits)

The course deals with basic concepts of biostatistics. Students will learn statistical skills for collecting, organizing, analyzing, evaluating, and interpreting data. The first part of the course deals with descriptive statistics, graphical and tabular presentations, and group comparisons, leading to finding among other things, burden of disease in populations and association of risk factors and disease. The second part of the course deals with probability theory, statistical inferences, and hypothesis testing.

Finishing Activities

EXM 880: Comprehensive Examination (2 credits)

Masters students complete this comprehensive examination as a required element of their academic program, prior to undertaking the thesis. The examination usually includes both written and oral components and is confined to the programs of studies completed by the student.

RES 885: Thesis Proposal (2 credits)

This course is required of all Masters students designed to guide them through the formal research proposal process for their final projects, including the development of the research methodology, data gathering device and data analysis techniques. Students also prepare annotated bibliographies of the major scholarly works underlying their project.

RES 890: Thesis (4 credits)

This course governs the conduct of the thesis project for the Master's level student. The Master's thesis is the demonstration of the mastery of a body of knowledge in a given field and is presented in a manuscript usually 75 or more pages in length. The final project may take any of several forms, depending upon the field of study and the expectations of faculty. This may be quantitative or qualitative research, participatory action research, or a major project demonstrating excellence. Master's students may re-enroll for this course for no-credit, as needed.

EXM 895: Oral Review of Thesis (2 credits)

This examination is an oral review of the Master's thesis conducted by the graduate committee immediately following their reading of the thesis manuscript.