



GRADUATE PROGRAM IN PUBLIC HEALTH

Graduate Program in Public Health

Core Faculty:

Director: Raymond L. Goldstein

Professors: Raymond L. Goldstein, John A. Rizzo

Research Associate Professor: Karen Goldstein (SHTM)

Assistant Professors: John Chen, Hongdao Meng

Affiliated Faculty:

Professors: John Chaves (Dental Medicine), John L. Coulehan (Preventive. Medicine), Steven Jonas (Preventive. Medicine), Charles L. Robbins (Clinical Social Welfare), Warren C. Sanderson (Economics), Nancy J. Tomes (History), George Tortora (SHTM), Patricia C. Wright (Anthropology)

Associate Professors: Candyce Berger (Social Welfare), Sharon A. Nachman (Pediatrics), Nanci Rice (SHTM) Thomas O'Riordan (Medicine)

Assistant Professors: Feroza Daroowalla (Medicine), Debra S. Dwyer (Economics), Linda E. Francis (Social Welfare)

Clinical Assistant Professors: Lisa A. Benz Scott (SHTM), Jeannette O. Coane (Nursing), Hector Sepulveda (SHTM)

Adjunct Professors: Peter Hotez (George Washington University), Brian Harper (Commissioner of Health Services, Suffolk County Department of Health)

Adjunct Associate Professor: Victor Jimenez (VA Hospital)

Adjunct Assistant Professor: David G. Graham (Suffolk County Department of Health)

Lectuer: Mahfouz Zaki (Suffolk County Department of Health)

Mission and Goals

The Health Sciences Center at Stony Brook University has established the Graduate Program in Public Health to train health and health-related professionals who wish to integrate the knowledge, skills, visions, and values of public health into their careers and provide leadership in the field. The program will lead to a Master of Public Health (MPH) degree.

The program will aim to develop among students and professionals within the Health Sciences Center and on Long Island the values, commitment, knowledge, and technical skills necessary to advance the field of public health through application of the population health approach. The hallmarks of population health are an ecological understanding of the determinants of health and a systems approach to solving health problems; emphasis on proactively stabilizing and improving health among all populations; and insistence on accountability, evidence-based practice, and continuous performance improvement. The population health approach requires multi-disciplinary collaboration among scholars in the social, clinical, and basic sciences and humanities; development of comprehensive, sophisticated health information systems; and use of advanced analytical tools to examine health problems and evaluate responses to them.

Population health grew from recognition among health professionals and policymakers that enormous health care expenditures in the United States have not resulted in concomitant improvements in health; indeed just the opposite is the case. The goal to "produce" and maintain healthy populations, effectively and efficiently, is a driving force behind the population health approach. This is a particularly acute concern in a world of limited resources, where competing agendas vie for the same resources. Population health is also motivated by social and demographic shifts in national and international populations that have changed the kinds, and scope of, health problems that confront the health care community. Implementing a population health approach has been made more viable by progress in several areas, including:

- Advances in our understanding of health and illness as having multiple determinants - social, behavioral, environmental, demographic, occupational, economic, policy, and genetic - in addition to health care
- Advances in analytical techniques and information technology that improve our ability to examine and model health problems and evaluate strategies to address them from an ecological, or systems, perspective
- Advances in the basic sciences such as molecular biology and genetics that enable us to include these factors in our models
- Advances in medical technologies such as imaging that increase our ability to detect, monitor, and treat health problems and, therefore, improve our models and increase the range of strategies available for addressing population health problems.

The orientation of the proposed program is also compatible with the educational philosophy of the Health Sciences Center. The Health Sciences Center opened in 1971, emphasizing the need for interdisciplinary education and collaboration, recognizing a great need for health professions to work together. In this way, they hoped that standards and professionalism would be maintained as a result of students having the opportunity to work in a collegial atmosphere at an early stage of their education, where they would learn to respect each other and their diverse competencies.

The Graduate Program in Public Health will further this goal by providing an organizing structure within the Health Sciences Center for cross-professional interactions and collaborations around the issue of how to maintain and improve the health of populations - with each profession contributing its knowledge and perspective to the educational experience. Through involvement in the proposed program, the Health Sciences Center will foster collaboration that may lead to reinvention of public health, other health professions, and the health care system.

Therefore, the Graduate Program in Public Health will pursue educational, research, and service activities that bring the strengths of Stony Brook University, particularly the Health Sciences Center, to bear on issues of population health. The program will emphasize collaborative, boundary-spanning scholarship and cognizance of the forces that shape population health and affect the well-being of communities. It will provide a neutral forum in which all perspectives on how to maintain and improve health within the health sciences can be heard, considered, and debated.

The vision of the Graduate Program in Public Health is to improve the health of populations on Long Island and in the region, state, and nation through education, research, and community service that utilizes all of the scholarly resources of Stony Brook University in a collaborative and boundary-spanning manner.

The mission of the proposed program is to develop among students and professionals the values, commitment, knowledge, and technical skills necessary to advance the field of public health through application of the population health philosophy.

The goals of the Graduate Program in Public Health are to:

- Develop a nationally recognized, accredited, graduate educational program in public health that instills in students the values, commitment, knowledge, and technical skills necessary to improve health through application of the population health philosophy
- Advance knowledge in the public health field by developing an active program of population health research among faculty and students in the program and other health-related professionals at Stony Brook University
- Provide community partnerships of the highest quality that benefit the health of local, regional, and State populations

To achieve its educational and community benefit goals, the program will train public health professionals who:

- Understand the multiple determinants of health and illness including social, behavioral, environmental, demographic, occupational, policy, economic, and genetic, as well as health care
- Appreciate the need for interdisciplinary collaboration in order to understand population health problems and develop optimal strategies to address them
- Have the strongest analytical, conceptual, and communication skills in order to facilitate development and implementation of optimal strategies for addressing population health problems.

Accreditation

This program falls under the general Stony Brook University accreditation. In the near future, accreditation will be sought from the Council on Education for Public Health (CEPH).

Research Center for Health Policy Management

The Graduate Program in Public Health and the Center has named population health research as a priority area for development. We have considerable success in recruiting top research scientists. The center also benefits from the interest of scientists at the HSC as well as across the university. All are enthusiastic about our initiatives. We are hopeful that policy makers and communities will contact us regarding our analytical capacity to better the well-being of our communities. Originally established to carry out suburban research, especially on Long Island, the Center emphasizes interdisciplinary scholarship. Therefore, the Center will provide broad-based collaboration among scientists to study how key characteristics of suburban communities have changed, how they compare to adjacent areas and how these factors affect its population health.

Admission Requirements

Although admissions requirements will be rigorous, the program will aim to develop camaraderie, cooperation, and cohesiveness among students in each cohort. For this reason, core courses will be taken together. Admission to the program will be during the fall semester only.

The Graduate Program in Public Health will seek intellectually driven, inquisitive people from different socioeconomic, educational, racial, and ethnic backgrounds who can provide special contributions to the field of public health and the program. The program will consider the potential contribution of each applicant to the student body and the public health field. Applicants will be evaluated on academic achievement, leadership potential, professional

accomplishment, and personal attributes. Excellent written and oral communication skills will be expected. Fluency in more than one language will not be required for admission, but it is becoming increasingly desirable for the practice of population health. The program will reserve the right to limit class size in order to maintain an appropriate faculty/student ratio that ensures a high quality academic program. Therefore, program admission will be highly selective, and not all qualified applicants will be accepted.

Admission to the Standard Program will be open to persons with a Bachelor's degree or a non-clinical Master's degree. Persons with a clinical Master's degree will be eligible for the Professional Option (See below). Each degree must be from an accredited U.S. or Canadian college or university. There are special admission requirements for persons who have earned degrees from schools in other countries.

Admission to the Professional Option will be open only to:

- The health professional holding a graduate clinical or relevant degree with an equivalent at the Stony Brook University Health Sciences Center or other SUNY campuses (e.g., MD, DDS, MS, MSW), or from an accredited U.S. or Canadian college or university. Preference will be given to applicants who are licensed, registered, or certified, where applicable
- The student who is currently enrolled in a graduate clinical or relevant program with an equivalent at the Stony Brook University Health Sciences Center or other SUNY campuses (e.g., MD, DDS, MS, MSW), or in an accredited U.S. or Canadian college or university
- The professional with relevant experience and demonstrated leadership abilities, as determined by the Academic Committee, will be considered.

Note: the Admissions Standards Committee will consider all factors including grades, GRE scores, recommendation letters, essay, prior training, and professional experience.

Goal of the Graduate Program in Public Health is to graduate students who will eventually assume leadership positions and contribute creatively to public health, and the admission policy reflects this goal. The admission policy for the Standard Program and Professional Option will be:

- Bachelor's degree from an accredited U.S. college or university. The major must have an equivalent at the State University of New York (SUNY)
- GRE with a total score (verbal, quantitative, and analytical) at or above the 85th percentile. Number of years since university training will be taken into account when a student's score is reviewed. Students who have equivalent scores from their clinical professional examinations will not be required to provide GRE scores
- Three references from persons who can address the applicant's capacity to provide leadership in public health and complete a course of graduate study. At least one letter must be from a college or university faculty member with whom the applicant has studied, if applicant has graduated within the last two years
- A one-page essay with a "Statement of Purpose" addressing the applicant's hopes to contribute to the improvement of health in the community and why the applicant is seeking the MPH degree at Stony Brook University
- Official transcripts from all post secondary schools and proof of licensure for licensed health professionals
- International students who trained in non-English speaking schools, and do not reside in an English speaking country, will be required to take the TOEFL exam.

- Recommendation: Calculus or linear algebra is recommended for students entering the Evaluative Sciences Concentration, or Health Economics Concentration (Pending approval).

It will be a goal of the Admissions Standards Committee to select applicants who have the academic capability, aptitude, character, personal qualities, and commitment to provide future value to society through leadership and creative contributions to the field of public health.

In addition, the program will require satisfactory completion of a basic undergraduate or graduate course in statistics, an undergraduate calculus course, or an advanced undergraduate algebra course. Also, students without a clinical background will be required to demonstrate basic knowledge about the biomedical foundations of health and illness. Students without prior coursework in these areas must complete an approved course in the biomedical foundations of health. Students will be admitted to the program on the condition that this course will be completed by the end of the first semester.

The applicant must meet any other requirements of the University's Graduate School, not stated here. Interviews may be required.

Credit Transfers

If admitted to the program, the following criteria will apply as pertains to credit transfers:

- Credits transferred from another college or university must be for courses comparable to Stony Brook University MPH graduate courses, and transfer eligibility must be approved in writing by the program advisor and the chair of the curriculum committee who will authorize approval
- Credit transfers must be requested no later than the student's first semester at Stony Brook
- Credit transfers must be approved by the Academic Committee.

All core courses must be taken at Stony Brook University, unless an equivalent was taken in an accredited Public Health Program with a grade of B or better. All concentration courses are to be taken at Stony Brook University, unless an equivalent course, with a grade of B or better was taken at an approved graduate program, with the approval from the advisor.

Public Health Core

MPH Core (23 Credits)

Required Core Courses (21 Credits)

| Course | Title | Credits |
|---------|--|---------|
| HPH 500 | Contemporary Issues in Public Health | 3 |
| HPH 511 | Biostatistics for Public Health | 3 |
| HPH 514 | Epidemiology for Public Health | 3 |
| HPH 516 | Environmental & Occupational Health | 3 |
| HPH 523 | Social Determinants of Population Health | 2 |
| HPH 543 | Public Health Ethics & Law | 2 |
| HPH 601 | Health Behavior & Risk Reduction | 2 |
| HPH 609 | Fundamentals of Health Care Management | 3 |

Core Selectives (Select 1)

(These courses may not be offered every year)

| Course | Title | Credits |
|---------|---|---------|
| HPH 530 | History of Public Health & Medicine | 2 |
| HPH 542 | Global Health | 2 |
| HPH 563 | Cost Benefit & Cost Effectiveness Analysis | 2 |
| HPH 612 | Grantsmanship in the Health Professions | 3 |
| HPH 636 | Community Analysis & Health Promotion | 2 |
| HPH 638 | Qualitative Health Research Methods | 3 |
| HPH 658 | The Use of Remote Sensing and GIS in Environmental Analysis & GIS | 3 |

MPH Culminating Experience (4 or 7 Credits)

| Course | Title | Credits |
|---------|--|---------|
| HPH 580 | Practicum | 2 or 5 |
| HPH 581 | Capstone Seminar: Ecological Solutions | 2 |

MPH Concentration (15 or 29 Credits)

Professional Option (15 Credits)

Standard Option (29 Credits)

Total Credit Hours for MPH Program

| | |
|---------------------|------------|
| Professional Option | 42 Credits |
| Standard Option | 59 Credits |

Professional and Standard Option

The Professional Option is a 42-credit curriculum or persons with an advanced clinical degree or a doctoral degree in a health-related field or currently studying for one of these degrees. Applicants may petition the Admissions Standard Committee to consider other factors, i.e. relevant experience, for this option. It consists of a public health core (23 credits), a practicum (2 credits), a capstone seminar (2 credits), and a concentration (15 credits).

The Standard Option is a 59-credit curriculum for all other applicants consisting of a public health core (23 credits), a practicum (5 credits), a capstone seminar (2 credits), and a concentration (29 credits).

Concentrations are:

- Community Health - Professional or Standard Option
- Evaluation of Substance Abuse or Family Violence Programs
- Professional or Standard Option
- Evaluative Sciences - Professional or Standard Option
- Health Economics - Professional or Standard
- Population Health Studies (a generalist concentration limited to Professional)

Concentrations

(1) Community Health is designed for health professionals who will work in a variety of community and public health settings. These settings include: state and local health departments, private health agencies, worksites and hospitals. It is also applicable for health professionals who are not specifically employed in a community health setting, but who develop and manage community health programs.

Professional Option – 15 credits
(Courses from School of Health Technology & Management)

| Course | Title | Credits |
|---------|---|---------|
| HPH 605 | Principles & Practices of Public & Community Health | 3 |
| HPH 606 | Long Island Community Health | 3 |
| HPH 607 | Community Health & Patient Education | 3 |
| HPH 608 | Communication & Group Dynamics | 3 |
| HPH 613 | Planning & Evaluating Health Programs | 3 |

Standard Option – 29 credits
(Courses from School of Health Technology & Management) Required (15 credits):

| Course | Title | Credits |
|---------|---|---------|
| HPH 605 | Principles & Practices of Public & Community Health | 3 * |
| HPH 606 | Long Island Community Health | 3 * |
| HPH 607 | Community Health & Patient Education | 3 |
| HPH 608 | Communication & Group Dynamics | 3 |
| HPH 613 | Planning & Evaluating Health Programs | 3 * |

Select five of the following (15 credits):

| | | |
|---------|------------------------------|-----|
| HPH 602 | Health care & Older People | 3 |
| HPH 603 | Women & Health care | 3 |
| HPH 604 | Community Mental Health | 3 |
| HPH 611 | Ethics and Health Care | 3 |
| HPH 614 | Epidemiology & Health Policy | 3 * |
| HPH 616 | Workplace 2010 | 3 |

* Three of the four courses marked are required, in addition to two additional Community Health electives from this list, in order to obtain the Advanced Certificate in Community Health.

(2) Evaluation of Programs: Substance Abuse or Family Violence is a concentration offered to both the Professional and Standard Option students. It is designed to train the next generation of public health professionals to conduct program evaluation of substance abuse or domestic violence programs. Students will have the framework for understanding the social issues surrounding these policy areas. They will gain the knowledge of program evaluation through the study of research design and analytic methods for rigorous inquiry into the effectiveness of these programs.

Professional Option – 15 credits (A or B)
(A) Evaluation of Substance Abuse Programs
(Courses from School of Social Welfare)

| Course | Title | Credits |
|---------|---|---------|
| HPH 622 | Research II | 3 |
| HPH 626 | Overview of Substance Abuse | 2 |
| HPH 630 | Cultural Competency: An Ingredient in Special Populations | 2 |
| HPH 631 | Enhancing Treatment Outcomes | 2 |
| HPH 632 | Psychopathology & Psychopharmacology | 2 |
| HPH 634 | Program Evaluation | 2 |
| HPH 637 | Health & Social Planning | 2 |

(B) Evaluation of Family Violence Programs
(Courses from School of Social Welfare)

Required:

| | | |
|---------|---|---|
| HPH 622 | Research II | 3 |
| HPH 629 | Managing Conflict | 2 |
| HPH 631 | Cultural Competence: An Ingredient Enhancing Treatment Outcomes | 2 |
| HPH 634 | Program Evaluation | 2 |
| HPH 635 | Seminar on Family Violence | 2 |
| HPH 637 | Health & Social Planning | 2 |

Select one of the following:

| | | |
|---------|--------------------|---|
| HPH 624 | Youth and Violence | 2 |
| HPH 625 | Children of Chaos | 2 |

Standard Option – 29 credits (A or B)

(A) Evaluation of Substance Abuse Programs
(Courses from School of Social Welfare and Other HSC Schools)

Required (23 credits):

| Course | Title | Credits |
|---------|--|---------|
| HPH 622 | Research II | 3 |
| HPH 626 | Overview of Substance Abuse | 2 |
| HPH 627 | Individual, Group & Family Treatment of Alcoholics & Substance Abusers | 2 |
| HPH 628 | Working with Adult Children of Alcoholics & Substance Abusers | 2 |
| HPH 630 | Chemical Dependency in Special Populations | 2 |
| HPH 631 | Cultural Competency: An Ingredient Enhancing Treatment Outcomes | 2 |
| HPH 632 | Psychopathology & Psychopharmacology | 2 |
| HPH 634 | Program Evaluation | 3 |
| HPH 637 | Health & Social Planning | 2 |
| HPH 638 | Qualitative Health Research Methods | 3 |

Select 6 credits from:

Courses in any MPH Program concentration. Selection requires approval of Advisor.

(B) Evaluation of Family Violence Programs
(Courses from School of Social Welfare and other HSC Schools) Required (23 credits):

| | | |
|---------|---|---|
| HPH 622 | Research II | 3 |
| HPH 624 | Youth and Violence | 2 |
| HPH 625 | Children of Chaos | 2 |
| HPH 629 | Managing Conflict | 2 |
| HPH 631 | Cultural Competence: An Ingredient Enhancing Treatment Outcomes | 2 |
| HPH 633 | Family Violence & Childhood Sexual Abuse | 2 |
| HPH 634 | Program Evaluation | 3 |
| HPH 635 | Seminar on Family Violence | 2 |
| HPH 637 | Health & Social Planning | 2 |
| HPH 638 | Qualitative Health Research Methods | 3 |

Select 6 credits from:

Courses in any MPH Program concentration. Selection requires approval of Advisor.

(3) Evaluative Sciences is a concentration developed to address the challenge for those in the health care field to provide better medical care more efficiently, and to develop more effective medical and public health interventions to limit the adverse effects of disease and disability. To a greater extent the health care field has been challenged to prevent disease and disability, rather than focusing mainly on their treatment. Meeting these challenges will require benchmarking the current state of health in populations and continual evaluation of progress toward achieving these goals. The Division of Evaluative Sciences will play a critical role in meeting these challenges by providing public health professionals with the analytical and statistical skills necessary to benchmark and evaluate health improvement initiatives in community and health care settings. The program builds on a rigorous core curriculum that includes advanced statistical and research methods for health studies in communities and health care organizations. The core areas are clinical research, clinical outcomes research, health services research, and public health research. There is a special emphasis on integrating cost effectiveness and cost benefit concepts into the curriculum so that resource allocation issues are considered. Graduates should be well prepared to conduct cutting edge research on important population health problems.

The division consists of faculty with training in research design, implementation, and analysis as well as expertise in evaluating the performance of specific areas of the health care system. They study a variety of health issues including health care quality improvement, patient decision-making, and determinants of health and disease. Some work with physicians to improve clinical outcomes for patients with heart disease, cancer, asthma, and other conditions. Others work with health care administrators to increase efficiency in the use of health care resources in hospitals and other medical care settings. Some members of the Division work with basic and clinical scientists - such as geneticists, environmental scientists, molecular biologists, and social scientists - to develop our understanding of how to prevent disease and disability altogether. Each of these endeavors requires application of the general principles of research design, implementation, and analysis, as well as knowledge about the kinds of issues that affect a specific area of the health care system. They also require faculty to work in teams with scientists in other disciplines and fields.

Professional Option – 15 credits

(Courses from Department of Preventive Medicine, Division of Evaluative Sciences, or Department of Economics) Required

| Course | Title | Credits |
|---------|--|---------|
| HPH 560 | Advanced Biostatistics & Epidemiology | 3 |
| HPH 561 | Design of Scientific Investigations | 1 |
| HPH 562 | Data Management & Informatics | 1 |
| HPH 563 | Cost Benefit & Cost Effectiveness Analysis | 2 |

Select two of the following:

| | | |
|---------|--|---|
| HPH 564 | Research Methods for Community Populations | 2 |
| HPH 565 | Health Services Research | 2 |
| HPH 566 | Clinical Trials | 2 |
| HPH 567 | Clinical Outcomes Research | 2 |

Select two of the following:

| | | |
|---------|---|---|
| HPH 568 | Overview of Molecular Medicine & Genomics | 2 |
| HPH 569 | Modeling for Evaluative Sciences | 2 |
| HPH 570 | Multilevel & Longitudinal Analyses | 2 |
| HPH 571 | Research Synthesis & Meta Analysis | 2 |
| HPH 664 | Economics of Health | 2 |
| HPH 665 | Health Economics II | 2 |

Standard Option – 29 credits

(Courses from Department of Preventive Medicine, Division of Evaluative Sciences; and Department of Economics or Department of Applied Mathematics)

Required (7 credits):

| | | |
|---------|--|---|
| HPH 560 | Advanced Biostatistics & Epidemiology | 3 |
| HPH 561 | Design of Scientific Investigations | 1 |
| HPH 562 | Data Management & Informatics | 1 |
| HPH 563 | Cost Benefit & Cost Effectiveness Analysis | 2 |

Select three of the following (6 credits):

| | | |
|---------|--|---|
| HPH 564 | Research Methods for Community Populations | 2 |
| HPH 565 | Health Services Research | 2 |
| HPH 566 | Clinical Trials | 2 |
| HPH 567 | Clinical Outcomes Research | 2 |

Select three of the following (6 credits):

| | | |
|---------|---|---|
| HPH 568 | Overview of Molecular Medicine & Genomics | 2 |
| HPH 569 | Modeling for Evaluative Sciences | 2 |
| HPH 570 | Multilevel & Longitudinal Analyses | 2 |
| HPH 571 | Research Synthesis & Meta Analysis | 2 |
| HPH 664 | Health Economics I | 2 |
| HPH 665 | Health Economics II | 2 |

Select 10 credits from:

Graduate course offerings in the Department of Economics or the Department of Applied Mathematics. Selection requires approval of Advisor

| | | |
|---------|--|---|
| HPH 695 | Applied Linear Algebra | 3 |
| HPH 696 | Introduction to Probability | 3 |
| HPH 697 | Mathematical Statistics II: Hypothesis Testing | 3 |
| HPH 698 | Data Analysis I | 3 |
| HPH 699 | Design of Experiments | 3 |

(4) Health Economics: the population health approach requires multi-disciplinary collaboration among scholars in the social, clinical, and basic sciences and humanities; development of comprehensive, sophisticated health information systems; and use of advanced analytical tools to examine health problems and evaluate responses to them. The Health Economics concentration will train public health practitioners in the advanced analytical tools and methods to meet these needs.

Professional Option – 15 credits
Required (15 credits)

| Course | Title | Credits |
|---------|----------------------|---------|
| HPH 617 | Microeconomics I | 3 |
| HPH 618 | Econometrics | 3 |
| HPH 619 | Applied Econometrics | 3 |
| HPH 664 | Economics of Health | 3 |
| HPH 665 | Health Economics | 3 |

All with a grade of B or better.

Standard Option – 29 credits
Required (29 credits)

| Course | Title | Credits |
|---------|----------------------|---------|
| HPH 617 | Microeconomics I | 3 |
| HPH 618 | Econometrics | 3 |
| HPH 619 | Applied Econometrics | 3 |
| HPH 664 | Health Economics I | 3 |
| HPH 665 | Health Economics II | 3 |

All with a grade of B or better

Select 14 credits from:

Courses in the Evaluative Sciences concentration.

(5) Population Health Studies is a generalist concentration offered to Professional Option students only. The Concentration will allow students to choose from evaluative sciences and evaluation of domestic violence and substance abuse programs, health policy, and community health environment health. Working with their advisor, students will select a program that is designed to meet their professional goals. *(Not offered in Standard Option)*

Professional Option – 15 credits

Area: Community Health
(Courses from School of Health Technology & Management)

| Course | Title | Credits |
|---------|---|---------|
| HPH 602 | Health care & Older People | 3 |
| HPH 603 | Women & Health care | 3 |
| HPH 604 | Community Mental Health | 3 |
| HPH 605 | Principles & Practices of Public & Community Health | 3 |
| HPH 606 | Long Island Community Health | 3 |
| HPH 607 | Community Health & Patient Education | 3 |
| HPH 608 | Communication & Group Dynamics | 3 |
| HPH 611 | Ethics and Health Care | 3 |
| HPH 613 | Planning & Evaluating Health Programs | 3 |
| HPH 616 | Workplace 2010 | 3 |

Area: Health Policy

(Courses from School of Social Welfare)

| | | |
|---------|---|---|
| HPH 620 | Parameters of Social & Health Policy I | 3 |
| HPH 621 | Parameters of Social & Health Policy II | 3 |
| HPH 623 | Aging & the Law | 3 |

(Courses from School of Health Technology & Management)

| | | |
|---------|-----------------------------------|---|
| HPH 610 | Health Policy | 3 |
| HPH 614 | Epidemiology & Health Policy | 3 |
| HPH 615 | Advanced Seminar in Health Policy | 3 |

Area: Substance Abuse & Domestic Violence
(Courses from School of Social Welfare)

| | | |
|---------|-------------------|-----|
| HPH 624 | Youth in Violence | 2-3 |
|---------|-------------------|-----|

| | | |
|---------|--|-----|
| HPH 626 | Overview of Substance Abuse | 2-3 |
| HPH 630 | Chemical Dependency in Special Populations | 2-3 |
| HPH 633 | Family Violence & Childhood Sexual Abuse | 2-3 |

Area: Environmental Studies

(Courses from Marine Sciences Research Center or Department of Technology & Society)

| | | |
|---------|---|---|
| HPH 671 | Marine Pollution | 3 |
| HPH 672 | Marine Management | 3 |
| HPH 673 | Groundwater Problems | 3 |
| HPH 674 | Environmental Toxicology | 3 |
| HPH 675 | Environment & Public Health | 3 |
| HPH 676 | Environmental Law and Regulation | 3 |
| HPH 677 | Introduction to Risk Assessment & Risk Management | 3 |
| HPH 683 | Air Pollution & Quality Management | 3 |
| HPH 684 | Environmental & Waste Management in Business & Industry | 3 |
| HPH 685 | Assessment of Socio-Technological Problems and Issues | 3 |
| HPH 686 | Risk Assessment & Hazard Management | 3 |
| HPH 687 | Diagnosis of Environmental Disputes | 3 |
| HPH 688 | Principles of Environmental System Analysis | 3 |
| HPH 689 | Simulation Models for Environmental & Waste Management | 3 |

Area: Evaluative Sciences

(Courses from Marine Sciences Research Center or Department of Technology & Society)

| | | |
|---------|--|---|
| HPH 560 | Advanced Biostatistics & Epidemiology | 3 |
| HPH 561 | Design of Scientific Investigations | 1 |
| HPH 562 | Data Management & Informatics | 1 |
| HPH 564 | Research Methods for Community Populations | 2 |
| HPH 567 | Clinical Outcomes Research | 2 |
| HPH 568 | Overview of Molecular Medicine & Genomics | 2 |

Area: Environmental & Occupational Health

(Courses from Department of Preventive Medicine, Division of Evaluative Sciences)

| | | |
|---------|---|---|
| HPH 644 | Epidemiology of Environmental & Occupational Disorders | 3 |
| HPH 645 | Occupational Health Principles | 3 |
| HPH 647 | Environmental Toxicology | 3 |
| HPH 648 | Industrial Hygiene | 3 |
| HPH 649 | Health Physics | 3 |
| HPH 650 | Safety Engineering & Management | 3 |
| HPH 651 | Environmental and Occupational Health Laws and Agencies | 3 |
| HPH 652 | Occupational Safety and Health for Special Groups | 3 |

Area: Global Health

| | | |
|---------|---|---|
| HPH 639 | Global Epidemiology & Preventive Medicine | 3 |
| HPH 640 | Medical Anthropology, Culture, & Ethics | 3 |
| HPH 641 | Provision of Health Care | |

| | | |
|---------|---|---|
| | in Low Income Countries | 3 |
| HPH 642 | Development & Demography | 3 |
| HPH 643 | Clinical, Laboratory, & Epidemiological Parasitology & Protozoology | 3 |

Courses will be taught at the Health Sciences Center and on West Campus, and will be offered in the late afternoon and early evening. Since the proposed program is designed primarily as a part-time program, it will be recommended that students carry at least six credits per semester and attend summer school. Students should consider starting the summer prior to the first academic year and summer after this academic year. If students take six to nine credits per semester, the Professional Option could be completed in two years and the Standard Program in three years. We project that the average number of years in the program for all students will be three years. All degree requirements must be completed within five years.

All core courses will be taken at Stony Brook University unless an equivalent course was taken at an accredited School or Program of Public Health with a grade of B or better. However, no more than 6 credits can be taken elsewhere. All concentration courses will be taken at Stony Brook University unless an equivalent course, with a grade of B or better, was taken at an approved graduate program with approval from the concentration advisor. All Stony Brook University Graduate School requirements will be in effect.

MPH CORE COURSES

HPH 500 Contemporary Issues in Public Health: The Long Island Experience

This course will examine the role of medicine and public health in improving the health of the Suffolk County population. Students will be exposed to Field Preventive Medicine as performed by public health practitioners including investigations of infectious disease outbreaks and cancer clusters. As one of the most heavily mosquito and tick infested counties in the country, will emphasize arthropod-borne diseases. The impact of drinking water standards and frequently encountered contaminants such as synthetic organic compounds and pesticides will be studied. Sanitary regulations and public health law will be discussed, as will bioterrorism and the modes most threatening to residents of Long Island. Global issues will include infectious diseases and food-borne illnesses that affect morbidity and mortality worldwide.

3 credits, fall term

HPH 511 Biostatistics for Public Health

This course provides an introduction to the study of statistics with specific applications to the field of public health. It introduces students to basic statistical concepts and develops the skills needed to summarize data, interpret findings, and critically evaluate the public health literature. Concepts taught in this course include, but are not limited to, the following topics: summarizing data, drawing inferences, estimation, chi-squared statistics, parametric and nonparametric correlation, and linear and nonlinear regression. Additionally, students are introduced to a statistics software package (SPSS) and required to use this program to complete the mandatory homework assignments.

3 credits, fall term, Professor Meng

HPH 514 Epidemiology for Public Health

This course presents basic epidemiologic concepts used to study health and disease in populations and describes their application in three categories of prevention (risk reduction, screening, and rehabilitation). The course provides an overview of the major causes of morbidity and mortality among infants, children, and adults locally, in the U.S., as well as internationally, including preventive measures that are appropriate in each of these age groups. The course aims for students to begin developing the skills needed to evaluate data, interpret reports, and conduct studies. The course comprises both lectures and small group seminars for in-depth discussions of previously assigned topics.

3 credits, spring term

HPH 516 Environmental and Occupational Health

This course is designed to provide the fundamentals of environmental and occupational health and to educate students on issues related to major environmental and occupational concerns. It will provide a forum for the discussion of local and national environmental and occupational public health issues. The content of the course will focus on major pollutants, their detection, impact on health, and principles of remediation. Using various teaching techniques, students will be exposed to current environmental and occupational topics and approaches to prevention and treatment. The course will emphasize the most recent research in the field.

3 credits, spring term, Professor Benz-Scott

HPH 523 Social Determinants of Population Health

This course introduces students to population health as one of the organizing concepts in public health and the orientation that differentiates public health from medicine. Consistent with public health tradition, health is discussed from an ecological perspective, and the course presents current knowledge about the multiple determinants of population health including socioeconomic status, the physical environment, medical care, individual behavior, and genetics and the interaction of these factors. Also covered is the measurement of population health, sources of data about population health, and methods for assessing population health improvements.

2 credits, spring term

HPH 530 History of Public Health and Medicine

This course explores major themes and interpretations in the history of public health and medicine since the 18th century. Particular emphasis is placed on the influence of social and cultural developments on medicine and public health, and vice versa. American developments will be placed in a broad comparative perspective including both Western and non-Western nations.

2 credits, spring term, Professor Tomes

HPH 542 Global Health

This course will provide health personnel with a basic awareness of the problems of the worlds' population with special focus on the poorest. To promote these objectives, this course has been designed to introduce medical and public health students to key population health topics from a global perspective, with special emphasis placed on the health and welfare of women and young children in low-income countries. The health impact of emergent infectious diseases will be reviewed. The design and effectiveness of foreign aid programs will be discussed. Students will be introduced to demography and the impact of population increases on the global environment. There will be discussions of the health problems of immigrants to the U.S. from tropical countries. Finally, students will learn about vaccination and other safety issues related to traveling and working in the tropics.

2 credits, spring term, Professor O'Riordan

HPH 543 Public Health Ethics and Law

This course will deal with the role of law in public health, the history of law concerning public health, the basic legal knowledge for public health, legal basis for public health powers, the administrative law system, public health law as it relates to individual rights, control of property, substance abuse, the AIDS epidemic, laws/regulations governing public health safety; workers' compensation law related to health; environmental laws/regulations and food, drug, device, and cosmetic laws/ regulations. Additionally, the individual rights and ethics of modern general public health practice in the 21st century will be discussed. Topics such as genomics, HIPPA, bioterrorism, emergent infectious diseases, public health research and issues regarding public health accountability will be explored.

2 credits, spring term, Professor Coulehan

HPH 560 Advanced Biostatistics and Epidemiology

This course will discuss aspects of practice and statistical theory relevant to the design of scientific investigations in the health sciences. Topics will include sample size considerations, basic principles of experimental design, block designs, and factorial experiments, and multivariate analysis for continuous and categorical data.

3 credits

HPH 561 Design of Scientific Investigations

This course is an overview of the theory and methods relevant to health sciences research, beginning with the philosophy of scientific

investigations, the role of literature in the advancement of science and moving to problem identification, formulation of research questions, research design, and issues of sampling and sample selection, measurement, and analysis.

1 credit

HPH 562 Data Management and Informatics

This course provides instruction in the use of software to prepare data for statistical analysis. The focus is on database management and programming problems.

1 credit

HPH 563 Cost Benefit and Cost Effectiveness Analysis

The course will introduce the uses and conduct of cost benefit and cost effectiveness analyses as decision-making aids in the health care research. It will provide students with an understanding of the roles and limitations of cost benefit and cost effectiveness analyses and criteria for evaluating those studies. Critical issues regarding measuring cost and effectiveness, evaluating outcomes, discounting, and dealing with uncertainty will be discussed.

2 credits, fall term, Professor Rizzo

HPH 564 Research Methods for Community Populations

This course will introduce the design, measurement, and analysis of research for community populations. It will include measurement of health status and other factors related to the health of community populations including socioeconomic status, health behavior, occupation, and social support. Topics will include instrument development, scaling, assessment of reliability, validity and responsiveness to change; principal component analysis and factor analysis; and item response theory. The course will introduce the many existing sources of community health information including the recurrent national surveys such as the Health Interview Survey.

2 credits

HPH 565 Health Services Research

The course is designed to introduce students to the application of standard methods in health services research. The student will learn the principles, methods, and terminology specific to this field. Threats to validity, information bias and the methods of control will be explored. Lectures will include risk adjustment, benchmarking, outcomes and effectiveness research. This course will emphasize the theory of sampling and survey methods and their application to health service research.

2 credits

HPH 566 Clinical Trials

This course introduces the design, conduct, and analysis of clinical trials. Topics will include types of clinical trials, study design, treatment allocation, randomization and stratification, quality control, sample size requirements, patient consent, and interpretation of results.

2 credits

HPH 567 Clinical Outcomes Research

This course will (i) introduce the basic concepts, methods and topics in clinical outcomes research and (ii) introduce the skills necessary to evaluate the efficacy, effectiveness, and cost-effectiveness of devices, interventions, processes of care, and health care delivery systems. The specific topics to be covered include: outcomes measurement, population health assessment, valuing health outcomes, risk adjustment, case-mix adjustment methods, effectiveness, efficacy, and cost effectiveness in clinical outcomes research, and analysis methods.

2 credits

HPH 568 Overview of Molecular Medicine and Genomics

The course will introduce basic concepts of molecular diagnostics currently in clinical use. The principal topics to be covered include: an introduction to the human genome; principles of human genetics; microarray, genomic and bioinformatics approaches to human disease; cancer genetics; animal models of human diseases; emerging pathogens; principles of genetic testing strategies and test development; emerging molecular therapeutics; regulatory, patenting and licensing issues of relevance to drug discovery and test development.

2 credits

HPH 569 Modeling for Evaluative Sciences

This course will present an introduction to the methods of data mining and predictive modeling, with particular emphasis on applications to health services research and clinical outcomes research. Basic concepts and philosophy of data mining as well as appropriate applications will be discussed. Topics covered will include multiple comparisons adjustment, and predictive model building through logistic regression, classification and regression trees (CART), multivariate adaptive splines (MARS), and neural networks.

2 credits

HPH 570 Multilevel and Longitudinal Analyses

The course covers methods for the analysis of repeated measures, correlated outcomes and longitudinal data, including the unbalanced and incomplete data sets characteristic of health service research. Topics include ANOVA, random effects and growth curve models, and generalized linear models for correlated data, including generalized estimating equations.

2 credits

HPH 571 Research Synthesis and Meta Analysis

This course concerns the use of existing data to inform clinical decision-making and health care policy. The course focus is research synthesis (meta-analysis). The principles of meta-analytic statistical methods are reviewed, and the application of these to data sets is explored. Application of methods includes considerations for clinical trials and observational studies. The use of meta-analysis to explore data and identify sources of variation among studies is emphasized, as is the use of meta-analysis to identify future research questions.

2 credits

The Culminating Experience

The Capstone Seminar and the Practicum are offered as tandem experiences. They combine to create the culminating experience for the proposed program.

HPH 580 Practicum

Prior to beginning their Practicum, students will be required to complete all core and most concentration courses. The Practicum is 90 hours for the Professional Option and 225 hours for the Standard Option, in a planned, supervised, and evaluated practice setting. The Practicum placement must be mutually beneficial to both parties. A journal of fieldwork and a written report (consultant's report format) are required. Students will be expected to provide progress reports every three weeks, and to demonstrate their "capacity to organize, analyze, interpret and communicate knowledge in an applied manner." Students may choose from two types of experiences in their practice setting: (1) applied research project; or (2) practice project. The applied research project will provide an opportunity for students to select, design, conduct, and report on a research project related to their concentration in the Practicum site. Students will be expected to discuss and defend the research strategy selected and its implementation, including strengths and weaknesses. They will be expected to communicate their findings to a broad audience. A major written research paper suitable for publication is required and must be submitted to a refereed journal. The practice project will allow students to select, design, implement, and evaluate a project relevant to a functional area within the Practicum organization. All students, regardless of type of project, must demonstrate the ability to synthesize and integrate the public health competencies through the Practicum project. All students must also complete the National Institutes of Health On-Line Human Participants Protections Training and demonstrate knowledge of the Stony Brook University Institutional Review Protocol Statement.

(Health departments, as well as a variety of other local health care organizations, offer a wide array of potential sites for MPH student field training experiences.)

2 - 5 credits

HPH 581 Capstone Seminar: Ecological Solutions

This course is offered in tandem with the Practicum. All core and concentration course work must be completed before the student can participate in the Capstone Seminar. This course has two parts: (1) The first hour of the Capstone Seminar will be used to evaluate student competencies in the basic knowledge of public health through student presentations based on the Practicum. Students present their plans for the Practicum project at the beginning of the seminar and the final

product near the end. The seminar is also a forum to discuss issues and problems that arise during the Practicum experience (2) The second hour of the Capstone Seminar is divided into expert presentations in three areas: (a) ethics in public health practice (b) public health legal issues (c) the future of public health, including the impact of new technologies and scientific discoveries, especially the contributions of technology, molecular biology, and genomics. This hour of the seminar will be open to all MPH students as well as faculty and other students in the Health Sciences Center.

2 credits

HPH 601 Health Behavior and Risk Reduction

This course introduces current knowledge related to the impact of health behavior on morbidity and mortality, sources of information about health behavior, trends in health behavior, variation in health behaviors by culture, class, age, and gender, disparities in morbidity and mortality related to health behavior, and current theories about the impact that reducing risky behaviors would have on health outcomes.

3 credits, spring term

HPH 602 Healthcare and Older People

Course is designed to maximize a student's understanding of policy and administrative issues in delivering health care to older people. Highlights examples of policy directions on the national, state and local levels and the practical application of administrative tools on managing health facilities mandated for older people (Co-scheduled with HAS 513).

3 credits, fall term, Professor Sganga

HPH 603 Women and Healthcare

This course provides an overview of women as users and providers of health care in the United States. Attention is given to women as active participants in their health care today as compared to historical times when women were encouraged to be passive. Throughout the course, case studies are introduced to demonstrate the contemporary utilization patterns of health care by women, including the use of managed care companies, women's public health agencies and grassroots health organizations. In addition, a number of issues are addressed regarding the role of women in providing health care, specifically from a public health management perspective. The course includes examples and presentations of national and regional women's health concerns, such as breast cancer, reproductive choices, heart disease, tobacco use menopause-related issues, and domestic violence. Special populations are also discussed as they related to women and health care, including adolescents, older women, homeless women, working women, caretaking women, and middle-class uninsured women. Traditional and alternative health care strategies are offered as acceptable methods for meeting the growing and changing needs of women presently and in the future (Co-scheduled with HAS 518).

3 credits

HPH 604 Community Mental Health

Provides a critical examination of the mental health system as it has evolved in the United States. Focuses on the service delivery system: how it has developed, what it is today and where it is going. Deals with the mental health system as a business: how it operates, how it is funded, who it employs, and how it will develop in the new managed care environment (Co-scheduled with HAS 526).

3 credits

HPH 605 Principles and Practices of Public and Community Health

Provides an overview of the public health system, the philosophy and purpose of public and community health, the managerial and educational aspects of public health programs, how the public health sector responds to disease prevention, environmental issues, community public health provisions and other core public and community health components. The impact of federal health care reform on the public health delivery system and the economic and fiscal implications of the system on state and local governments will be discussed. Students will analyze the critical elements of a health care system. Addresses problems encountered by institutions and individuals (Co-scheduled with HAS 527).

3 credits

HPH 606 Long Island's Community Health

Provides students with an overview of community health concerns of Long Island and information and resources for addressing them. Presents conditions that are associated with special populations such as

the Native Americans, baymen, homeless, migrant workers, rural residents, urban residents, and the uninsured middle-income residents. Community health problems with high incidence on Long Island including breast cancer, Lyme disease, AIDS, and tuberculosis will be covered. Reviews Long Island's environmental health problems with special emphasis on those associated with drinking and swimming water, agriculture, pesticides, and transportation. Discusses and presents the community health care delivery system and model programs and resources, increasing evolution of laws, agency regulations, and controls that apply to health organizations. Includes elements of planning and budgeting that apply to the internal functioning of health care institutions. Emphasis on development of management ability and departmental relationship to the total agency's activities (Co-scheduled with HAS 528).

3 credits

HPH 607 Community Health and Patient Education

Provides a critical examination of the mental health system as it has evolved in the United States. Focuses on the service delivery system: how it has developed, what it is today and where it is going. Deals with the mental health system as a business: how it operates, how it is funded, who it employs and how it will develop in the new managed care environment field and the health delivery system. Covers specific areas of laws (including statutory law, common law and rules and regulations) applicable to and controlling the operation of hospitals, long-term care facilities, medical practices, health professional practices and other (Co-scheduled with HAS 529).

3 credits

HPH 608 Communication and Group Dynamics

Assist students in understanding and improving interpersonal communication skills through structured exercises in speaking, writing and interacting. Emphasizes leadership skills in group interactions, especially in the health care fields (Co-scheduled with HAS 533).

3 credits

HPH 609 Fundamentals of Health Care Management

This course provides students with a realistic knowledge of management, not only the theories and techniques, but the way they are worked out in practice. It emphasizes the essentials of management pertinent to practicing managers, e.g., organizational profiles, political and power relationships, planning, organizing, staffing, directing, leading, controlling, and evaluating. The course examines the manager's environment as a system of interacting factors including economic, technological, social, political, and ethical aspects.

3 credits

HPH 610 Health Policy

Provides students with an overview of health care policy making principles. Specific policy formats will be analyzed using examples of local and national policies. Students will learn to develop selective health policies using case studies.

3 credits, MPH Faculty (Co-scheduled with HAS 543).

HPH 611 Ethics and Health Care

Provides an overview of ethics in health care in a rapidly changing society. Teaches students to approach ethical dilemmas using theoretical frameworks and decision making processes. Explores ethical issues surrounding health care reform and public health policy and includes distribution of resources and rationing of services. Introduces students to the ethical perspectives of euthanasia, reproduction, transplants, and HIV/AIDS through case studies. Reviews classic cases in health care ethics and their shaping of health policy. Discusses patient education and professional codes of ethics and standards. Discusses the integration of health information systems with communication systems, such as E-mail, fax, pagers and wireless telephones. Through the use of classroom demonstrations and site visits, students gain hands-on experience with several health related information and communications systems (Co-scheduled with HAS 545).

3 credits

HPH 612 Grantsmanship in the Health Professions

Introduces the grantsmanship process in both Federal and private domains. Focuses on research, design, preparation, and submission of grant applications (Co-scheduled with HAS 547).

3 credits

HPH 613 Planning and Evaluating Health Programs
Prepares students to conduct needs assessment of various diverse populations and to plan, implement and evaluate to meet their needs. Plans include detailed goals, behavioral objectives, methods, resource, and budget allocation, including grant and contract considerations (*Co-scheduled with HAS 557*).
3 credits

HPH 614 Epidemiology and Health Policy
Presents the concepts, principles, and application of epidemiology through the use of public health case studies. The students examine the distributions and determinants of disease, human morbidity and mortality, the characteristics of populations and the biological bases of health and disease (*Co-scheduled with HAS 558*).
3 credits

HPH 615 Advanced Seminar in Health Policy
Analyzes the principle of health policy-making. The goal of the session is a complete health policy statement/paper deliverable to the appropriate policy-maker/legislator. Students will have a round table discussion of general public health topics and develop their own health policy project (*Co-scheduled with HAS 579*).
3 credits

HPH 616 Workplace 2010
Provides an overview of issues affecting the American workplace in the future to the year 2010. Expected working conditions, human resources, schedules and technology are explored as students learn how to plan for advances and changes in the health system. Through the use of case studies, introduces students to early experiments in organizational evolution and resulting applications to the health care (*Co-scheduled with HAS 576*).
3 credits

HPH 617 Microeconomics I
The first semester of a one-year course in microeconomic theory. Deals with decision making of economic agents in different choice environments using the analytical approach of duality theory. Topics include theory of the consumer, theory of the firm, decision making under risk and uncertainty, intertemporal choice, aggregation, and capital theory (*Co-scheduled with ECO 500*).
3 credits

HPH 618 Econometrics
A continuation of ECO 521. The application of mathematical and statistical methods of economic theory, including the concept of explanatory economic model, multiple regression, hypothesis testing, simultaneous equations models, and estimating techniques (*Co-scheduled with ECO 521*).
3 credits

HPH 619 Applied Econometrics
A continuation of ECO 521. The application and extension of econometric techniques developed in ECO 521. Emphasis on the relationship among economic theory, econometric modeling and estimation, and empirical inference. Computer usage of calculation of estimators. Critical examination of econometric studies in current journals (*Co-scheduled with ECO 522*).
3 credits

HPH 620 Parameters of Social and Health Policy I
Introduces students to U.S. social policy, with special emphasis on political, economic and social factors that have affected its historical development, particularly in reference to oppressed groups. Explores the relationship of social policy to social work practice (*Co-scheduled with HWC 509*).
3 credits, fall term

HPH 621 Parameters of Social and Health Policy II
Utilizes frameworks for social policy analysis. Explores continuing dilemmas in policy development. Stresses effects of social movements and social change on social policy (*Co-scheduled with HWC 510*).
3 credits, fall term

HPH 622 Research II
Provides instruction in the computation, interpretation and application of data analytic procedures used in social research. Covers procedures such as descriptive statistics, correlations, chi-square and t-test

examines their relevancy for analyzing issues in social work practice (*Co-scheduled with HWC 512*).
3 credits, fall term

HPH 623 Aging and the Law
Provides an overview of the many laws and programs affecting the quality of life, concerns and needs of the age, with particular emphasis on health care policy. The major entitlement programs for the aged, including Social Security, SSI, Medicare, and Medicaid are covered as well as institutions and programs serving the aged, including nursing homes, protective services, and home care. Health care decision making, including health care proxies, the "right to die" and other ethical and legal issues are emphasized (*Co-scheduled with HWC 519*).
3 credits

HPH 624 Youth and Violence
Examines the etiology of youth at risk for violence, using ecological and interpersonal perspectives. Family, school, and community risk factors are outlined as well as assessment, intervention and treatment issues. Successful prevention programs are highlighted (*Co-scheduled with HWC 541*).
2 credits

HPH 625 Children of Chaos : The Social Worker's Role
Designed to provide an understanding of the special issues and concerns surrounding work with children. Professional dilemmas and guidelines to aid practice are identified. Special issues involved in work with young children are highlighted. Although the focus is on direct work with children, a family-centered approach is presented. Practitioner roles, the impact of service settings, policy and legislation affecting this area of practice are reviewed as is the knowledge base that serves to guide practice, including formulations of practice theory and empirical research findings (*Co-scheduled with HWC 542*).
2 credits

HPH 626 Overview of Substance Abuse
An examination of the history and development of alcohol and substance abuse problems in the United States. Focuses on the etiology, psychopharmacology and legal ramifications of the use licit and illicit substances in our culture. Provides information on a variety of services available to drug abusers, addicted individuals and their families in the fields of prevention, education and treatment (*Co-scheduled with HWC 544*).
2 credits, fall term

HPH 627 Individual, Group, and Family Treatment of Alcoholics and Substance Abusers
Covers alcoholism and substance abuse as family illnesses and their stages of development, as well as the impact these illnesses have on the families of active and recovering alcoholics and substance abusers. Focuses on self-help groups and on traditional and relatively recent modalities used in the treatment of addicted individuals and their families (*Co-scheduled with HWC 545*).
2 credits, fall term

HPH 628 Working with Adult Children of Alcoholics and Substance Abusers
Focuses on adult children of alcoholic parents and how parents' illness affects their children's social, emotional and educational development from infancy to adulthood and into old age. Discusses survival roles of children in alcoholic families and how these affect adult functioning and the intervention strategies used in treatment (*Co-scheduled with HWC 546*).
2 credits

HPH 629 Managing Conflict
A major concern for health and human service managers is conflict in organization, community and group settings. The various types of conflicts and the concepts of negotiation and mediation as interceptive strategies will be considered. Didactic and experiential learning experiences are utilized. Focus is on analyzing conflict situations and selecting interceptive strategies to reduce, contain or heighten the conflict situation. Oppressive conditions, structures and processes are considered major determinants of human suffering and individual and social problems; students examine how these oppressive conditions are present in conflict situations and consider ways of dealing with them (*Co-scheduled with HWC 547*).
2 credits

HPH 630 Chemical Dependency in Special Populations
Covers alcoholism and substance abuse with populations that have been traditionally devalued and oppressed. Focuses on development of skills and sensitivity to the needs of ethnic groups, women, the elderly, the mentally ill and gay and lesbian people who are chemically dependent. Explores policy and practice issues related to these populations (*Co-scheduled with HWC 553*).
2 credits

**HPH 631 Cultural Competency: an Ingredient
Enhancing Treatment Outcomes**

Demonstrates that cultural competency, like computer literacy, is a necessity. Outlines how prevention messages and treatment modalities provided within a cultural context are likely to change attitudes or redirect behaviors. There is a new wave of immigrants and a growing assertion of cultural identity by groups who were born in the U.S. Therefore, a new communication edict of cultural dialogue is fast becoming part of one's professional mandate. Hence, the ability to interact with people who are culturally different from the professional is a prerequisite to providing culturally competent services to these groups (*Co-scheduled with HWC 557*).
2 credits

HPH 632 Psychopathology and Psychopharmacology
An overview of the DSM IVTR system of Classification of Mental Disorders. Emphasizes the social work component within the interdisciplinary team. Special emphasis on assessment. Introduces psychopharmacology and the social work role related to drug management including side effects, risks and changes over time. Critiques value systems involved in diagnosis and definition of disorders (*Co-scheduled with HWC 567*).
2 credits, fall term

**HPH 633 Childhood Sexual Abuse and Long-Term
Sequelae: Assessment and Intervention**

Introduces students to the incidence and prevalence of childhood sexual abuse as a national problem. Covered are definition issues, sequelae during childhood, family constellation and adult sequelae. Assessment and current treatment modalities, particularly for families and offenders, will be addressed as well as ethical and legal dilemmas and the subsequent health related difficulties of this childhood trauma. Special attention is paid to the cultural dynamics in sexual abuse. Students are expected to develop an awareness of and critically analyze current research (*Co-scheduled with HWC 569*).
2 credits

HPH 634 Program Evaluation
Provides an in-depth analysis of the technical requirements of program evaluation and the organizational and political constraints that influence the evaluation process. Covers techniques in the design and implementation of evaluation research in the health and human services field (*Co-scheduled with HWC 577*).
3 credits, fall term

HPH 635 Seminar on Family Violence
An overview of the phenomenon of family violence in the United States including child abuse, partner abuse and elder abuse. Explores theories of etiology, including patriarchy, intergenerational family dynamics and substance abuse. Examines programmatic approaches including the legal system and programs for batterers by utilizing guest speakers from Suffolk County agencies (*Co-scheduled with HWC 580*).
2 credits, fall term, MPH Faculty

HPH 636 Community Analysis and Health Promotion
Explores diverse concepts of community, analyzes a range of community structures, processes and power relationships. Investigates contemporary models, strategies and tactics of community organizing and health promotion in the U.S. and in selected other countries; and emphasizes efforts made by poor people, ethnic minorities of color and women to organize and mobilize community groups and movements. Highlights group and community analysis and organization skills. (*Co-scheduled with HWC 584*).
2-3 credits, term varies, Professor Vidal

HPH 637 Health and Social Planning
Provides a generic understanding of the planning process and exposure to the planning processes used in the organization and delivery of

health services. Explores the various backgrounds, lifestyles and coping mechanisms of patients, with particular attention given to class, race, age and sex, and how the planning process includes or excludes these factors (*Co-scheduled with HWC 585*).
2 credits

HPH 638 Qualitative Health Research Methods
The class works as a team on a joint project. Topics include problem formulation, instrument construction, sampling strategy, interviewing, data transcription, and data analysis (*Co-scheduled with HWC 588*).
3 credits

HPH 639 Global Epidemiology & Preventive Medicine
This course focuses on strategies to reduce mortality and morbidity from specific conditions. The conditions selected are mainly infectious diseases that account for the majority of preventable deaths and disability in low-income countries, especially among children. Detailed discussion of disease due to protozoa and parasites will, however, be deferred to another course. In addition, the increase in mortality from tobacco-related disease and trauma in poor countries will also be addressed.
3 credits

HPH 640 Medical Anthropology, Culture, and Ethics
This course focuses on how patients in non-western societies view issues related to health and disease and how medical interventions can be integrated into local beliefs and customs. Particular attention will be devoted to the role of women in improving the health status of their communities. Region-specific overviews will be provided on how history and culture have influenced health in sub-Saharan Africa and Latin America. Ethical issues related to resource allocation and medical and public health research in low-income countries will also be addressed in this course.
3 credits

**HPH 641 Provision of Health Care in
Low Income Countries**
This course focuses on the practical implementation of interventions to reduce disability and premature death in low-income countries. It will cover funding and organization of health care; primary health care programs; role of expatriate health workers; and emergency medical care of refugee populations.
3 credits

HPH 642 Development and Demography
This course focuses on broad issues of international aid and development policies that impact human health and the global environment. The course will help place the specific clinical interventions discussed in other courses into a wider socioeconomic context. Topics will include demography, poverty, health, and development; international and U.S. AID policies; and global environment for sustainable development and human health.
3 credits

**HPH 643 Clinical, Laboratory, and Epidemiological
Parasitology and Protozoology**
This is an integrated and detailed course on the subjects of parasitology and protozoology. The epidemiology, microbiology, clinical presentation, and management, as well as laboratory diagnosis, of these conditions will be covered. The human and economic impact of these conditions will be discussed. Preventive measures will be discussed in detail. It will be assumed that students have minimal or no prior knowledge of these conditions.
3 credits

**HPH 644 Epidemiology of Environmental
& Occupational Disorders**
This course will introduce students to the frequency, distribution and determining factors of environmental and occupational disease among exposed groups in the general population. It will enable the students to understand the epidemiological concept of the general and work place environments. Emphasis will be placed on teaching the skills necessary to assess data, to evaluate and critique the professional literature, and to formulate and evaluate conclusions. The course will provide basic knowledge for writing up exposure incidents or research projects (*Co-scheduled with CEM 522*).
3 credits

HPH 645 Occupational Health Principles

This course will provide an in-depth description of the field of occupational/environmental health and safety. It will provide the historical and general principles of occupational health, focusing on prevention of occupational health and safety and how these professionals work together and communicate will be covered, as well as discussion of topics of common interest in the occupational safety and health field (*Co-scheduled with CEM 525*).

3 credits

HPH 647 Environmental Toxicology

This course will assist in the understanding of toxicological concepts and principles learn basic toxicological terminology and focus on environmental toxicology issues. Although formulas, chemical structures, mathematical calculations, charts and graphs will be used to illustrate concepts. Anatomy, physiology, biochemistry and pathology will also necessarily be covered as these disciplines relate to toxicological concepts, principles, and vocabulary. The course goals and objectives are to provide core knowledge in: 1) Principle in toxicology 2) Cancer related to toxic exposures 3) Organ and system toxic effects 4) Environmental Toxicological issues (*Co-scheduled with CEM 527*).

3 credits

HPH 648 Industrial Hygiene

The aim of the course is to assist in the understanding of industrial hygiene concepts and principles, learn basic terminology and focus in national and local environmental and occupational industrial hygiene issues. The course goals and objectives are to provide core knowledge in the following areas 1) Principles of Industrial Hygiene 2) Identification, Evaluation and Control of Hazards in the workplace 3) Industrial Hygiene Standards, Agencies and Regulations (*Co-scheduled with CEM 538*).

3 credits

HPH 649 Health Physics

This course will introduce concepts of radiation protection; define general terms that are used in radiation protection; define unique aspects of medical and academic radiation environments; describe the principles of applied radio-biology; and define the basics of an integrated radiation protection management program (*Co-scheduled with CEM 539*).

3 credits

HPH 650 Safety Engineering & Management

The course is designed to provide practical knowledge of the fundamentals of occupational and environmental health and safety, including safety engineering regulations, codes and practices, safety program administration, recognition of hazards and implementation of hazard controls (*Co-scheduled with CEM 541*).

3 credits

HPH 651 Environmental and Occupational Health Laws and Agencies

This survey course will introduce the legal parameters involved in occupational and environmental health and safety including statutory considerations on federal, state, and local levels; common law; and industry standards. Practical tools such as document retrieval, familiarity with governmental agencies, and research techniques will also be covered. Emphasis will be places on decision making and innovative problem solving in an area where the laws are constantly changing, some retroactively (*Co-scheduled with CEM 542*).

3 credits

HPH 652 Occupational Safety and Health for Special Groups

This course will address the occupational health and safety issues surrounding populations known for their population size, diversity and magnitude of exposure. While there are many environmental hazardous aspects in the workplace, work populations are affected by agents specific to the nature of the occupations. The risk of those exposed requires special knowledge, monitoring and regulations. Upon completion of this course, students will be able to identify the occupational safety and health hazards for the following special groups: health care workers, firefighters, construction workers, agricultural workers and disabled workers. Students will be provided with a historical perspective of safety and health in the workplace. Following the introductory sessions, the course will be divided into sessions that

will focus on select occupational groups and will identify the hazards, regulations and preventive interventions specific to these groups (*Co-scheduled with CEM 543*).

3 credits

HPH 658 The Use Of Remote Sensing and GIS in Environmental Analysis

An introduction to the use of aerial and satellite imagery in environmental analysis and the manipulation of geographic data sets of all types using Geographic Information Systems. This course is designed to teach students in archaeology, physical anthropology, and related disciplines, how satellite imagery combined with various maps can be manipulated using GIS software to perform powerful geographic analysis. Although students are eventually likely to use these tools in many different parts of the world, this courses focuses on Long Island as a research area, and each student designs and completes a research project on a particular section of the area, focusing on the habitats of local wildlife, the locations of archaeological sites, coastal regimes, etc. This course presumes computer literacy and familiarity with database management (*Co-scheduled with ANT 526*).

3 credits

HPH 664 Economics of Health

An overview of market failures and peculiarities of the health market. We develop tools necessary for studying the health market from efficiency and social welfare perspectives. Incorporate key market specific differences into economic models, like asymmetric information and agency, imperfect information, and forms of intervention. Covers theoretical and econometric tools necessary for evaluation of the market. Supply and demand analysis of the market for health services (*Co-scheduled with ECO 646*).

2 credits, fall term, Professor Dwyer

HPH 665 Health Economics

This course applies advanced economic theory and econometrics to issues within the health market in more detail. Theoretical and econometric analysis of the health care delivery system, such as the demand for medical services, the supply and distribution of physician services, hospital behavior, third-party insurance reimbursement, national health insurance and cost, price inflation, and welfare economics and policy analysis.

2 credits, spring term

HPH 671 Marine Pollution

Review of the physical and chemical characteristics and speciation in the marine environment of organic pollutants, metals and radionuclides including bioavailability, assimilation by marine organisms, toxicity, and policy issues (*Co-scheduled with MAR 512*).

3 credits

HPH 672 Marine Management

The course discusses waste management issues particularly affecting the marine environment. Topics include ocean dumping, sewage treatment, fish kills, beach pollution, and nuisance algal blooms. Techniques for managing the waste stream are presented (*Co-scheduled with MAR 514*).

3 credits

HPH 673 Groundwater Problems

Discussion of the hydraulic processes and technologies that are central to the management and monitoring of groundwater resources including special problems of coastal hydrology and saltwater intrusion, as well as the fate of contaminants. Remediation approaches are also examined (*Co-scheduled with MAR 521*).

3 credits, fall term, Professor Tonjes

HPH 674 Environmental Toxicology

The ecological and human health effects of toxic chemicals, especially chlorinated hydrocarbons, are examined. Toxicological principles, carcinogenesis, and economic and political considerations are included (*Co-scheduled with MAR 522*).

3 credits

HPH 675 Environment and Public Health

Review of the interactions of humans with the atmosphere and water resources, especially in the Long Island coastal community. An introduction is provided to the field of environmental health and the

practices relevant to an urban and suburban and coastal setting (*Co-scheduled with MAR 525*).
3 credits

HPH 676 Environmental Law & Regulation

This course covers environmental law and regulations from inception in common law through statutory law and regulations. The initial approach entails the review of important case law giving rise to today's body of environmental regulations. Emphasis is on environmental statutes and regulations dealing with waterfront and coastal development and solid waste as well as New York State's Environmental Quality Review Act (SEQRA) and the National Environmental Policy Act (NEPA) (*Co-scheduled with MAR 536*).

3 credits, fall term, Professor Cahill

HPH 677 Introduction to Risk Assessment and Risk Management

Risk assessment, the quantification of the degree of hazard resulting from human activities, is the device adopted by governmental agencies to establish the priorities of the hazards of our daily lives. This course will explore the science and assumption on which risk assessment is based, the benefits it has generated, and the controversies with risk communication will be studied, along with case studies (*Co-scheduled with MAR 557*).

3 credits

HPH 683 Air Pollution and Air Quality Management

The effects of air pollution on the environment and public health are explored. Primary pollutants, such as particulates, oxides of sulfur, nitrogen and carbon, hydrocarbons, lead and CFS's are considered, as are secondary pollutants, such as sulfuric acid, PAN, and surface ozone. The effect of the atmospheric conditions on the dilution and dispersion of pollutants and the impact of pollution on the global atmosphere are explained. Air pollution disasters and the impacts and ramifications of the Clean Air Act of 1970, its 1990 amendments, and recent international accords are discussed. Case studies of air pollution reduction, management, and regulation in local industry are included. Other contemporary topics include the loss of stratospheric ozone and global warming due to man's activities (*Co-scheduled with EST 584*).

3 credits

HPH 684 Environmental and Waste Management in Business and Industry

Environmental and waste management practices in industrial and other institutional settings. Technologies of hazardous waste prevention, treatment, storage, transportation, and disposal. Information systems and software tools for environmental audits, regulatory monitoring and compliance and cost estimation. Recycling programs, air, land and water (*Co-scheduled with EST 586*).

3 credits

HPH 685 Assessment of Socio-Technological Problems and Issues

Diagnosis of disagreements about environmental and waste problems. Tools for evaluating disputes about (a) scientific theories, and environmental models, (b) definitions and analytical methodologies for estimating risks, real cost, net energy use, and life-cycle environmental impact, (c) regulatory and legal policy, (d) citing of controversial environmental facilities, and (e) fairness and other ethical issues. These diagnostic tools brought to bear upon case studies of population prevention, recycling, nuclear waste disposal, and climate change (*Co-scheduled with EST 594*).

3 credits, fall semester, Prof. Reaven

HPH 686 Risk Assessment and Hazard Management

A case study approach to the assessment of risk and the management of natural and technological hazards, with emphasis on those that can harm the environment. The course focus on technological hazards involving energy, transportation, agriculture, natural resources, chemical technology, nuclear technology and biotechnology, and on natural hazards such as climatic changes, droughts, floods, and earthquakes. The first part of the course consists of readings on risk assessment and hazard management and discussion of published case studies. During the second part of the course, students conduct their own case studies and use them as the basis for oral and written reports (*Co-scheduled with EST 593*).

3 credits

HPH 687 Diagnosis of Environmental Disputes

Diagnosis of disagreements about environmental and waste problems. Tools for evaluating disputes about (a) scientific theories, and environmental models (b) definitions and analytical methodologies for estimating risks, real cost, net energy use, and life-cycle environmental impact (c) regulatory and legal policy (d) citing of controversial environmental facilities (e) fairness and other ethical issues. These diagnostic tools brought to bear upon case studies of population prevention, recycling, nuclear waste disposal, and climate change (*Co-scheduled with EST 594*).

3 credits, fall term, Professor Reaven

HPH 688 Principles of Environmental Systems Analysis

This course is intended for students interested in learning systems engineering principles relevant to solving environmental and waste management problems. Concepts include compartmental models, state variables, optimization, and numerical and analytical solutions to differential equations (*Co-scheduled with EST 595*).

3 credits, fall term, Professor Kaplan

HPH 689 Simulation Models for Environmental and Waste Management

This course is intended for students interested in developing computer models for technology assessment and for environmental and waste management. Concepts developed in EST 595 Environmental Systems Engineering and Analysis will be applied to real world problems. Techniques in model development will be presented in the context of applications in surface and groundwater management, acid rain, and health risks from environmental contamination (*Co-scheduled with EST 596*).

3 credits

HPH 695 Applied Linear Algebra

Review of matrix operations. Elementary matrices and reduction of general matrices by elementary operations, canonical forms, and inverses. Applications to physical problems (*Co-scheduled with AMS 505*).

3 credits

HPH 696 Introduction to Probability

Sample spaces, conditional probability and independence, random variables and functions of random variables; binomial, Poisson, normal, and other special distributions; moment-generating functions; law of large numbers and central limit theorem; Markov chains. Applications to statistics (*Co-scheduled with AMS 507*).

3 credits

HPH 697 Mathematical Statistics II: Hypothesis Testing

Decision problems, Neyman-Pearson lemma, likelihood ratio tests, uniformly most powerful tests, unbiased tests, invariant tests, sequential tests, and nonparametric tests. Introduction to tests on contingency tables and multivariate data. Bayesian approaches and introduction to current research problems (*Co-scheduled with AMS 571*).

3 credits

HPH 698 Data Analysis I

Introduction to basic statistical procedures. Survey of elementary statistical procedures such as the t-test and chi-square test. Procedures to verify that assumptions are satisfied. Extensions of simple procedures to more complex situations and introduction to one-way analysis of variance. Basic exploratory data analysis procedures (stem and leaf plots, straightening regression lines, and techniques to establish equal variance (*Co-scheduled with AMS 572*).

3 credits

HPH 699 Design of Experiments

Discussion of the accuracy of experiments, partitioning sums of squares, randomized designs, factorial experiments, Latin squares, confounding and fractional replication, response surface experiments, and incomplete block designs (*Co-scheduled with AMS 582*).

3 credit, MPH Faculty

Grading Policy

The following grading system will be used in the Graduate Program in Public Health: A (4.0), A- (3.67), B+ (3.33), B (3.00), B- (2.67), C+ (2.23), C (2.00), C- (1.67), and F (0.00). A grade of Satisfactory/Failure will be given for the Practicum. Students must maintain an overall 3.0 average in the core. Course work in the concentration must receive a B or better. The Capstone Seminar must receive a grade of B or better. There will be a student performance report completed at the end of each semester for each course. The program will be rigorous, part-time course of study, and students must be able to devote sufficient time to meet the performance standards required at Stony Brook University. The proposed program is designed primarily to be part-time. It will be recommended that the students carry at least 6-9 credits per semester. The Professional Option can be completed in two years and the Standard Program in three years.

Time Limits

Not including granted leaves of absence, all graduate requirements towards the MPH degree must be completed within five years from matriculation in the program.

Attendance Requirements

Attendance by student is mandatory, unless excused by the program director or course instructor, or for medical reasons.

Statement of Student Responsibility

Students are responsible for reviewing, understanding, and abiding by the University's regulations, procedures, requirements and deadlines as described in all official publications. These include the Graduate Bulletin, Undergraduate Bulletin (and supplements), Summer Sessions Bulletin, SPD Handbook and website, Student Handbook and Class Schedules. Student should keep all Stony Brook catalogs and correspondence for reference.

Financial Aid

Inquiries about financial aid should be directed to the Health Sciences Center Office of Student Services.

