**Pharmacy Systems, Outcomes, and Policy (PSOP)**

**PSOP 400. Ethics and Privacy Issues in Comparative Effectiveness Research.** 1 hour.
Covers ethical and privacy issues in comparative effectiveness research. Course Information: Satisfactory/Unsatisfactory grading only. Extensive computer use required. Taught online.

**PSOP 421. Pharmaceutical Marketing.** 3 hours.
Introduction to the field of marketing with specific emphasis on pharmaceuticals and the marketing of pharmacy services.

**PSOP 470. Managed Care Pharmacy.** 3 hours.
Professional development in managed care pharmacy to learn history, administrative and policy aspects, network with operational managers and leaders in field, visit managed care sites and observe activities of managed care pharmacists. Course Information: Prerequisite(s): Third year standing in the Doctor of Pharmacy program or second year standing in the Doctor of Pharmacy program with consent of the instructor, or graduate standing in pharmacy.

**PSOP 482. Professional Practice Management.** 3 hours.
Managerial functions of the pharmacist in all practice environments with emphasis on the planning, organizing, staffing, directing and controlling of resources.

**PSOP 484. Systematic Reviews and Meta-Analysis.** 3 hours.
The course will discuss the concepts, process, and statistical methods required to perform a systematic review or meta-analysis of a large body of empirical findings. Course Information: Extensive computer use required. Taught online. Prerequisite(s): EPID 403 or BSTT 400 or PSOP 502; or graduate or professional standing; or consent of the instructor. Recommended background: Graduate coursework in biostatistics or epidemiology.

**PSOP 485. Concentration Research.** 2 hours.
Investigation, under the direction of one or more faculty members, of a problem of limited scope. May require literature research related to the research project. Course Information: May be repeated to a maximum of 4 hours.

**PSOP 489. Health Economics and Outcomes Research Overview.** 2 hours.
A survey of topics in the field of health economics and outcomes research as applied to pharmacy.

**PSOP 494. Special Topics in Pharmacy Systems, Outcomes and Policy.** 1-3 hours.
Topics will vary, including the on-going analysis of contemporary issues associated with delivery, financing and management of pharmaceutical products and professional services. Course Information: May be repeated to a maximum of 6 hours.

Overview of the research process in the social, behavioral, and economic pharmaceutical sciences from problem identification and conceptualization through data collection, analysis, and interpretation. Course Information: Extensive computer use required. Taught online, in person, or via distance education. Prerequisite(s): Consent of the instructor is required for non-departmental students.

**PSOP 507. Pharmacy and Its Environment.** 2 hours.
Factors directly influencing the practice of pharmacy. Roles of the pharmacist as affected by contemporary organizational, legislative, societal and fiscal environments in the U.S. Course Information: Prerequisite(s): Admission into the M.S. or Ph.D. in Pharmacy Program.

**PSOP 510. Problems in Pharmacy Management.** 3 hours.
Selective managerial problems relative to pharmacy practice in complex healthcare environments. Course Information: Prerequisite(s): PSOP 482 or the equivalent.

**PSOP 516. Comparative Effectiveness Research.** 3 hours.
Overview of concepts and application of comparative effectiveness research. Course Information: Extensive computer use required. Taught online.

**PSOP 525. Integrating Behavior Change Models and Theory into Research.** 3 hours.
Provides a contextual understanding of the social determinants of health and behavior change theories aimed at informing behavioral interventions. Course Information: Extensive computer use required. Prerequisite(s): PSOP 502; or consent of the instructor consent. Recommended background: Basic understanding of research methods and design is required. Can be taken along with or following PSOP 502.

**PSOP 526. Pharmacoepidemiology.** 3 hours.
Provides an introduction to pharmacoepidemiology and key concepts and principles that are unique to the study of medications in large populations. Course Information: Same as EPID 526. Previously listed as PSOP 426. Extensive computer use required. Taught online. A computer with sufficient memory and Internet access is required. Prerequisite(s): EPID 400 or EPID 403 or consent of the instructor.

**PSOP 527. Advanced and Applied Pharmacoepidemiology Methods.** 2-4 hours.
Reviews and applies advanced epidemiological methods and biostatistical applications in pharmacoepidemiology. Course Information: Students may enroll in the enroll for PSOP 527 over the second-half of the semester for 2 additional credit hours. Prerequisite(s): PSOP 502 and PSOP 526; or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Lecture-Discussion.

**PSOP 528. Advanced and Applied Pharmacoepidemiology Discussion.** 2 hours.
Involves a review of contemporary literature in pharmacoepidemiology. Course Information: Prerequisite(s): PSOP 526 or consent of the instructor. Recommended background: EPID 400.

**PSOP 535. Pharmaceutical Policy.** 3 hours.
Introduces key features of pharmaceutical policy and provides a framework for analyzing and evaluating current policy issues that affect the development and provision of safe, effective and affordable medications in the U.S. Course Information: Extensive computer use required. Taught online.

**PSOP 555. Measurement and Evaluation of Patient Reported Outcomes.** 2 hours.
Focuses on the development, assessment, and application of measures of patient-reported outcomes (PROs). Course Information: Extensive computer use required. Course offered online.
PSOP 573. Principles of Economic Evaluations of Health Care Interventions. 3 hours.
Principles, models and practical methods for the economic evaluation of health care services with an emphasis on pharmaceutical care. Course Information: Same as HPA 573. Extensive computer use required. Course offered online, in person, or via distance education. Prerequisite(s): Consent of the instructor.

PSOP 575. Educational Instruction and Practice in Pharmacy Systems, Outcomes and Policy. 2 hours.
Designed to develop teaching skills and improve instructional abilities. Course Information: Prerequisite(s): Consent of the instructor.

PSOP 577. Applied Population Health Survey Research. 3 hours.
Development of computer programming skills and knowledge of statistical techniques for analyzing population health survey data. Course Information: Credit is not given for PSOP 577 if the student has credit in BSTT 507 or CHSC 447 or STAT 431 or STAT 531 or STAT 532. Extensive computer use required. Prerequisite(s): Consent of the instructor. Restricted to graduate students in the Health Sciences Colleges. Class Schedule Information: To be properly registered, students must enroll in one Lecture-Discussion and one Practice.

PSOP 579. Advanced Methods in Outcomes Research and Grant Writing. 3 hours.
An advanced graduate-level course focused on the grant writing strategies with an emphasis on methodologies relevant to health services, economics and outcomes research. Course Information: Prerequisite(s): PSOP 502 and PSOP 573; or consent of the instructor.

PSOP 580. Advanced Decision Analysis Techniques I. 2 hours.
Exposes students to advanced decision analysis and related sensitivity analysis methodologies. Course Information: Extensive computer use required. Prerequisite(s): PSOP 573 and consent of the instructor. Priority enrollment is provided to graduate students in the Health Science Colleges and the Department of Economics, School of Liberal Arts and Sciences, and those enrolled in the MBA program, College of Business Administration.

PSOP 581. Advanced Decision Analysis Techniques II. 1 hour.
The purpose will be to gain experience using techniques germane to the advanced decision analysis and related sensitivity analysis methodologies taught in PSOP 580. Course Information: Extensive computer use required. Prerequisite(s): PSOP 580 and consent of the instructor. Priority enrollment is provided to graduate students in the Health Science Colleges and the Department of Economics, School of Liberal Arts and Sciences, and those enrolled in the MBA program, College of Business Administration.

PSOP 592. Comparative Effectiveness Research Project. 6 hours.
Supervised literature-based scholarship and/or research in comparative effectiveness research. Selected problems or issues in comparative effectiveness research are investigated under the direction of the faculty advisor. Course Information: Satisfactory/Unsatisfactory grading only. Extensive computer use required. Taught online, in person, or via distance education.

PSOP 594. Special Topics in Pharmacy Systems, Outcomes and Policy. 1-3 hours.
Topics vary. Intensive analysis of contemporary issue(s) associated with delivery and financing of pharmaceutical products and professional services. Course Information: May be repeated to a maximum of 6 hours.

PSOP 595. Departmental Seminar in Pharmacy Systems, Outcomes and Policy. 1 hour.
Presentation by students, faculty and visiting experts. Topics to be arranged. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Extensive computer use required. Taught online, in person, or via distance education. Prerequisite(s): Consent of the instructor. Graduate students in the Pharmacy Systems, Outcomes and Policy degree program must register for PSOP 595 every fall and spring semester.

PSOP 596. Independent Study. 1-4 hours.
Individual research under direction of a member of the faculty. Course Information: May be repeated. Students may register in more than one section per term. Extensive computer use required. Taught online, in person, or via distance education. Prerequisite(s): Consent of the instructor.

PSOP 597. Pharmacy Systems, Outcomes and Policy Project. 6 hours.
Supervised literature-based scholarship and/or research in pharmacy systems, outcomes and policy. Selected problems or issues in social, behavioral, or economic pharmaceutical sciences are investigated under the direction of the faculty advisor. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): PSOP 502.

PSOP 599. Ph.D. Thesis Research. 0-16 hours.
Independent dissertation research on topic approved by student's graduate committee. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Prerequisite(s): Consent of the committee. Open only to degree candidates.