



Master of Science in Pharmacy

Major in Applied Pharmacoeconomics

Acquire the Knowledge & Credentials For:

- ❖ Economic Analyst
- ❖ Outcomes Research Director
- ❖ Medical Science Liaison

UF | College of Pharmacy
UNIVERSITY of FLORIDA

The University of Florida College of Pharmacy offers a part-time online major in Applied Pharmacoeconomics (PE) within the Master of Science in Pharmacy program. This major provides students with the opportunity to critique, apply, and participate in a team effort to conduct applied pharmacoeconomics research to improve clinical decision making. Courses in the program are taught by national content experts. Courses are taught using a distance-learning format, thus students do not need to relocate to earn this degree.

Background: The Applied PE major was developed as a response to student demand based on a survey of University of Florida students and graduates. Students who enroll in this program aspire to work in or currently work in the pharmacy benefits management industry, the insurance industry, the pharmaceutical industry, and government agencies. The program takes two years for students to complete. All online courses are 7 weeks in length and are taken sequentially; two courses per semester. Online courses use Electronic Learning System (a University of Florida adaptation of WebCT Vista) as the learning platform and Elluminate for live online classes. Individual courses are available to those who wish to acquire limited specialized knowledge without making a commitment to the complete program. All students must attend three weekend seminars in Gainesville during the course of their two years of study.

Program Goals: This course of study is designed to provide students with the ability to critique, apply, and conduct applied pharmacoeconomics research to improve clinical decision making. Students learn how to apply economic principles to describe and understand the use of medications and pharmaceutical services. Using these principles, students will be able to participate in a team effort to design and evaluate interventions to improve clinical, economic, and humanistic outcomes within a health system. Since Applied PE deals with healthcare at the population level rather than the individual patient level, students will also gain a working understanding of health care systems and the epidemiological techniques used to describe and analyze medication-induced diseases at a population level. In addition students learn how the incentives within the system drive provider and patient behavior, and the ethical implications of the use of pharmacoeconomic data in the decision making process.

The director of the Master of Science in Pharmacy Major in Applied Pharmacoeconomics is Teresa Kauf, Associate Professor in the Department of Pharmaceutical Outcomes and Policy at UF. Dr. Kauf's research interests in health policy and the economic evaluation of health care technologies have evolved from a professional experience that spans the private and public sectors of academia and industry.

The program consultant for the Master of Science in Pharmacy Major in Applied Pharmacoeconomics is Kem P. Krueger Pharm.D., Ph.D. Dr. Krueger's research interests are in pharmacoeconomics and outcomes research, specifically measuring the clinical and economic impact of pharmacy services, medication adherence, modeling disease interventions, and validating disease state models.

Pharmacoeconomics Curriculum:

(3 credit courses unless indicated otherwise)

- ❖ Pharmaceutical Microeconomics
- ❖ Pharmaceutical Health Economics
- ❖ Evidence-Based Medicine
- ❖ Commercial Applications of Pharmacoeconomics
- ❖ Regulating Pharmaceutical Access & Cost
- ❖ Ethics in Drug Production, Distribution & Use
- ❖ Pharmaceutical Products & Public Policy
- ❖ Pharmacy Health Care Systems
- ❖ Introduction Pharmacoeconomics
- ❖ Pharmaceutical Outcomes and Policy Seminar
(3 times for 1 credit each time)

For more information, contact the Program Director at:

brushwood@cop.ufl.edu

Phone: (352) 273-6255 **Fax:** (352) 273-6270

<http://pharmreg.dce.ufl.edu>

Courses in the Curriculum



❖ Pharmaceutical Microeconomics

This course will introduce students to basic microeconomic principles as they are applied to pharmaceuticals. Elucidation of the basic concepts of choice, opportunity costs, supply and demand, elasticity, utility maximizing behavior, competition, monopolies and oligopolies in the healthcare market will engage students and provide the foundation for success in the program.

❖ Pharmaceutical Health Economics

This course will build on Pharmaceutical Microeconomics by delving into the economic principles and issues of health care in the US. Topics such as health care structure and financing, market failures, human capital, and producer and consumer behavior will round out the students' understanding of the economics of our health care system.

❖ Evidence-Based Medicine

This course will focus on building the skills necessary to incorporate timely and rigorously analyzed medical and pharmacoeconomic literature into a rational decision making process. Students will develop the ability to critically evaluate studies published in the medical and pharmacoeconomic literature, interpret statistics commonly encountered in clinical studies, and review strategies to efficiently and effectively retrieve drug information.

❖ Commercial Applications of Pharmacoeconomic Principles

This course will also build on Pharmaceutical Microeconomics by investigating the theory, methods, and application of technology assessment in health care. It covers basic methods used to structure a technology assessment study, measure and summarize health outcomes, estimate their value to patients or the public, identify the resources used, estimate cost of health resources, and construct and test mathematical models to make population and/or temporal predictions of outcomes and costs from limited data. Applications will be drawn from a variety of health care settings and will include the evaluation of pharmaceuticals.

❖ Regulating Pharmaceutical Access and Cost

This course explores regulation intended to expand access to and control the costs of health care. Students are exposed to a variety of concepts including: the obligation to provide care; state and federal regulation of private health insurance and managed care; the implications of EMTALA, ERISA, HIPAA, and COBRA; Medicare and Medicaid; technology assessment; and drug pricing and controls.

❖ Ethics in Drug Production, Distribution and Use

This course provides an in-depth examination of a process for ethical decision making and core principles and theories of biomedical ethics with an emphasis on utilitarianism. The focus of the course is on the responsibility health care decision makers have to the patients they serve with application in areas such as informed consent, abortion/contraception, physician-assisted dying, experimentation with human subjects, and confidentiality.

❖ Pharmaceutical Products and Public Policy

In this course, students are challenged to consider the broader context of the research activities in which they will engage. Channels of distribution for pharmaceutical and medical device products are reviewed. The importance of intellectual property protection is discussed. The concept of comparative effectiveness is introduced. Pharmaceutical industry promotional practices, and the effect of them on research and clinical care, are examined. The global implications of domestic pharmaceutical policies are considered.

❖ Pharmacy Health Care Systems

This course will explore the structure and management of different mechanisms for organizing and delivering health care in the US. Students will develop an understanding of the implicit and explicit incentives for providers, patients, and payers in each system, and the impact of these incentives on the clinical, economic, and humanistic outcomes produced by the healthcare system.

❖ Pharmacoepidemiology

This course will expose students to the traditional techniques used in descriptive and analytic epidemiology to describe and measure the negative impact of medication use. Students will learn how to use pharmacoepidemiology concepts, such as pharmacovigilance, to minimize patients' risk exposure.

❖ Pharmaceutical Outcomes and Policy Seminar

This is a two-day exploration of a specific topic facilitated by an expert on the topic. Students are required to prepare for seminar by reading a book or a series of articles. Topics might be related to a recent widely publicized breach of research ethics, a newly released Institute of Medicine recommendation, or a basic area of interest such as fetal protection or Current Good Tissue Practices.

Schedule

Students who begin in Fall Semester (August)

Aug-Oct	Pharmaceutical Microeconomics
Nov-Dec	Pharmaceutical Products & Public Policy
Jan-Feb	Pharmaceutical Health Economics
Mar-Apr	Regulating Pharmaceutical Access & Cost
May-Jun	Ethics in Drug Production, Distribution & Use
Aug-Oct	Evidence-Based Medicine
Nov-Dec	Intro to Pharmacoepidemiology
Jan-Feb	Pharmacy Health Care Systems
Mar-Apr	Commercial Applications of Pharmacoeconomics

Students who begin in Spring Semester (January)

Jan-Feb	Pharmaceutical Microeconomics
Mar-Apr	Regulating Pharmaceutical Access & Cost
May-Jun	Ethics in Drug Production, Distribution & Use
Aug-Oct	Pharmaceutical Health Economics
Nov-Dec	Pharmaceutical Products & Public Policy
Jan-Feb	Pharmacy Health Care Systems
Mar-Apr	Commercial Applications of Pharmacoeconomics
Aug-Oct	Evidence-Based Medicine
Nov-Dec	Intro to Pharmacoepidemiology