Public Health

In the College of Health and Human Services

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Faculty

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The John J. Hanlon Chair in Health Services Research and Policy

Alvarado Hospital Medical Center has joined with SDSU's faculty and staff to create The John J. Hanlon Chair in Health Services Research and Policy in the Graduate School of Public Health. The chair is named in honor of the late Dr. John J. Hanlon, former assistant surgeon general for the U.S. Public Health Service. Dr. Hanlon coordinated the planning and development of SDSU's Graduate School of Public Health.

The first appointee to the Chair, Dr. Dennis Pointer, is a national authority on health care organization, governance, strategy, and management.

General Information

APPLICATION DEADLINES: For students applying for the MPH, MS, and MD/MPH, both the GSPH and SDSU applications must be postmarked by July 1 for fall semester admission, or December 1 for spring semester admission (transcripts, letters of recommendation, and GRE scores can arrive after these dates). Students applying for the Ph.D. must submit all application materials (applications, transcripts, letters of recommendation, and GRE scores) by February 1, for fall admission only.

Students interested in the MSW/MPH should contact the School of Social Work. The completed application is due March 1.

The Graduate School of Public Health offers graduate study leading to the degrees of Doctor of Philosophy in public health, Master of Public Health, Master of Science, and a concurrent program leading to a Master of Public Health and a Master of Social Work.

The curriculum enables students to prepare for careers in academic teaching and research, as well as health services and research in public and private agencies and organizations. The Doctor of Philosophy is offered in public health, with a concentration in epidemiology. The Master of Public Health (MPH) is awarded in the concentration areas of biometry, environmental

health, epidemiology, health promotion, health services administration. The Master of Science degree is awarded in the concentration areas of environmental health science, industrial hygiene and toxicology. The preventive medicine residency program enables qualified physicians to sit for the American Board of Preventive Medicine certificate examination as well as receive the MPH degree upon completion of preventive medicine residency requirements. The Graduate School of Public Health is nationally accredited by the Council on Education in Public Health (CEPH). In addition, the graduate program in health services administration is accredited by the Accrediting Commission on Education for Health Services Administration (ACEHSA), and the preventive medicine residency program is accredited by the Accrediting Committee for Graduate Medical Education (ACGME).

A significant number of expert practitioners in specialized fields of public health are involved in the academic and practical components of the program to provide breadth and depth of opportunity for the student. Many of the health facilities within San Diego are available for field study and practicum requirements. In addition, modern computer facilities and laboratories are available on the San Diego State University campus.

The school's proximity to the Mexican border has promoted the development of strong professional ties between the Graduate School of Public Health faculty and students and their counterparts in Baja California. A number of jointly sponsored binational research and service projects are aimed at improving public health conditions and health services on both sides of the U.S.-Mexico border.The following general description of faculty and student research being conducted in each of the concentration areas illustrates the role of each specialty area within the broad, interdisciplinary field of public health:

Biometry: Development and application of statistical methods and models in the fields of public health, medicine and biology.

Environmental Health Science: Isolation and identification of chemical and microbiological disease agents in air, water, soil, hazardous and other solid wastes. The M.S. program in environmental health science offers greater technical laboratory focus than the environmental health M.P.H.

Epidemiology: Identification of biological, environmental, social and behavioral risk factors for human disease; determination of the distribution and etiology of disease in human populations, particularly infectious and chronic diseases.

Health Promotion: Health education and behavior modification approaches to reducing the incidence of chronic diseases, injury, and other major health problems; particular emphasis on minority, disadvantaged, and aged populations.

Health Services Administration: Management of health care facilities, services, and organizations; planning and evaluation of public and private sector programs; administration and operations in specialty services, hospitals, ambulatory care, insurance companies, and other health related organizations.

Industrial Hygiene: Recognition, evaluation and control of chemical, physical, and biological hazards in the work place; current emphasis on studies of airborne contaminants and respiratory protection.

Toxicology: Study of toxicity, biologic mechanisms of action, and human health risk of exposure to chemicals in the environment.

Section I. Master's Degree Programs

Master of Public Health Degree

Admission to Graduate Study

Applicants seeking admission to public health concentration areas leading to either the Master of Public Health or Master of Science degree should contact the Graduate School of Public Health requesting appropriate application materials. Detailed information concerning application procedures will be sent to the applicant along with appropriate application forms.

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student seeking admission to the Graduate School of Public Health must: (1) submit a narrative statement as described in Instructions for Applicants; (2) submit three letters of recommendation (preferably academic); (3) present additional evidence of promise of success in academic and professional activities; and (4) document competence or prior academic preparation in the biological sciences, social sciences, and quantitative methods. Applicants for the biometry concentration are required to have successfully completed undergraduate courses in single and multivariable calculus.

Students who do not fully meet the requirements for admission with classified graduate standing may be considered for conditionally classified graduate standing upon recommendation of the admissions committee and the graduate coordinator.

Advancement to Candidacy

All students must: (1) meet the general requirements for advancement to candidacy as described in Part Two of this bulletin; (2) satisfactorily pass a faculty evaluation of the progress that they are making in their graduate course of study; (3) complete the core courses, Public Health 601, 602, 603, 604, 605 (students in health services administration will substitute Public Health 641 and 644A for Public Health 605 and students in health promotion will substitute Public Health 661 and 662 for Public Health 603); have a grade point average of at least 3.0 and no grade less than a B– in each core course completed; and (4) have completed at least 12 semester units of approved public health coursework.

In addition, the student must be recommended for advancement to candidacy by the faculty of the Graduate School of Public Health.

Specific Requirements for the Master of Public Health Degree

(Major Code: 12141)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 48 units (55 units for students in Health Services Administration Concentration) including: (1) twelve units of core courses, Public Health

601, 602, 603*, 604, and 605**; (2) a minimum of 21 units of graduate courses in the area of concentration; (3) a maximum of twelve units of supervised field placement (if the student has not had equivalent field experience); and (4) electives selected with the approval of the graduate adviser. In addition, Public Health 799A, Thesis, must be included in the program except in the biometry, health promotion, health services administration and maternal and child health concentrations where the student may select the Plan B option, with a comprehensive examination in lieu of the thesis or project when approved by the graduate adviser.

In the environmental health and occupational health concentrations, students registering for 799A may complete a major project or thesis. Up to six units of graduate credit may be accepted in transfer, with the approval of the graduate adviser.

*Students in Health Promotion will take Public Health 661 and 662 in lieu of Public Health 603.

**Students in Health Services Administration will take Public Health 641 and Public Health 644A in lieu of Public Health 605.

Concentration in Biometry

Courses required for the concentration:

PH 623 Epidemiological Methods (3)
PH 627 Advanced Statistical Methods in Public Health (3)
PH 628 Applications of Multivariate Statistics in Public Health (3)
STAT 551A Mathematical Statistics (3)
STAT 551B Mathematical Statistics (3)
STAT 552 Sample Surveys (3)

Prescribed Electives: Three units selected from the following Public Health courses:

PH 622 Epidemiology of Chronic Diseases (3)
PH 649 Public Health Surveillance (3)
PH 700A Seminar in Public Health: Epidemiology (3)

Prescribed Electives: Nine units selected with the approval of the adviser from the following Mathematics courses:

STAT 553 Stochastic Processes (3)
STAT 554A Computer Oriented Statistical Analysis (3)
STAT 554B Advanced Computer Oriented Statistical Analysis (3)
STAT 555 Multivariate Statistical Methods in Biology (3)
STAT 670A-670B Advanced Mathematical Statistics (3-3)
STAT 671 Statistical Computing (3)
STAT 672 Nonparametric Statistics (3)
STAT 674 Multivariate Analysis (3)
STAT 675 Linear Statistical Models (3)
STAT 677 Design of Experiments (3)
STAT 678 Survival Analysis (3)
STAT 679 Analysis of Discrete Data (3)
STAT 680A-680B Advanced Biostatistical Methods (3-3)

Concentration in Environmental Health

Courses required for the concentration:

PH 632 Air Quality (3)
PH 634 Environmental Protection (3)
PH 639 Water Quality Investigation (3)

Prescribed electives (a minimum of six additional units selected with the approval of the adviser from):

PH 635 Occupational Medicine (3)
PH 636 Hazardous Waste Management (3)
PH 637 Biological Mechanisms of Environmental Toxicants (3)
PH 638A Principles of Toxicology (3)
PH 700D Seminar in Public Health: Environmental Health (3)
PH 721 Environmental Epidemiology (3)
PH 731 Environmental and Occupational Health Policy (3)
PH 732 Principles of Industrial Hygiene (4)
PH 737 Advanced Industrial Hygiene (4)
PH 738 Topics in Toxicology (3)
PH 798 Special Study (1-3) Cr/NC/SP

Electives (6 units): These electives may include any public health course or selected graduate level courses in other departments with the approval of the faculty adviser.

Concentration in Epidemiology

Courses required for the concentration:

PH 621 Epidemiology of Infectious Diseases (3)
PH 622 Epidemiology of Chronic Diseases (3)
PH 623 Epidemiological Methods (3)
PH 627 Advanced Statistical Methods in Public Health (3)

Prescribed electives in Epidemiology (two courses selected from):

PH 625 Control of Infectious Diseases (3)
PH 628 Applications of Multivariate Statistics in Public Health (3)
PH 649 Public Health Surveillance (3)
PH 700A Seminar in Public Health: Epidemiology (3)
PH 721 Environmental Epidemiology (3)

Electives (3 units selected with the approval of the concentration faculty): These electives may include any public health course or selections from the following:

Biology 585, 586, 588
Nutrition 600, 606, 607, 700
Sociology 770
Statistics 550, 551A, 552, 554A, 672, 674, 677

Concentration in Health Promotion

Courses required for the concentration:

PH 607 Research Methods and Proposal Writing (3)
PH 661 Theoretical Foundations of Health Promotion (3)
PH 662 Motivating Health Behavior (3)
PH 663 Health Promotion Communications Theory and Design (3)
PH 666 Health Promotion Program Planning and Assessment (3)

Prescribed electives (choose two or more different courses from):

PH 664 Health, Society and Human Behavior (3)
PH 667 Prevention and Control of Chronic Diseases (3)
PH 668 Seminar in Health Promotion Research (3)
PH 669 Health Risk Appraisal (3)
PH 700F Seminar in Public Health: Health Promotion (3)
PH 761 Programming Health Promotion (3)
PH 762 Behavioral Medicine (3)
PH 797 Research (3) Cr/NC/SP

Electives (6 units to be chosen with the approval of the faculty from any public health course or Community Health Education 574).

Concentration in Health Services Administration

Courses prerequisite to this concentration are Public Health 640 and Business Administration 650 or their equivalents as determined by the graduate adviser. If these courses or the equivalents have not been completed prior to admission, they should be included in the first semester course requirements.

BA 650 Financial Accounting (2)
PH 640 Public Issues in Financing Health Care (3)

Courses required for the concentration:

PH 641 Health Care Delivery Systems (3)
PH 644A Health Services Organizations Structure and Functioning (3)
PH 644B Organizational Behavior in Health Services Organizations (3)
PH 645 Health Services Economics (3)
PH 646 Legal and Ethical Aspects of Health Care (3)
PH 647 Quantitative Methods (3)
PH 742A Health Services Financial Management (3)
PH 742B Health Services Financial Management (3)
PH 748 Competitive Strategies and Tactics in Health Services Delivery (3)

Prescribed electives (nine units selected with approval of adviser):

PH 649 Public Health Surveillance (3)
PH 700E Seminar in Public Health: Health Services Administration (3)
PH 743 Hospital Administration (3)
PH 744 Ambulatory Care Management (3)
PH 745 Seminar in Health Economics (3)
PH 746 Quality of Care Assessment and Assurance (3)
PH 798 Special Study (1-3) Cr/NC/SP

The remaining elective units may be selected with the approval of the adviser.

Master of Science Degree in Public Health

Admission to Graduate Study

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student seeking admission to the Graduate School of Public Health master of science programs must (1) submit a narrative statement as described in Instructions to Applicants; (2) provide three letters of recommendation preferably academic; (3) document competence or prior academic preparation in laboratory sciences. Normally, to be considered for admission to these programs, a student must have successfully completed lecture and laboratory course requirements for an undergraduate degree (BA or BS) in biology, chemistry, engineering, or other basic or applied natural science. The Graduate School of Public Health should be consulted for specific course preparation recommended for each of the concentrations. In some cases, if an applicant is deficient in certain basic or applied science areas, some remedial coursework can be completed as an unclassified graduate student. However, credits earned by remedial courses cannot be applied toward the required number of units for the master's degree. The student must also have successfully completed PH 601 and PH 602 or their equivalents with a minimum grade of B– in both courses in order to become fully classified in the programs. (PH 601 and PH 602 will not count toward the 36 unit master of science degree requirements.) Students who do not meet all of the above requirements for admission with classified graduate standing may be admitted with conditionally classified graduate standing upon the recommendation of the admissions committee and the graduate adviser. Students so admitted will be advised as to remedial steps to take to satisfy the requirement to achieve full classified graduate standing.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. Students completing master of science degree concentrations must (1) have satisfactorily completed at least 12 units of coursework of the 36-unit official program including at least two courses chosen from the list of courses required for the student's concentration, with a minimum grade point average of 3.0 (B) and no grade less than a B–; (2) have a thesis proposal which has received the approval of the Graduate School of Public Health faculty.

General Requirements for the Master of Science Degree

(Major Code: 12141)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 36 units in the area of concentration or related disciplines as listed below. Up to six units may be accepted in transfer, with the approval of the graduate adviser. Requirements vary depending on the area of concentration and are as shown below:

	Environmental Health Science	Industrial Hygiene	Toxicology
Required	18	20	18
Prescribed Electives	12	7	12
Research/Thesis (PH 797, 799A)	6	6	6
Field Practice* (PH 650)	—	3	—
Total units:	36	36	36

* A 3-unit field practice is mandatory for industrial hygiene students and may be taken as an elective by students in the environmental health science and toxicology concentrations with approval of the academic adviser.

Specific Requirements for Master of Science Degree Programs

Concentration in Environmental Health Science

Courses required for the concentration (18 units):

PH 632 Air Quality (3)
PH 634 Environmental Protection (3)
PH 636 Hazardous Waste Management (3)
PH 638A Principles of Toxicology (3)
PH 639 Water Quality Investigation (3)
PH 700D Seminar in Public Health: Environmental Health (3)

Prescribed electives (a minimum of 12 units of coursework selected from the following with the approval of the faculty adviser):

GEOL 551 Hydrogeology (3)
CEE 635 Water Quality Engineering (3)
CEE 636 Water Quality Processes (3)
PH 623 Epidemiological Methods (3)
PH 637 Biological Mechanisms of Environmental Toxicants (3)
PH 650 Field Practice (3) Cr/NC
PH 721 Environmental Epidemiology (3)
PH 731 Environmental and Occupational Health Policy (3)
PH 738 Topics in Toxicology (3)
PH 798 Special Study (1-3) Cr/NC/SP

Concentration in Industrial Hygiene

Courses required for the concentration (20 units):

PH 636 Hazardous Waste Management (3)
PH 638A Principles of Toxicology (3)
PH 700C Seminar in Public Health: Occupational Health (3)
PH 732 Principles of Industrial Hygiene (4)
PH 735 Industrial Ventilation (3)
PH 737 Advanced Industrial Hygiene (4)

Prescribed electives (a minimum of seven units of coursework selected from the following list with the approval of the faculty adviser):

PH 604 Environmental Determinants of Human Health (2)
PH 632 Air Quality (3)
PH 634 Environmental Protection (3)
PH 635 Occupational Medicine (3)
PH 639 Water Quality Investigation (3)
PH 731 Environmental and Occupational Health Policy (3)
PH 733 Principles of Industrial Safety (3)
PH 798 Special Study (1-3) Cr/NC/SP

Concentration in Toxicology

Courses required for the concentration (18 units):

PH 636 Hazardous Waste Management (3)
PH 637 Biological Mechanisms of Environmental Toxicants (3)
PH 638A Principles of Toxicology (3)
PH 638B Methods in Toxicity Testing (3)
PH 700D Seminar in Public Health: Environmental Health (3)
PH 738 Topics in Toxicology (3)

Prescribed electives (a minimum of 12 units of coursework selected from the following list with the approval of the faculty adviser):

BIOL 561 Radiation Biology (3)
BIOL 561L Radiation Biology Laboratory (2)
BIOL 569 Molecular Pharmacology (3)
CHEM 550 Instrumental Methods of Chemical Analysis (2)
PH 627 Advanced Statistical Methods in Public Health (3)
PH 632 Air Quality (3)
PH 635 Occupational Medicine (3)
PH 639 Water Quality Investigation (3)
PH 650 Field Practice (3) Cr/NC
PH 721 Environmental Epidemiology (3)
PH 731 Environmental and Occupational Health Policy (3)
PH 732 Principles of Industrial Hygiene (4)
PH 798 Special Study (1-3) Cr/NC/SP

Master of Social Work and Master of Public Health Degrees

General Information

The Graduate School of Public Health and the School of Social Work offer a three year concurrent graduate program leading to a Master of Public Health and a Master of Social Work. The major objective of the concurrent program is to offer preparation in the fields of public health and social work for the purpose of providing the knowledge and skills necessary to promote health, prevent disease, and enhance the delivery of social and health services in the community.

Admission to Graduate Study

To request application materials for the concurrent graduate program in Social Work and Public Health, applicants should write to the Director of the MSW/MPH Advisory Committee, Graduate School of Public Health, San Diego State University. All necessary application forms, instructions for filing them, and information about the program will be sent. In order to be considered for the concurrent MSW/MPH program, applicants must:

1. Meet the general requirements for admission to graduate study at the University (see Part Two of this bulletin).
2. Have a minimum 2.75 grade point average in the last 60 semester or 90 quarter units in undergraduate work completed. Undergraduate preparation in at least one of the following areas is preferred: social work, social or behavioral sciences, or health science.
3. A satisfactory score on the GRE General Test. Applicants already holding another master's degree or higher degree from an acceptable accredited graduate school are exempt from the GRE.
4. Submit a narrative statement as described in Instructions for Applicants.
5. Submit three letters of recommendation.

A committee composed of faculty from Public Health and Social Work will make all admission recommendations to the Dean of the Graduate Division.

Advancement to Candidacy

All students must meet the general requirements for advancement to candidacy as described in Part Two of this bulletin. All core courses in public health and social work must be completed prior to advancement. In addition, the student must: (1) have earned at least 24 units of graduate study within the concurrent program with a minimum grade point average of 3.0 and no grade less than a B– in each core course; (2) have been recommended for advancement by the combined faculty advisory committee; received credit (Cr) in field practicum; (3) have a thesis proposal approved by the combined faculty advisory committee.

Upon advancement to candidacy, the student will enroll in Public Health 797 (Research), Social Work 797 (Research), and Public Health 799A (Thesis) or Social Work 799A (Thesis). A thesis (Plan A) incorporating theory, method, and analytic techniques from both disciplines is the culminating experience for the concurrent program leading to the MSW and MPH degrees.

Specific Requirements for the MSW/MPH Concurrent Program

(Major Code: 12991)

In addition to meeting the requirements for classified graduate standing and the basic requirements for the master's degree as described in Part Two of this bulletin, the student must complete an officially approved course of study of not less than 83 units as outlined below.

Social Work/Public Health – Health Services Administration

Courses prerequisite are Public Health 640 and Business Administration 650 or their equivalents as determined by the graduate adviser. If these courses or the equivalents have not been completed prior to admission, they should be included in the first semester course requirements.

BA 650	Financial Accounting (2)
PH 640	Public Issues in Financing Health Care (3)
SWORK 601	Seminar in Social Welfare Policy and Services (3)
SWORK 619	Human Behavior in the Social Environment (3)
SWORK 620B	Seminar in Human Behavior and Social Environment: Administration (3)
SWORK 630	Social Work Practice: A Generalist Perspective (3)
SWORK 631	Social Work Practice: Individuals, Families, and Groups (3)
SWORK 632	Social Work Practice: Organizations and Communities (3)
SWORK 650*	Field Practicum: Health (7) Cr/NC
SWORK 690	Seminar in Social Work Research Methods (3)
SWORK 702C	Seminar in Social Welfare Policy and Services: Health and Aging (3)
SWORK 740	Advanced Seminar in Social Work Administration (3)
SWORK 745	Advanced Seminar in Selected Topics in Social Work Administration (3)
SWORK 750B*	Advanced Field Practicum: Social Work Administration (8) Cr/NC
SWORK 797	Research (3) Cr/NC/SP
PH 601	Epidemiology (3)
PH 602	Biostatistics (3)
PH 604	Environmental Determinants of Human Health (2)
PH 641	Health Care Delivery Systems (3)
PH 644A	Health Services Organizations Structure and Functioning (3)
PH 644B	Organizational Behavior in Health Services Organizations (3)
PH 645	Health Services Economics (3)
PH 647	Quantitative Methods (3)
PH 742A	Health Services Financial Management (3)
PH 742B	Health Services Financial Management (3)
PH 797	Research (3) Cr/NC/SP
PH 799A or SWORK 799A	Thesis (3) Cr/NC/SP

*Social Work 650 and 750 (field practica) must have the approval of the faculty advisory committee. Responsibility for faculty field supervision will be assigned in social work.

Transfer units will not be accepted toward the concurrent MSW/MPH degree program. Graduate study or degrees obtained previously will not be accepted toward meeting the unit requirements of the concurrent MSW/MPH degree program.

If a student after entering the concurrent MSW/MPH program returns to a single degree program, all the requirements for the single degree program must then be met.

Section II. Doctoral Program

(Major Code: 12141)

Ph.D. in Public Health with a Concentration in Epidemiology

The cooperating faculties of the Division of Epidemiology and Biostatistics, Graduate School of Public Health at San Diego State University and the Department of Community and Family Medicine at the University of California, San Diego offer a joint doctoral program leading to a Ph.D. in public health, with a concentration in epidemiology. The research interests of the participating faculty members cover a wide range of public health problems which represent the interdisciplinary nature of modern public health.

Admission to Doctoral Study

Applicants for admission to the doctoral program must present evidence of capacity for graduate study in public health. A multidisciplinary field such as public health draws from a wide variety of undergraduate majors, but the student is expected to have a strong grounding in the quantitative and biological sciences. The applicant must have a bachelor's degree or the equivalent from an acceptable accredited institution of higher learning with training comparable to that provided by The California State University or University of California undergraduate programs. Admission to the program requires acceptance by both institutions on recommendation of the participating units at SDSU and UCSD. It is understood that acceptance of a student into the joint program by each of the units will be conditioned by their respective standards for graduate admissions and also the available facilities.

Applications must be received by the Graduate School of Public Health not later than February 1 for the Ph.D. program.

Application

Preliminary application for admission must be made to the steering committee, in care of the Graduate School of Public Health, SDSU. A complete application to the joint doctoral program in public health requires the following information:

The appropriate application form.

Three letters of recommendation (sent directly to the Doctoral Program Coordinator, Graduate School of Public Health, SDSU).

Transcripts of academic work already completed.

Results of the Graduate Record Examination.

To be considered for admission to the joint SDSU-UCSD doctoral program in public health, students must meet the general

requirements for admission to both universities with classified graduate standing as outlined in the respective current catalogs. These include (a) an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or equivalent academic preparation, as determined by the deans of the two graduate divisions; (b) a GPA of at least 3.0 in the last 60 semester (90 quarter) units attempted; (c) good standing at the last institution attended; and (d) an acceptable score (verbal and quantitative) on the GRE General Test. Given the large number of applicants in the field of public health, and the limited number of spaces in the program, the selection process is designed to identify the best from among many highly qualified applicants. Thus no minimum set of qualifications in any way guarantees admission.

Residency Requirements

After formal admission to the joint doctoral program, the student must spend at least one academic year in full-time residence on each of the two campuses. The definition of residence must be in accord with the regulations of San Diego State University and University of California, San Diego.

Advisory Committee

Upon admission to the program, the steering committee of the two institutions will establish an advisory committee for the student. This committee will consist of three faculty members chosen jointly from the two institutions. In consultation with the student, the committee will develop the student's course of study, prepare and guide a preliminary examination, and establish the student's joint qualifying committee. At least one member of the advisory committee must be from SDSU and one from UCSD.

Course Requirements

Core courses required for the doctoral degree in public health include Public Health 601, 602, 621, 622, 623, 627, 628, 649, and Statistics 554A. Prior to taking the qualifying examination, every student is expected to have a firm understanding of modern principles of public health and the student's area of epidemiologic interest.

Elective coursework may be selected from offerings at either SDSU or UCSD.

Preliminary Examination

The advisory committee has the responsibility for the preparation of a written preliminary examination that will test broad public health principles and knowledge of epidemiologic methods and their application.

Doctoral Committee

A five-member committee, composed of faculty at SDSU and UCSD, will be recommended by the advisory committee for each student and approved by the graduate deans from both campuses. Two members must be nonprogram faculty and at least one of those outside members must be a tenured member of each university. The student's dissertation adviser will chair the committee. At least two members must be from SDSU and two from UCSD.

The doctoral committee will conduct a written and oral comprehensive qualifying examination, which will evaluate the student's understanding and knowledge of his or her special area of epidemiologic interest. The purpose of this examination is for the student to demonstrate competence in the major research field.

The doctoral committee may specify a course of study to strengthen any weaknesses identified during the qualifying examination. Upon successful completion of the qualifying examination the student must make application to the Graduate Division at UCSD for advancement to candidacy. Upon payment of the candidacy fee to UCSD, and after approval by the graduate deans on both campuses, the student will be notified of advancement to candidacy by the UCSD Graduate Division.

Faculty

The following faculty members of the cooperating institutions participate in the joint doctoral program in Public Health Epidemiology and are available for direction of research and as members of joint doctoral committees.

San Diego State University:
Program Director: Bart
Committee Members: Bender, Benenson, Brodine, Chang, dePeyster, Elder, Gersberg, Hofherr, Hollenbach, Hovell, Koch, Mayer, Peddecord, Samimi, Slymen, Talavera, Williams, Willis

University of California, San Diego:
Program Director: Kaplan
Committee Members: Barrett-Connor, Berry, Criqui, C. Garland, F. Garland, Ginsberg, Goodman-Guen, Heifetz, Holbrook, Hughson, Jackson, Klauber, Klonoff-Cohen, Langer, McCutchan, Nadar, Rupp, Silverstein, Simon, Wingard, Wright

Dissertation

Following successful completion of the qualifying examination and advancement to candidacy, the major remaining requirement for the Ph.D. degree will be satisfactory completion of a dissertation consisting of original and significant research carried out under the guidance of the dissertation adviser, who may be from either SDSU or UCSD. The doctoral committee becomes the dissertation committee after the student's advancement to candidacy. Requirements currently in force at SDSU and UCSD must be met for completing and filing the dissertation.

Award of the Degree

The Doctor of Philosophy degree will be awarded jointly by the Trustees of The California State University and the Regents of the University of California in the names of both institutions.

Financial Support

The Graduate School of Public Health at SDSU and the Department of Community and Family Medicine at UCSD endeavors to provide financial support that will enable all students to devote full time to research training and study.

Section III. Other Programs

Preventive Medicine Residency Certificate

The purpose of the Preventive Medicine Residency Certificate is to train physicians to assure that they have adequate knowledge, attitudes, and skills germane to general preventive medicine and occupational medicine. The physician will be eligible to

sit for the board certification examination administered by the American Board of Preventive Medicine.

In addition to satisfying the requirements for admission to the University with classified graduate standing, as described in Part Two of this bulletin, the student seeking admission to the preventive medicine residency must (1) fulfill the admission requirements given above, and (2) have completed a Doctor of Medicine degree from an accredited institution.

The student will be expected to complete a three year course of study which involves the completion of a clinical year provided by the University of California, San Diego, School of Medicine, the completion of an academic year leading to the Master of Public Health degree provided by the Graduate School of Public Health at San Diego State University, and appropriate practicum experiences under the supervision of faculty of one of the two cooperating institutions.

The student is expected to complete the number of units required for the Master of Public Health degree as well as those additional units which may be prescribed in order to complete the practicum year, i.e., Public Health 750.

The student is expected to have maintained a 3.0 average overall in the coursework at the Graduate School of Public Health and at the University of California, San Diego, School of Medicine.

Program Adviser:

Kevin M. Patrick, M.D., Director
General Preventive Medicine

Courses Acceptable on Master's and Doctoral Degree Programs

Community Health Education

UPPER DIVISION COURSES

560. Introduction to Public Health (3)

Prerequisite: Community Health Education 290.

Epidemiological methods, behavioral and biological determinants, modes of transmission, risk factors, prevention of common infectious and chronic disease. Evaluation of health information to develop health education programs.

561. Health and Medical Care (3)

Prerequisite: Senior or graduate standing with a major or minor in health education or a closely related area.

Health values, concepts, and attitudes; health products and facilities; hospital care and hospitalization plans; governmental health controls; economic and cultural influences on health and medical care; professional contributions, relationships, and careers; national and international health programs.

574. Habit-Forming Substances (3)

Tobacco, alcohol, and other drugs; their use, misuse and abuse.

596. Workshop in Health Education (1-3)

Selected problems in health science are used as a basis for workshop experiences. See Class Schedule for specific content. Limit of nine units of any combination of 296, 496, 596 courses applicable to a bachelor's degree. Maximum credit of six units of 596; maximum credit of three units of 596 applicable to a master's degree. Maximum combined credit of six units of 596 and 696 applicable to a 30-unit master's degree.

Community Health Education

GRADUATE COURSE

920. Health Education for Teachers (3)

Prerequisite: For professional, multiple, or single subject clear credential teaching applicants.

Covers all topics designated in the health framework for California including nutrition, physiological, and sociological effects of substance abuse, consumer health, injury prevention, and child abuse.

Public Health

GRADUATE COURSES

601. Epidemiology (3)

Prerequisite: Consent of instructor.

Distribution and determinants of diseases; role of epidemiology in public health. Descriptive, analytic and experimental epidemiology.

602. Biostatistics (3)

Prerequisite: Successful completion of an elementary statistics course within three years or satisfactory score on departmental competency examination on basic statistical methods.

Statistical reasoning applied to public health; probability, hypothesis testing, regression and correlation, analysis of variance, measurement theory and modeling.

603. Behavioral and Social Science in Public Health (2)

Prerequisites: Psychology 316, 340, and Sociology 436.

Role of psychological, social and environmental variables in health and illness. Multifactorial psychosocial model of disease susceptibility.

604. Environmental Determinants of Human Health (2)

Prerequisites: Biology 100, Chemistry 100.

Environmental determinants and their influence on human health. Biological, physical, and chemical factors which affect the health of a community.

605. Planning, Policy Analysis and Administration of Health Programs (2)

United States health care system with focus on resources planning, policy, and management. Includes health consumer issues, health organizational problems, and elements of public health administration.

607. Research Methods and Proposal Writing (3)

Two lectures and three hours of laboratory.

Prerequisites: Public Health 601, 661, and consent of instructor. Recommended: Public Health 602.

Direct observation measurement, group and intensive experimental designs. Laboratory exercises and proposal writing applicable to public health.

621. Epidemiology of Infectious Diseases (3)

Prerequisite: Public Health 601.

Utilizing selected infectious diseases and environmental settings, provides scientific background on which epidemiological investigations and control measures are based.

622. Epidemiology of Chronic Diseases (3)
Prerequisite: Public Health 601.
Epidemiology of selected chronic diseases.

623. Epidemiological Methods (3)
Prerequisites: Public Health 602, 621 or 622.
Topics include: analysis of descriptive data, design of studies, evaluation of data, development of biological models. Examples of both acute and chronic diseases.

625. Control of Infectious Diseases (3)
Prerequisite: Public Health 621.
Theoretical and practical experience in techniques available for control of infectious diseases.

627. Advanced Statistical Methods in Public Health (3)
Prerequisite: Public Health 602.
Applications of advanced statistical methods for analysis of public health and biomedical data. Topics include multiple linear regression, analysis of variance, logistic regression, and introduction to survival analysis.

628. Applications of Multivariate Statistics in Public Health (3)
Prerequisite: Public Health 627.
Statistical methods for multivariate problems in public health including regression diagnostics, cluster analysis, discriminant analysis, principal components, multivariate discrete analysis and Poisson regression. Computer applications included.

632. Air Quality (3)
Prerequisites: Biology 100, Chemistry 251, Physics 180A.
Properties of airborne gases, vapors, and particulate matter. Effects of air pollution on community. Mobile and stationary sources of air pollution. Meteorology and dispersion of air pollutants. Ambient air quality standards.

634. Environmental Protection (3)
Rationale and mechanisms for control of water supplies, liquid and solid waste disposal, lighting, heat, food and housing, pesticides and community noise.

635. Occupational Medicine (3)
Etiology, diagnosis of disease, and stress in the modern industrial environment.

636. Hazardous Waste Management (3)
Prerequisite: Chemistry 201.
Rationale, methods, and regulations governing the proper management of hazardous and toxic wastes.

637. Biological Mechanisms of Environmental Toxicants (3)
Two lectures and three hours of laboratory.
Prerequisites: Biology 261 and Chemistry 160.
Biologic effects and underlying mechanisms of action of harmful environmental agents on mammalism cells and tissues. Emphasis on toxic chemicals and applications of basic mechanisms research to public health situations.

638A. Principles of Toxicology (3)
Prerequisites: Biology 261 and Chemistry 160.
Dose-response and other principles for evaluating the effects of toxic chemicals on mammalian organ systems.

638B. Methods in Toxicity Testing (3)
One lecture and six hours of laboratory.
Prerequisite: Credit or concurrent registration in Public Health 638A.
Laboratory methods used in evaluating chemicals for potential human toxicity.

639. Water Quality Investigation (3)
Two lectures and three hours of laboratory.
Prerequisite: Public Health 604 or 634.
Human health problems associated with water usage and with various aquatic environments.

640. Public Issues in Financing Health Care (3)
Prerequisite: Open to Health Services Administration majors and students in related fields with consent of instructor.
Orientation to growing role of public intervention in health care sector, including equity versus efficiency aspects of taxation and health care financing, social insurance programs, and methods of evaluating public health activities.

641. Health Care Delivery Systems (3)
National health care system; topics include health personnel, facilities, organization, and funding of health care.

644A. Health Services Organizations Structure and Functioning (3)
Prerequisite: Public Health 641.
Health services organization theory. Processes and functioning of the organization and its relationship to the surrounding environment.

644B. Organizational Behavior in Health Services Organizations (3)
Prerequisite: Public Health 644A.
Managerial role performance in health service organizations in context of organization behavior theory. Acquisition of techniques and skills to enhance managerial effectiveness, efficiency, adaptability, and creativity.

645. Health Services Economics (3)
Prerequisite: Public Health 640.
Topics related to economics of health care, including supply and demand factors, financing of care, efficiency and cost of delivery, and allied areas.

646. Legal and Ethical Aspects of Health Care (3)
Prerequisite: Public Health 641.
Structure of American legal and judicial systems in relation to health, medical care, and related public policy. Ethical and legal considerations of resource allocation, termination of treatment, and experimentation.

647. Quantitative Methods (3)
Prerequisites: Public Health 602 and 641.
Health services applications of quantitative methods to management decision making. Includes subjects applicable to management of hospitals, clinics, and other health care organizations.

649. Public Health Surveillance (3)
Two lectures and three hours of laboratory.
Prerequisites: Public Health 601 and 602.
Public health data sources, including vital statistics, hospital discharge systems, the census, annual and special federal surveys through use of computer files. Methods of data quality control and analysis, communication of information, survey research, and public health surveillance.

650. Field Practice (3-6) Cr/NC
Field instruction in public health settings. Application of public health principles and skills to practical problems. Maximum credit six units of Public Health 650 applicable to a master's degree.

- **A.** Epidemiology
- **B.** Maternal and Child Health
- **C.** Occupational Health
- **D.** Environmental Health
- **E.** Health Services Administration
- **F.** Health Promotion

651A. Legislation and Policy Affecting Women and Children's Health (3)
Prerequisite: Open to graduate students in the College of Health and Human Services.
Health policies and legislation affecting programs and services for women, children, adolescents, and families.

655. Child and Adolescent Health (3)
Health problems of children and adolescents in the U.S. with identification of needs and services which address these problems.

658. Program and Data Management in Maternal and Child Health (3)
Planning and evaluation, program implementation, budgeting, personnel issues, quality assurance, and data management for services in maternal and child health programs.

661. Theoretical Foundations of Health Promotion (3)
Prerequisite: Community Health Education 290.
Psychological, sociological, economic, and political theories relevant to the mission and processes of health promotion. (Formerly numbered Community Health Education 621.)

662. Motivating Health Behavior (3)
Prerequisite: Community Health Education 401.
Application of behavioral change techniques and health education methodology to health promotion targeting individuals and whole communities. (Formerly numbered Community Health Education 606.)

663. Health Promotion Communications Theory and Design (3)
Prerequisite: Community Health Education 402.
Theory, design and implementation of health education communications in community contexts. Extensive use of student design, analysis, and projects.

664. Health, Society and Human Behavior (3)
Prerequisites: Psychology 101, Sociology 101.
Historical and contemporary examination of health problems of individuals and communities. Health needs, resources; impact of society on health and health on society.

666. Health Promotion Program Planning and Assessment (3)
Prerequisites: Public Health 661, 662.
Program planning and assessment, theories, systems and procedures relevant to health promotion and education.

667. Prevention and Control of Chronic Diseases (3)
Prerequisites: Public Health 601 and 602.
Health promotion strategies for modification of individual behaviors and social practices to lower risk of chronic disease.

668. Seminar in Health Promotion Research (3)
Prerequisite: Graduate standing in public health.
Philosophical, ethical and methodological issues in current health promotion research and services.

669. Health Risk Appraisal (3)
Prerequisites: Public Health 601, 602, 661, 662.
Techniques available for identifying personal health risk. Use of these methods for inducing change. Evaluation of effectiveness of methodologies.

696. Contemporary Topics in Public Health (1-3)
Intensive study in specific areas of public health and health services administration. May be repeated with new content. See Class Schedule for specific content. Maximum credit six units applicable to a master's degree.

700. Seminar in Public Health (1-3)
Prerequisites: Public Health 601, 602, and 603.
Investigation of current problems in one of the fields of public health. Maximum credit nine units of Public Health 700 applicable to a master's degree. These units may be in a single concentration area or any of the public health concentration areas.

- **A.** Epidemiology
- **C.** Occupational Health
- **D.** Environmental Health
- **E.** Health Services Administration
- **F.** Health Promotion
- **G.** Preventive Medicine

721. Environmental Epidemiology (3)
Prerequisites: Public Health 601 and 602. Recommended: Public Health 623.
Uses of epidemiological methods in study of environmental hazards affecting community health and health of workers. Case studies.

731. Environmental and Occupational Health Policy (3)
Prerequisite: Credit or concurrent registration in Public Health 604.
Current issues in environmental and occupational health, including risk assessment, policy development, and program management.

732. Principles of Industrial Hygiene (4)
Three lectures and three hours of laboratory.
Prerequisites: Chemistry 251, 431, and Physics 180A.
Fundamental principles of recognition, evaluation, and control of hazardous chemical, physical, and biological agents in the work place.

733. Principles of Industrial Safety (3)
Prerequisite: Public Health 732.
Introduction to field of industrial safety including accident prevention as a function of training people in safe work behaviors and maintaining and monitoring the machine interface.

734. Noise in the Work Place (3)
Prerequisites: Biology 100 and Physics 180A.
Physics of sound; physiology and effects of noise on hearing; noise assessment and control in the work place.

735. Industrial Ventilation (3)
Two lectures and three hours of laboratory.
Prerequisite: Public Health 732.
Techniques of general, dilution, and local exhaust ventilation. Ventilation system design. Techniques and strategies of ventilation survey and testing. OSHA ventilation regulations.

737. Advanced Industrial Hygiene (4)
Two lectures and six hours of laboratory.
Prerequisite: Public Health 732.
Techniques and strategies for investigation and control of potential health hazards in occupational environment.

738. Topics in Toxicology (3)
Prerequisite: Public Health 638A.
Topics in toxicology to include food toxicants, pesticides, soil and groundwater pollutants, industrial toxicology and quality assurance, toxicokinetics, genetic toxicology and toxicology in risk assessment.

742A. Health Services Financial Management (3)
Prerequisite: Business Administration 650.
Financing and accounting principles applied to health services facilities and organizations: activities of financial managers, discounted cash flow analysis, debt and equity valuation, long-term financing, risk/return, capital budgeting, capital costs, financial statement analysis, forecasting, working capital management.

742B. Health Services Financial Management (3)
Prerequisite: Public Health 742A.
Health insurance, financing of health services—medicare, medicaid, and private health insurance programs. Emphasis on principles of managed care, provider reimbursement, and incentives for cost containment. Comparison of U.S. health financing to methods used in other industrialized nations.

743. Hospital Administration (3)
Prerequisite: Public Health 644A.
Organization and management of hospitals including such topics as environment, relationships among medical staff, board, and administration, role of administrator, patient services, structure of hospital, and organizational survival.

744. Ambulatory Care Management (3)
Prerequisite: Public Health 644A.
Organization and management of ambulatory care. Emphasis on group practice, prepayment, organizations, hospital services, and other clinical settings.

745. Seminar in Health Economics (3)
Prerequisite: Public Health 645.
Operation and interaction of markets for medical care and health insurance. Development of analytical skills appropriate for examining current policy issues in health.

746. Quality of Care Assessment and Assurance (3)
Prerequisite: Public Health 641.
Methods for development and evaluation of quality assurance programs in health service organizations. Alternative methods of assessment. Evaluation of consumer, professional, institutional, and governmental responsibilities.

748. Competitive Strategies and Tactics in Health Services Delivery (3)
Prerequisite: Public Health 644B.
Application of strategy concepts and techniques to health services marketing.

750. Advanced Field Practice (3-6) Cr/NC
Prerequisite: Public Health 650.
Advanced field instruction in public health setting. Intensification and continuation of application of public health principles and skills to public health problems. Maximum credit six units of Public Health 750 applicable to a master's degree.

A. Epidemiology
B. Maternal and Child Health
C. Occupational Health
D. Environmental Health
E. Health Services Administration
F. Health Promotion

751. Studies in Perinatal and Reproductive Health (3)
Perinatal mortality and morbidity. Review of methods and findings in studies of reproductive exposures and outcomes.

761. Programming Health Promotion (3)
Prerequisites: Public Health 661 and 663.
Current programs, practices, and problems in health promotion activities of hospitals, clinics, public health departments, and government. Issues necessitating health promotion programs. Formulation of effective promotion programming in various settings.

762. Behavioral Medicine (3)
Prerequisites: Public Health 661 and 662.
Behavioral management approaches to health care problems. Diseases and conditions that arise from physical, psychological and environmental causes; behavioral interventions that attenuate disease process and improve compliance.

797. Research (1-3) Cr/NC/SP
Prerequisite: Consent of instructor.
Research in one of the fields of public health. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

798. Special Study (1-3) Cr/NC/SP
Prerequisite: Consent of staff, to be arranged with the director and instructor.
Individual study. Maximum credit six units applicable to a master's degree. Maximum combined credit six units of Public Health 797 and 798 applicable to a master's degree.

799A. Thesis (3) Cr/NC/SP
Prerequisite: An officially appointed thesis committee and advancement to candidacy.
Preparation of a project or thesis for the master's degree.

799B. Thesis Extension (0) Cr/NC
Prerequisite: Prior registration in Thesis 799A with an assigned grade symbol of SP.
Registration required in any semester or term following assignment of SP in Course 799A in which the student expects to use the facilities and resources of the university; also student must be registered in the course when the completed thesis is granted final approval.

800. Seminar (1-9)
Prerequisite: Admission to the doctoral program.
Investigation of a particular topic or issue, emphasis on empirical research; topic to be announced in the Class Schedule. Maximum credit nine units applicable to a doctoral degree.

897. Doctoral Research (1-9) Cr/NC/SP
Prerequisite: Admission to the doctoral program.
Independent investigation in the general field of the dissertation.

898. Doctoral Special Study (1-9) Cr/NC/SP
Prerequisite: Admission to the doctoral program.
Individual study in the field of specialization. Maximum credit nine units applicable to the doctoral degree.

899. Doctoral Dissertation (6-9) Cr/NC/SP
Prerequisites: An officially constituted dissertation committee and advancement to candidacy.
Preparation of the dissertation for the doctoral degree. Enrollment is required during the term in which the dissertation is approved.