

**PUBLIC HEALTH 435**  
**HEALTH SERVICES RESEARCH DESIGN AND ANALYSIS STRATEGIES**  
**1.0 Credit**  
**Spring Quarter, 2007: March 29 – June 7, 2007**

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**Course Format and Enrollment Procedure**

The course will run from 3/29/2007 to 6/7/2007 and will be conducted in an independent study research seminar format. Weekly individual student or project group meetings with the instructor, to be arranged at students' convenience, will replace class sessions, except for one or possibly two Thursday evening 6:15-9:15PM sessions at which students will present their class projects. The focus of this course is on completion of an empirical health services research paper and oral presentation, as described below. Course project presentations will take place in McGaw Pavilion 2-402 (710 N Fairbanks) during the last weeks of the quarter.

Because of the intensive student-instructor interaction required to complete projects within the allotted time, **course enrollment will be limited to six students**. Students wishing to enroll will need to contact the MPH office and the instructor for approval to enroll. In the event that more than six students seek to enroll, preference will be given to more senior students with the best developed ideas for potential projects that can be successfully completed within the ten week quarter. Interested students are strongly encouraged to call or email the instructor as soon as possible and prior to the first week of the quarter to discuss acceptability of potential class project ideas.

**Course Objectives**

This course focuses on the methodological and study design skills required to perform and present empirical health services research. The course is designed to enhance each student's real world data analysis, writing and presentation skills. All research projects will be expected to address at least one of the the following areas in depth:

- 1) Describe the problems in health services research as applied to health policy debates
- 2) Describe the factors underlying geographic or provider variations in medical practice
- 3) Define quality of care, quality assurance, continuous quality improvement, or patient safety research techniques
- 4) Conduct risk adjustment for use in medical or behavioral health interventions to control for bias in comparisons of health outcomes
- 5) Describe the social determinants of health or social epidemiology

## **Required Research Projects**

The class has been designed to facilitate students in the completion of a written research project, which will also be orally presented to the class in at least a 20 minute presentation. Completion of project assignments within the dates described below is critical for acceptable performance in this class. No required readings are assigned, but each student will be expected to incorporate a systematic literature review of all key materials on their topic and provide a comprehensive bibliography (if at all possible in endnote format) as part of their projects. There is no final exam.

In these projects, students will demonstrate their ability to clearly frame problem statements, undertake evidence-based literature reviews, describe and justify choice of research design and statistical methods, and demonstrate the capability to perform basic data processing and data table and figure preparation procedures. Projects should address important issues in health care policy, financing, patient outcomes, technology assessment, cost effectiveness, quality of care, patient safety, or social epidemiology research. Although we encourage individual assignments, students are also encouraged to work in pairs or groups with course instructor permission. For multiple student projects there will be a corresponding increase in the expectation of effort relative to individual assignments. **I strongly encourage students to work on research projects related to their MPH culminating experience and/or fellowships.**

Students will formally prepare a 20 minute presentation for the entire class during the scheduled project presentation sessions at the end of the quarter. Students will need to make regular (usually weekly) in-person appointments to discuss progress on their projects with the course instructor and/or other designated faculty mentors, as well as regularly communicating progress and problems by phone or email. Students may be required to provide individualized SPSS, STATA or other statistical software programs or output tables used for descriptive and multivariate statistics or other analytic needs at specified intervals. Computer workstations are available in the medical school library or by agreement with selected faculty.

## **Course Research Project Minimum Requirements**

An 8 page double-spaced, referenced paper with additional table or figure pages is required. This will generally involve analysis of an existing (secondary) database from a health services research perspective, analyzing variations in structure, process or outcomes of medical care, incidence or prevalence of designated conditions in a health survey, or a health economic, policy or advocacy analysis. In general, these will most often be retrospective, hypothesis-generating studies from a public health perspective. An analytic exercise, such as a decision analysis, cost-effectiveness analysis, or meta-analysis is also an acceptable alternative if it addresses relevant health services research issues. Students are encouraged to identify their own data sets, if possible, subject to approval by the instructor. The instructor may recommend publicly available hospital discharge data or federal health surveys which have file documentation on the

internet. Students may be asked to interview faculty content or methodological experts for specific projects as part of their research review contact hours

**Deadlines**

**A data analysis research topic, with an accompanying draft of specific aims of the project, needs to be approved by the instructor as soon as possible to provide sufficient time for completion, and no later than the beginning of the third week of the course, 4/12.**

Regular data analysis coding, output and writing assignments for individual projects will be reviewed at follow-up appointments with the instructor. Course presentations must be completed by the 8<sup>th</sup> week and will be presented orally during either the 8<sup>th</sup> (Th 5/24) or 9<sup>th</sup> (Th 5/31) weeks. All papers (in appropriately edited and referenced word document format) will be due before Thursday evening 6/7. Late papers or presentations will not be accepted.

**Course Grade:**                    70% data analysis project paper  
   15% oral presentation  

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   15% class participation and work effort

**Course Evaluation**

The Programs in Public Health administer web-based course evaluations to students for each course near the end of the quarter. Your completion of both the unit (course) and faculty evaluation components is required; failure to complete either of the evaluations will result in an incomplete grade until the evaluations are submitted. You will be sent the web link and instructions via email later in the quarter. You will have about two weeks time to complete the evaluations before grades are submitted.