

Appendix C

SDSU COURSE DESCRIPTIONS**PREREQUISITES****PH 601 (3) Epidemiology** (Fall, Spring: Shaffer, Lindsay)

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

PH 602 (3) Biostatistics (Fall, Spring: Alcaraz, Ji)

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

PH 621 (3) Epidemiology of Infectious Diseases (Fall: Brodine)

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

PH 622 (3) Epidemiology of Chronic Diseases (Spring: Macera)

Epidemiological aspects of the leading causes of death and disability (heart disease, cancer, arthritis, and diabetes) with a focus on preventable risk factors; approaches to the study of these diseases or conditions from a population perspective.

PH 627 (3) Advanced Statistical Methods in Public Health (Fall, Spring: Alcaraz, Lemus)

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.

REQUIRED**PH 800 (2) Epi Doctoral Seminar in Health Disparities**, (Fall, Spring:, Madanat)

The Doctoral Seminar at SDSU is offered every semester and is specifically designed for students in their first year. The Seminar will be a combination of didactic instruction, interactive sessions, student presentations, and presentations of current work by JDP faculty. While the Doctoral Seminar is required for all JDP students in their first year, continued participation through subsequent years is encouraged since it is used as a venue to provide information to JDP students.

CORE**PH 623 (3) Epidemiological Methods** (Fall, Spring: Shaffer)

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

PH 628 (3) Applications of Multivariate Statistics in Public Health (Fall, Spring: Ji)

Statistical methods for multivariate problems in public health including regression diagnostics, cluster analysis, discriminate analysis, principal components, multivariate discrete analysis and Poisson regression. Computer applications included.

PH 722 (3) Analysis of Clinical Trials (Fall: Ji)

Prerequisites: Public Health 601, 602, 623 and 627. In-depth methodological issues in performance and interpretation of epidemiologic studies. Study design, cluster analysis, effect modification, accuracy and precision, adjustment of attributable risk, life tables, Kaplan-Meier, Cox proportional hazards modeling, and meta-analysis.

PH 823 (3) Design of Case-Control Studies (Fall: Macera)

Prerequisites: Public Health 601, 602, 623 and 627. Recommended Public Health 724, design, analysis, of case-control studies. Methodologic issues, control of biases and misclassification errors, proper use of interpretation of stratification and logistic regression in study of diseases of multifactorial etiology.

PH 824 (3) Design of Cohort Studies (Spring: Yu)

Prerequisites: Public Health 601, 602, 623 and 627. Recommended: Public Health 724, design, and analysis of cohort studies. Cohort study designs, importance of time-varying exposures and out-comes, external and internal validity, and in-depth treatment of approaches to analysis based on cohort sampling methods.

PH 826 (3) Analysis of Case-Control Studies (Fall: Slymen)

Course covers basic and advanced methods of analyzing data from matched and unmatched case-control studies. Topics include methods for binary, nominal, ordinal, and continuous exposure variables with and without adjustment for confounders; dose response; unconditional and conditional logistic regression; analysis of pair-matched and frequency-matched data; and goodness of fit. Examples using SAS output.

PH 827 (3) Analysis of Cohort Studies (Spring: Ji)

Statistical models for analyzing cohort studies. Topics include: general regression methodology, generalized linear models, generalized estimating equations; random affects models and survival analysis. Emphasis on conceptual understanding of these models, implementation with statistical software, and interpretation.

PH 897 (6) Research

After advancing and completing coursework – students register every semester for 6 units of PH 897 while in the program.

PH 898 (varies) Special Studies

Individual research projects that are independently designed by professor and student.

PH 899 (6) Dissertation

Students will register for 6 units of Dissertation the semester they plan to defend their dissertation.

STAT 510 (3) Applied Regression Analysis (Fall: Lin)

TBA

UCSD COURSE DESCRIPTIONS

REQUIRED

FPM 258A, B, C (2-2-2) Public Health Doctoral Lecture Series (Fall, Winter, Spring: Wingard)

This three quarter sequence is a combination of didactic instruction, interactive sessions, and student presentations. Topics cover study design, ethics, data analysis and management techniques, and qualitative research will be presented.

CORE

FPM 259A, B, C (6-6-6) Applied Epidemiology (Fall, Winter, Spring: Wingard)

Prerequisite: completion of all SDSU core courses.

Students explore a research question from an existing data set. They will conduct a literature review, design and conduct the analysis, and write-up the results under the guidance of a faculty member. Students will then learn the principles of scientific writing and presentation. They will submit a manuscript for publication, and present their research at the San Diego Epidemiology Research Exchange.

ELECTIVES

FPM 229 (3) Projects in Epidemiology (Fall, Winter, Spring: faculty)

Students who wish to gain experience in the epidemiological analysis of published or original data in one chosen area may do so under this directed reading program. Students meet weekly with one instructor to discuss the project, and must submit a written analysis of data or a referenced project proposal based on an analysis of data at the completion of the elective. Project topics are selected by the students, and have included epidemiology of infectious diseases, cancers, cardiovascular diseases and nutrition among others.

FPM 231(2) Exposure Assessment & Biomarkers (Spring: Al-Delaimy)

Students will address how exposure assessment accuracies or biases can influence study outcomes and conclusions in epidemiology. Special emphasis will be on biomarkers as recent measures of exposure.

FPM 232 (1) Perinatal Epidemiology (Winter: Klonoff-Cohen)

This guest-lectured weekly seminar will address the cause (e.g., AIDS, substance abuse), diagnosis, and treatment of various perinatal diseases. The student will gain an in-depth knowledge of obstetric/pediatric diseases through a medical, legal, and epidemiologic perspective.

FPM 233 (2) Clinical Nutrition (Fall: Rock)

Clinical nutrition is the study of nutrition and diet as related to the prevention and treatment of human disease. Nutrition is an interdisciplinary field of study, built on a foundation of biomedical and behavioral sciences. This course emphasizes class discussion of clinical topics and assigned readings in current areas of research and practice (i.e., diet and cancer, vitamin and other diet supplements), with case studies and illustrative class exercises.

FPM 237 (1) Microarray Technology and Informatics (Winter: Jain)

This course is an introduction to microarray technology and analysis of gene expression data. This 10-lecture course will cover a range of microarray topics including platform types, image processing, experimental design, statistical analysis, and applications in medicine and health sciences.

FPM 243 (2) Genetics and Preventive Medicine (Winter: Madlensky)

Explore the often controversial role of genetics in health care, focusing in preventive health. Topics include inherited predisposition to common diseases, genetics and health behaviors, prenatal testing, and cultural issues in genetic medicine.

FPM 246 (2) Occupational/Environmental Health (Fall: Heifetz)

Introduction to history/epidemiology of work-related disease. A review of occupationally-related health problems (heart disease, pneumoconiosis, peripheral neuropathy, sterility, birth defects, psychiatric disease and disability. Major modalities of prevention and control will be presented and the role of health practitioners, government, management and labor will be reviewed. Course will include guest lecturers, films, videotapes, and field visits to local industries and/or clinicians treating occupational disease. (See course outline binder on counter in the Student Affairs Office).

FPM 247 (2) Clinical Epidemiology Seminar (Spring: Criqui)

This seminar is designed to expand the student's understanding of clinical epidemiology by investigating several major controversial issues, such as dietary habits and exercise in the prevention of coronary heart disease, clinical consequences of low level lead poisoning, and tract elements in the prevention of epidemiology of various chronic diseases.

FPM 257 (2) Cancer: Cause and Prevention (Spring: Pierce)

The course provides an in-depth review of cancer causation and prevention with an emphasis on epidemiologic evidence associated with cancer. Based on evidence for cancer cause, interventions to prevent cancer will be reviewed emphasizing biological and social correlates.

FPM 270 (2-4) Cultural and Ethnic Differences in Disease Risk (Winter: Todd, Zuniga)

Relevant social and cultural theory and clinical case studies will be introduced to examine ethnic and cultural diversity in health status and health behavior with relevance to disease etiology, clinical practice, and prevention.

FPM 276 (4) Health Behavior Interventions I (Fall: Pierce)

This Course will include a discussion of intervention goals suggested by major theories of health behavior change. Common communication modes and messages will be studied, including examples using small group settings, mass media, legislation, and telephone counseling.

FPM 277 (4) Health Behavior Interventions II (Winter: Zhu)

Course will focus on theories of health behavior and effective components to promote behavior change and health promotion and will highlight novel technologies for disseminating intervention approaches via the Internet. Various intervention modalities will include static web pages, asynchronous support, and synchronous communication.

FPM 278 (4) Scale Development for Health Behavior Measurement (Fall: Norman)

This course will present theory and methods for developing scales to assess health behavior constructs (e.g., self-efficacy). Core measurement concepts will be covered such as reliability and validity, latent variable theory, and factor analysis methods.

FPM 279 (4) Achieving Health Behavior Change in Cancer Prevention

(Spring: Madlensky)

Course will provide an overview of model health behavior change programs designated by the Substance Abuse and Mental Health Services Administration (SAMHSA). Domains covered will include smoking, physical activity and nutrition.

FPM 285 (2) Clinical Trials: Issues & Dilemmas in Clinical Trials

(Winter: Natarajan, Raman)

This course will provide students with a comprehensive introduction to the basic concepts and dilemmas of clinical trials. The course will cover methodology and topics will include research design (Phase I - IV), randomization, blinding, sample size estimation, stopping rules, endpoints and bias, statistical analyses, subgroup analyses, meta-analyses, and ethics.

FPM 296 (1-3) Independent Study* (Fall, Winter, Spring / Faculty)

This course is used to document independent study projects that are unique to each student. Requirements for successful credit will be determined by each individual faculty member.

*JDP also uses this class as a "placeholder" to count students that are registered at SDSU full-time in the program.