



HANDBOOK FOR GRADUATE STUDY IN

MASTER IN PHARMACY ADMINISTRATION: PHARMACEUTICAL ECONOMICS AND POLICY RESIDENCY PROGRAM

GENERAL INFORMATION, POLICY, AND PROCEDURES

2003 – 2005

College of Pharmacy
The Ohio State University
500 W. 12th Avenue
Columbus, Ohio 43210

Preface

This handbook is designed to provide an up-to-date summary of important requirements, policies, and procedures. Although a concerted effort is spent to maintain our handbook, readers should be aware that changes in University or program regulations not reflected in the handbook may still be binding. When a potential or current graduate student confronts a question or problem relating to Graduate School rules and policies, information may be attained from the Department's Graduate Studies Office; Dr. Craig A. Pedersen, the Graduate Program Director of the Division of Pharmacy Practice and Administration; or the Graduate School Staff, whichever seems most appropriate. The coordinator of the MS in Pharmaceutical Economics and Policy, Enrique C. Seoane, should be contacted to inquire about changes in the program. Responsibility for insuring that requirements are met always rests with the student.

The codes in square brackets (e.g., [GSH II.2.1]) throughout this handbook refer to sections of the **Graduate School Handbook** where additional information or policy relevant to the topic is found. The *Graduate School Handbook* is updated annually; citations are based on the most recent available 2002-2003 edition, available online at <http://www.gradsch.ohio-state.edu/html/PDF/Handbook.pdf>. Policies published herein are established by the College of Pharmacy Graduate Studies Committee and Division of Pharmacy Practice and Administration should be understood as supplementing and extending those of the Graduate School. The requirements for the degrees offered may exceed those required under the general Graduate School policies (e.g., the number of credit hours required for a Master's degree). The basic Graduate School policies apply in addition to the policies established by the College of Pharmacy Graduate Studies Committee.

Graduate study in Pharmacy Practice and Administration is the responsibility of the Graduate Studies Committee (GSC), which administers the programs within rules established by the Graduate Faculty of the University.

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Section 1

Introduction

1.1 PURPOSE OF THIS HANDBOOK

This handbook is designed to provide details on graduate study in Pharmaceutical Economics and Policy at The Ohio State University. It should always be read as a complement to other publications of university policies and procedures, including the following:

- A. *Graduate School Handbook*. Issued to each new graduate student at orientation, and also available at the Graduate School offices and online at <http://www.gradsch.ohio-state.edu/html/PDF/Handbook.pdf>. The Graduate School of The Ohio State University publishes the *Graduate School Handbook* which provides the official rules governing all graduate students at the University. Thus, it is very important that graduate students in Pharmaceutical Economics and Policy have a copy and become familiar with its contents. The Graduate School Handbook covers all rules and regulations concerning matters of registration, scheduling, course credit, academic standards degree requirements, and petitions. It should be considered the first source of information regarding all such rules, policies, and procedures. It is the primary source of policy and procedure guidelines for all graduate students.
- B. *The Master Schedule of Classes*. Available online at <http://www.ureg.ohio-state.edu/courses/>. The Master Schedule contains course registration, listing, fees, and insurance information, as well as the academic calendar for the current and several future quarters and a synopsis of important regulations.
- C. *The Ohio State University Bulletin: Course Offerings*. Copies are available in the Graduate School, and online at <http://www.ureg.ohio-state.edu/courses/>. The Bulletin is the principal source of information on course content, format, and prerequisites.
- D. *The Ohio State University College of Pharmacy Student Handbook*. <http://www.pharmacy.ohio-state.edu/homepage/program/graduate/grdapply.html>
- E. *The Ohio State University Student Handbook*. Available upon request from the Office of Student Affairs. Although oriented primarily to undergraduates, the Student Handbook includes a variety of helpful information about campus life, services, and opportunities. Many practical rules (e.g., traffic and parking) are outlined and discussed.

Students are responsible for understanding and applying to their programs the relevant information contained in the sources listed above. Specific questions should be raised with the student's advisor.

1.2 PROGRAM FACULTY

The faculty has expertise in a variety of fields including pharmaceutical administration, economics, marketing, organizational behavior, finance, hospital pharmacy, behavioral sciences in pharmacy, health and drug insurance, and information systems (see Appendix B for a description of course offerings). In addition, the program draws heavily from the faculty expertise within the College of Administration Sciences, College of Medicine and Public Health, Department of Agricultural Education, Department of Agricultural Economics, Department of Psychology, Fisher College of Business, and the Department of Health Services Management and Policy. A brief introduction of Division Faculty is provided below.

Program Faculty Listing

Philip J. Schneider

Philip J. Schneider,(MS, FASHP) is clinical professor and Director of the Latiolais Leadership Program at The Ohio State University College of Pharmacy. The Latiolais Leadership Program is an inter-professional program to optimize the medication use process and reduce adverse drug events.

Professor Schneider earned a BS in Pharmacy from the University of Wisconsin and a Masters of Science from The Ohio State University. He also completed an ASHP accredited residency at The Ohio State University Medical Center. His professional experience consists of 21 years of pharmacy practice and administrative experience at The Ohio State University Medical Center where he developed the Clinic Pharmacy (which evolved into the College of Pharmacy's Pharmaceutical Care Clinic) and the Nutrition Support Service. He was responsible for the Pharmacy Residency program that produced 99 residents during his years as Program Director. He developed a nationally-recognized program for the reporting and analysis of adverse drug events which led to improvements in the medication use process at the Medical Center. The severity scale developed as part of this program is widely used in the health care industry, including serving as the basis for the system used by USP.

During his 24 years of professional and academic service, he has published 115 articles and abstracts in professional and scientific journals, ten book chapters, edited seven books and given more than 300 contributed or invited presentations in eleven countries and the US. He is a Past President of the American Society of Health-System Pharmacists (ASHP) and the American Society for Parenteral and Enteral Nutrition, having served for ten years as Editor-in-Chief of *Nutrition in Clinical Practice*, and is Secretary of the Hospital Pharmacy Section of the International Pharmaceutical Federation.

His current teaching and research interests at the College of Pharmacy are in the area of improving the medication use process and improving medication use safety. He

coordinates the Masters of Science degree program in health systems pharmacy administration which is structured in combination with ASHP-accredited pharmacy practice residencies at four local hospitals in Columbus, Ohio.

Craig A. Pedersen

Craig A. Pedersen (Ph.D. Pharmacy Administration, University of South Carolina) joined the faculty of the College of Pharmacy in 1999 as an Assistant Professor in the Division of Pharmacy Practice and Administration. He is also Graduate Program Director in the Division. Prior to his appointment, Dr. Pedersen was an Assistant Professor at Creighton University and co-founder of the Center for Practice Improvement and Outcomes Research. While at Creighton University, he worked extensively with Blue Cross Blue Shield of Nebraska and ProPar Services, a pharmacy benefit manager. He has completed internships in both the pharmaceutical industry and state government. His practice experience includes work as a staff pharmacist in chain and independent pharmacy settings.

Dr. Pedersen's research interests are the economics of pharmacy practice, pharmaceutical care services, and outcomes of drug policy decisions in insured populations. He has published in the journals *Archives of Family Medicine*, *American Journal of Pharmaceutical Education*, *American Journal of Health-System Pharmacists*, *PharmacoEconomics*, *Journal of Managed Care Pharmacy*, *Managed Care Pharmacy Practice*, *Hospital Pharmacy*, *Clinical Therapeutics*, and *Pharmacy Law Annual*.

Dr. Pedersen has taught in the areas of health care systems, biostatistics and research design, and pharmacoconomics and pharmacoepidemiology.

Dr. Pedersen is a member and chair elect of the House of Delegates of the American Pharmaceutical Association, Association for Health Services Research, American Association of Pharmaceutical Scientists, International Society for Pharmacoconomics and Outcomes Research, American Association of Colleges of Pharmacy, and American Society of Health-System Pharmacists, and Academy of Managed Care Pharmacy. He is currently member-at-large of Economic, Social & Administrative Science section of the American Pharmaceutical Association.

Sheryl L. Szeinbach

Sheryl L. Szeinbach is Professor of Pharmacy Practice and Administration at The Ohio State University. Previously, Dr. Szeinbach was Associate Professor in the Department of Pharmacy Administration, School of Pharmacy, University of Mississippi. Dr. Szeinbach held joint appointments in the School of Business Administration, Department of Management and Marketing, and the Research Institute of Pharmaceutical Sciences. She received her B.S. in Pharmacy from the University of Texas at Austin, M.S. in Pharmacology, University of Kentucky, and Ph.D. in Pharmacy Administration from Purdue University in 1989.

Her research interests include the distribution of pharmaceutical products and services, relationship marketing, pharmaceutical economics - cost utility analysis, and technology (automation). She has published over 125 articles in peer-reviewed and professional journals including the *Journal of Business Research*, *Journal Retailing*, *Journal of Business Ethics*, *Journal of Allergy and Clinical Immunology*, *Annals of Allergy, Asthma & Immunology*, *Journal of Structural Equation Modeling*, *Social Science and Medicine*, *American Journal of Health-System Pharmacy*, *American Journal of Pharmaceutical Education*, *Journal of Applied Business Research*, *Journal of Managed Care Pharmacy*, *Journal of Health Care Marketing*, *Journal of Pharmaceutical Marketing and Management*, *Journal of Research in Pharmaceutical Economics*, and *The Consultant Pharmacist*.

Her work experience includes community pharmacy practice; internships with the pharmaceutical industry and large chain stores; research projects with the National Wholesale Druggist Association. In addition, she has served as a consultant for several companies responsible for drug product distribution.

She is a member of the American Pharmaceutical Association, American Society of Health-System Pharmacists, International Society for Pharmacoeconomics and Outcomes Research, American Public Health Association, American Association for Consumer Research, American Marketing Association, and The Institute of Management Sciences. Dr. Szeinbach served as the president of the Economic, Marketing, and Management Sciences Section of the American Association of Pharmaceutical Scientists (AAPS). She is also a member of Rho Chi, Omicron Delta Kappa, and Phi Kappa Phi.

Dev S. Pathak

Dev S. Pathak (D.B.A., Marketing, Michigan State University; M.S., Economics, Southern Illinois University, LL.B., Gujarat University, India) is currently Merrell Dow Professor, Division of Pharmacy Practice and Administration. Dr. Pathak also holds a joint appointment as Professor in the College of Medicine and Public Health. Dr. Pathak serves as Director, Center for Health Outcomes and Policy Evaluation Studies, The Ohio State University College of Medicine and Public Health.

Before joining the College of Pharmacy in 1980, Dr. Pathak was a Professor of pharmacy administration and a Professor of data analysis in psychiatry at the University of Illinois at the Medical Center, Chicago.

Dr. Pathak has taught economic evaluation of health care program and services, pharmaceutical marketing, pharmacy management, marketing research, consumer behavior and research methods in pharmacy practice. He has served as a consultant to various organizations including Glaxo Wellcome, Inc., Pharmacia-UpJohn, Merck, Independent Drugs, Inc., Nursing Center Services, Inc., Walgreens, Affective Disorder clinic of the University of Illinois, the Council of the Ohio Colleges of Pharmacy and the Ohio State Pharmaceutical Association.

Dr. Pathak is widely published in journals such as *Health Economics, Clinical Therapeutics Journal of Pharmaceutical Marketing and Management, Journal of Research in Pharmaceutical Economics, Journal of Social and Administrative Pharmacy, The American Journals of Psychiatry, American Journal of Hospital Pharmacy, Drug Intelligence and Clinical Pharmacy, Topics in Hospital Pharmacy Management, Hospital Topics, Journal of Management, Journal of Retailing, Pharmaceutical Executive and the Advanced Management Journal*. He has presented more than 150 papers at the meetings of various professional societies.

Dr. Pathak's current research interests are: economic evaluation of pharmaceutical and health care programs; strategic planning and pharmaceutical organizations; marketing of pharmaceutical programs; and public policy and drug distribution. Dr. Pathak is on the editorial board of several journals and is an active member of several professional societies.

Enrique C. Seoane Vazquez

Dr. Seoane is an Assistant Professor in Pharmaceutical Economics and Drug Policy at the Ohio State University, College of Pharmacy (August 2002). His previous work experience includes positions as a Hospital CEO in the Spanish National Health System (1989-1994), and as a Research Fellow in the area of pharmaceutical economics and drug policy at the PRIME Institute, University of Minnesota (1995-July 2002). He has a Ph.D. in Social and Administrative Pharmacy by the University of Minnesota, College of Pharmacy (2002). He also holds a BS in Economics by the University of Santiago de Compostela, Spain (1986).

Dr. Seoane main areas of interest are drug policy and pharmaceutical economics, pharmaceutical care, and economic evaluation applied to pharmaceuticals. Recent research focuses on pharmaceutical policy and economics in the Americas, the Medicare and Medicaid drug benefits, drug financing in developing countries, the role of generic drugs in the health care system, and access of populations to pharmaceuticals.

Dr. Seoane has conducted 30 research projects as a principal or co-principal investigator for a variety of sponsors including the World Bank, the Pan-American Health Organization – World Health Organization (PAHO-WHO), Henry Kaiser Family Foundation, the pharmaceutical industry, and pharmacy associations. He has also conducted research for governments, private organizations, and associations of 10 countries, including Chile, Mexico, Spain, and Venezuela. Dr. Seoane has 13 publications of articles for scientific journals, books chapters and published reports. He has given 31 national and international presentations in the area of pharmaceutical economics and drug policy.

Section 2

Governance of Graduate Study

2.1 THE GRADUATE SCHOOL

Graduate study in Pharmaceutical Economics and Policy is conducted under the auspices of the Graduate School, and all students are considered to be enrolled directly in the Graduate School.

The student's primary relationship to the Graduate School is through his or her advisor and the Graduate Studies Committee. The student's adviser approves course schedules and degree plans, and certifies the student's progress to the Graduate School at several important points.

The Graduate School is the administrative unit that oversees policies and procedures established by the Graduate Faculty of the University for all graduate programs. The specific requirements of the graduate program of the Division of Pharmacy Practice and Administration outlined in this handbook exist within the environment administered by the Graduate School. Frequent reference will be made in this program handbook to the *Graduate School Handbook*; in general, information already provided there is not repeated here.

Questions concerning any Graduate School policy may be directed to the student's advisor, the Graduate Program Director of the Division of Pharmacy Practice and Administration, or the Graduate School (614-292-6031). The Graduate School offices are on the second floor of University Hall, 230 North Oval Mall.

2.2 THE GRADUATE FACULTY [GSH IV.3]

The Graduate Faculty is composed of the faculty members of the University approved by their graduate programs and the Graduate School to teach, advise, examine, and direct the research of graduate students. Normally this is not an issue for students, as the appropriate faculty status has been assured by the various departments. There are, however, at least two instances in which a problem may arise:

- a) A course that can be offered for both graduate and undergraduate credit (e.g., many 600 and 700 level courses in the College of Business) may be taught by a person without graduate faculty status, such as a Graduate Teaching Associate. In this case the course is available **only for undergraduate credit**, and should be designated as such in the *Master Schedule* (indicated by the restriction code 15).
- b) Students writing a thesis or dissertation sometimes propose persons as committee members who do not have graduate faculty status. In some situations a person may be granted temporary graduate faculty status for these purposes; this should be discussed with the adviser, who can bring the request to the Graduate and Professional Studies Committee if appropriate. Otherwise, such persons may serve informally and assist the student in the thesis research, but may not be regular committee members or play any formal role in examining the student or approving the thesis.

2.3 THE GRADUATE STUDIES COMMITTEE [GSH V]

The Graduate Studies Committee (GSC) concerns itself with major policy issues and overall coordination and direction of graduate study in Pharmacy Practice and Administration.

Graduate Studies Committee

Responsibilities

- Reviews and makes recommendations to the faculty on major program structure and policy decisions, such as the number of hours required for the degrees and the fields within which degrees may be obtained
 - Promotes growth and excellence in graduate education, and visibility of the graduate program in the Division of Pharmacy Practice and Administration nationally and internationally
 - Establishes and coordinates policy in areas having program-wide impact, such as:
 - offering of courses shared by more than one degree program as requirements
 - approval of new graduate courses or substantive changes in existing courses
 - development of sources of student support and establishment of policies for its allocation
 - establishment of policies for Graduate Associate positions funded by the College of Pharmacy
 - establishment of policies as needed on issues referred by the program faculty or that affect the College of Pharmacy as a whole
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Section 3

Advisors and Examination Committees

3.1 ADVISOR APPOINTMENT

Each student in the graduate program of the Division of Pharmacy Practice and Administration is assigned an advisor based on a variety of characteristics, including the degree program, the student's stage within the program, and the particular interests or research program of the student. Students may however, select a faculty member to serve as their advisor after appropriate discussion with the involved faculty. Students who later wish to change their advisor assignment may do so by obtaining the necessary signatures indicating approval on the Faculty Adviser Assignment Form.

3.2 MASTER'S EXAMINATION COMMITTEES [GSH II.5.10]

The graduate programs in the Division of Pharmacy Practice and Administration have a variety of culminating experience requirements that vary by degree and path. However, every master's degree student in Pharmaceutical Economics and Policy must complete a written comprehensive examination, which is administered during the spring of the second year. The examination is administered and evaluated by the Master's Examination Committee.

Section 4

Registration

4.1 REGISTRATION PROCEDURES [GSH II.2]

The incoming student's first registration will normally be completed with the assistance of the student's primary faculty contact. Unless the student's faculty contact has approved a deviation, incoming students will always be registered for the standard full-time schedule.

For continuing graduate students, the registration instructions are emailed to the student's primary email address, and registration is completed using web registration for courses or the BRUTUS touch-tone telephone process. It is extremely important, therefore, that the student maintain an accurate and active email address with the Registrar's Office. The relevant dates and other instructions are given in the *Master Schedule of Classes*, and alterations in this information are generally published in *The Lantern*, the student newspaper. Registration for the Autumn Quarter is usually accomplished during the preceding Spring Quarter.

Registration procedures always require the advisor's approval of the course selections. For full-time students, the sequence of required courses is preapproved, so it is only the elective choices that need advisor approval. Registering or altering registration without the advisor's knowledge and consent may create serious problems and jeopardize the student's progress in the curriculum.

Changes in an approved schedule (dropping or adding courses) also require the advisor's approval. Depending upon timing in the quarter, approval by the instructor and others may also be required. Forms requesting a change are available in the Graduate Studies Office and in the Graduate School offices.

4.2. FELLOWSHIP OFFERING

The Ohio State University, in partnership with the Pan American Health Organization/ World Health Organization makes available several Fellowship awards to those students who are selected through a competitive application process. Interested candidates are encouraged to review Fellowship information and submit the required documentation for consideration.

4.3. ADDITIONAL AWARDS, BURSARIES, AND FINANCIAL AID OPPORTUNITIES

Several awards and scholarships are offered through the University, and these can be found on the University website. In addition, there are financial aid arrangements available.

Section 5

Program for the Master of Science in Pharmaceutical Economics and Policy and Residency in PAHO-WHO

5.1 OBJECTIVES

The major focus of the Master of Science Program in Pharmaceutical Economics and Policy is to educate and train students to conceptualize, design, analyze, and evaluate pharmaceutical policies.

5.2 PROGRAM DESCRIPTION

The Master of Science Program in Pharmaceutical Economics and Policy is offered as a combined graduate study-residence program in cooperation with the Pan American Health Organization, the regional office for the Americas of the World Health Organization. The focus of the residency piece of the program will be on health policy in Latin America.

The program begins September of each year and ends, twenty-four months later (exact dates may vary from year to year). During the academic year, the student devotes half-time to PAHO initiatives and half-time to graduate course work. Full-time residency in PAHO is required during the quarter breaks (two weeks each) and during each summer of the two-year program (three months each). Students will have a two-week vacation during December, and two-week vacation during the summers.

Upon satisfactory completion of the program, the Master of Science degree will be conferred by Ohio State University and a Certificate of Residency will be awarded by PAHO.

5.3 GENERAL DEGREE REQUIREMENTS

University-wide requirements for the master's degree are set forth in the *Graduate School Handbook*. All graduate students should be familiar with this material; each student bears primary responsibility for assuring that his or her program meets the University requirements. The Master of Science In Pharmaceutical Economics and Policy degree requires a minimum of 49 hours of approved graduate courses and satisfactory completion of the two-year residency.

Courses for Students Beginning the Program in Autumn 2003 and After

The academic curriculum is designed to give the student an in-depth exposure to the role of pharmaceutical economics and policy in health care systems. Most of the courses in the program are offered by the College of Business, the Department of Health Services Management and Policy, and the graduate faculty of the Division of Pharmacy Practice and Administration. Through these courses, the student develops expertise in such areas as economic evaluation, the evaluation of pharmaceutical programs, drug policy, drug regulation, principles of personnel management, pharmaceutical marketing, research methodology in pharmacy practice, and current trends in pharmacy. The program consists of core courses in decision-making tools and pharmaceutical administration, graduate seminars, and approved elective courses. More specific course information is listing in sections 5.4 and 5.5.

Application to Graduate [GSH II.5.12.1]

During the quarter in which the student expects to complete all graduation requirements, the student is responsible for completing an "Application to Graduate" form. **The deadline for completion of this form is the second Friday of the quarter of expected graduation.** The student must obtain the form, have it signed by the advisor, and return it to The Office of Graduate Studies and Research.

Master's Examination

The student must satisfactorily pass a Master's Examination which is a written examination. The results of this examination must be communicated by the student to the Graduate School approximately two weeks prior to Commencement (graduation ceremony); **The deadline date for this communication is published in the *Master Schedule*.**

5.4 COURSE WORK OUTLINE

The curriculum for the Masters Degree in Pharmaceutical Economics and Policy consists of a minimum of 50 credit hours organized into four curricular domains:

1. Core courses in decision-making tools (15 credit hours minimum)
2. Core courses in pharmaceutical economics and policy (20 credit hours minimum)
3. Seminar series requirement for each quarter of program fellowship (6 credit hours minimum)
4. Supervised project (9 credit hours minimum).

In all course listings below, students need to be aware that course numbers and titles are subject to change. If there is any question concerning the identification or equivalency of courses, students should consult with their advisor. All electives and alternative or equivalent courses must be approved by the student's advisor. One credit hour is equivalent to 10 hours of classes per quarter.

Research Methods, Statistics, and Decision-Making Electives

Ag Ed 887	Analysis and Interpretation of Data	03 cr. hrs.
	Electives	12 cr. Hrs.

Pharmaceutical Administration

Pharm 999	Pharmaceutical Economics	04 cr. hrs.
Pharm 999	Drug Regulation and Policy	04 cr. hrs.
Pharm 821	Research Methods & Literature Evaluation	04 cr. hrs.
Pharm 824	Economic Evaluation of Pharmaceutical Programs	04 cr. hrs.
Pharm 999	Drug Insurance and Financing	04 cr. hrs.

Seminar in Pharmaceutical Administration

Students must register for one seminar each quarter for a total of 6 credit hours.

Pharm 850	Seminar in Pharmaceutical Administration	06 cr. hrs.
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Supervised Project

Pharm 970	Supervised Project	09 cr. hrs.
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5.5 COURSE SCHEDULING

The following is provided as one of several possible programs of study. Course offerings and degree requirements may change. Contact Enrique C. Seoane, Assistant Professor, or your faculty advisor about program changes. All students must register for several electives to meet the minimum number of credit hours each quarter as outlined in the *Graduate School Guidelines*.

Course #	Course Title	Credit Hours
AUTUMN QUARTER FIRST YEAR		
Ag Ed 887	Analysis and Interpretation of Data	03 cr. hrs.
Pharm 999	Pharmaceutical Economics	04 cr. hrs.
Pharm 850	Seminar	01 cr. hrs.
HSMP 882	Information Systems	04 cr. hrs.
HSMP 815	Health Services Organizational Management	04 cr. hrs.
WINTER QUARTER FIRST YEAR		
Pharm 999	Drug Regulation and Policy	04 cr. hrs.
Pharm 821	Research Methods & Literature Evaluation	04 cr. hrs.
Pharm 850	Seminar	01 cr. hrs.
HSMP 820	Health Services Finance I	04 cr. hrs.
HSMP 880	Operations Management for Health Services Organizations	04 cr. hrs.
SPRING QUARTER FIRST YEAR		
Pharm 824	Economic Evaluation of Pharmaceutical Programs & Services	04 cr. hrs.
Pharm 999	Drug Insurance and Financing	04 cr. hrs.
Pharm 850	Seminar	01 cr. hrs.
HSMP 821	Health Services Finance II	04 cr. hrs.
HSMP 831	Strategic Management and Program Development	04 cr. hrs.
AUTUMN QUARTER SECOND YEAR		
Pharm 970	Supervised Project in PAHO	03 cr. hrs.
Pharm 850	Seminar	01 cr. hrs.
HSMP 822	Health Services Financial Decision Making	04 cr. hrs.
WINTER QUARTER SECOND YEAR		
Pharm 970	Supervised Project in PAHO	03 cr. hrs.
Pharm 850	Seminar	01 cr. hrs.
HSMP 870.06	Health Care Marketing	04 cr. hrs.
SPRING QUARTER SECOND YEAR		
Pharm 970	Supervised Project in PAHO	03 cr. hrs.
Pharm 850	Seminar	01 cr. hrs.
MBA 840N	Marketing Management	04 cr. hrs.

5.6 RESIDENCY TRAINING

The residency training program serves as a viable laboratory experience to complement and apply the knowledge gained in the graduate study courses to actual practice situations.

5.7 REQUIREMENTS FOR SUPERVISED PROJECT IN PAHO

Students will work with PAHO on one of PAHO's most important initiatives, the "Pharmaceutical Clearinghouse of the Americas (PCA)." Each student will develop an individual area of expertise through its assigned residency project with PAHO. The residency program complement the academic coursework and allows students to develop their skills and knowledge by synthesizing the academic and practical experience. Students will take a minimum of nine credit hours of Supervised Project in PAHO (Pharmacy 970) during which they will collaborate with their academic advisor and residency preceptor towards completion of this degree requirement. A thesis on their supervised project in PAHO must be presented at the end of the program, and satisfactory performance on a final oral examination.

5.8 MASTER EXAMINATION

All students in the Master of Science in Pharmaceutical Economics and Policy are required to take comprehensive written take-home examination. The examination is based on key courses in the student's program and is designed to test the student's ability to analyze issues in pharmaceutical administration.

5.9 GRADUATION REQUIREMENTS

For the successful completion of the Master's program, the Graduate School and the graduate faculty of the Division of Pharmacy Practice and Administration have established guidelines and requirements in addition to the courses and thesis, and other requirements listed in this program description. The minimum requirements for completing the Master's program in Pharmaceutical Economics and Policy include:

- a. at least a "C" (on a scale from A to F) and/or "S" (in a scale of Satisfactory/Unsatisfactory) grade in all graduate courses taken in the program;
- b. graduate cumulative point-hour ratio of at least 3.0 in the core courses in pharmaceutical administration;
- c. graduate cumulative point-hour ratio of at least 3.0 in the overall coursework for the program; and
- d. satisfactory completion of the comprehensive Master's examination.

Additional graduation requirements are listed in the Graduate School Handbook of the University.

The Certificate of Residency will be awarded by PAHO-WHO.

5.10 ADMISSIONS REQUIREMENTS

The program is open to any individual regardless of race, color, creed, religion, national origin, sex, age, handicap. All applicants will be considered on a competitive basis.

The minimum criteria to receive consideration for admission in the graduate programs of Pharmaceutical Administration are:

- a. an earned University degree in a health or social science discipline;
- b. a 3.0 cumulative point-hour ratio (on a 4 point scale) in graduate work;
Graduate Record Examination (GRE) scores (www.gre.org) required of all applicants whose under-graduate GPA is less than 3.50.
- c. 3 letters of reference

Please note that these are minimum criteria to receive consideration for admission; meeting these criteria does not guarantee admission in our program.

Visit the College of Pharmacy's web site <http://www.pharmacy.ohio-state.edu/homepage/program/graduate/grdapply.html> for application information.

Any questions contact: Enrique C. Seoane Vazquez, Assistant Professor, OSU.

E-mail: pharmacoeconomics@osu.edu

International students

Students coming from Latin America and other countries are encouraged to apply.

English proficiency is required. Non-native speakers of English must have passed an English test within the last three years.

Applicants whose first language is not English must submit an acceptable score in one of the following tests:

- TOEFL (Test of English as a Foreign Language) score of 575 (written), or 233 (computer version).
- IELTS (International English Language Testing Service) at 7 overall with no score less than 6.5
- MELAB (Michigan English Language Assessment Battery) at 90

Those international students admitted into the program will work with PAHO/WHO to obtain a J-1 student visa and other necessary documentation.

Appendix A

Recommended Electives

Students are expected to use their electives in a thoughtful way to strengthen their programs, and are encouraged to consult with their advisers for this purpose. Naturally, you need to remember that changes in instructor or syllabus may make the course different than our experience. Please note the following points:

1. Any graduate course in the university is a potential elective, subject to two conditions: (a) your ability to meet the course prerequisites, and (b) if not in this pre-approved list, the course must have your adviser's approval that it contributes to your program.
2. Some courses that appear to have relevant titles are in fact not appropriate, which is why they are not listed.
3. Courses numbered below 800 may have mixed graduate and undergraduate enrollment. As a general rule, the lower the class number, the larger the class size is likely to be (e.g., 500s are likely to be bigger than 700s, etc.).
4. Courses or sections of courses with a restriction code of 15 in the Master Schedule are for undergraduate credit only, and cannot count toward graduate degree requirements in the Division of Pharmacy Practice and Administration. The restriction usually means that the instructor will be a teaching assistant rather than a regular faculty member, and thus graduate enrollment is not permitted.
5. You are responsible for checking whether there are any prerequisites for a course, and obtaining any necessary permission to enroll. It sometimes happens that the registration computer will not permit you to enroll in a course for which you have in fact met the prerequisite. This is usually because the prerequisite was taken somewhere other than Ohio State, and you will need to provide evidence to the department offering the course to obtain permission to enroll.

We would be happy to have additional appropriate courses brought to our attention for inclusion in this list, as well as any needed corrections of the existing list. In some academic units (e.g., Public Policy and Management) it is not possible to give a very accurate list because of the way they use multipurpose course numbers. In those cases, you are encouraged to call the department office to determine the current topics in these courses.

Please note: Departments may change the quarters in which courses are offered after the bulletin information is printed, so it is necessary to verify the actual offerings each quarter.

RECOMMENDED ELECTIVES

1st YEAR

FALL

HSMP 882	Information Systems	Schweikhart	M W 10:30-12:18
HSMP 815	Health Services Organizational Management	McAlearney	T Th 1:30-3:18

WINTER

HSMP 820	Health Services Finance I	Sherman	M W 5:30-7:18p
HSMP 880	Operations Management for Health Service Organizations	Schweikhart	M W 10:30-12:18

SPRING

HSMP 821	Health Services Finance II	Cleverly	M W 8:30-10:18
HSMP 831	Strategic Management and Program Development	McAlearney	M W 1:30-3:18

2nd YEAR

FALL

HSMP 822	Health Services Financial Decision Making	Schrock	M W 8:30-10:18
Or HSMP 811	Legal Environment of Health Care	Haller	T Th 3:30-5:18

WINTER

HSMP 870.05 Or HSMP 870.06	Managerial Decision Approaches: Human Resources Health Care Marketing	Stoffel Pathak	TBA T Th 8:30-10:18
Or MBA 840	Marketing Management	Allenby	T Th 8:30-10:18 or 10:30-12:18

SPRING

MBA 840N	Marketing Management	Mathews	M W 6-8 or 8-10p
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Appendix B

COURSES OFFERED BY THE GRADUATE FACULTY OF THE DIVISION OF PHARMACY PRACTICE AND ADMINISTRATION

Pharmacy 816: Medication Use System Management

Understanding the medication use system, principles of operations improvement and strategies for improving medication use systems

Pharmacy 817: Pharmacy Management in Health-Systems

Administrative and professional principles and concepts of, and trends affecting health systems pharmacy.

Pharmacy 821: Research Methodology in Pharmacy Practice

Investigation of the research principles and methods involved in planning, analysis, and interpretation of studies and projects in pharmacy practice.

Pharmacy 824: Evaluation of Pharmaceutical Programs

An overview and appraisal of the state-of-the-art in the evaluation of pharmaceutical programs and services.

Pharmacy 825: Drug Distribution and Public Policy

Investigation of the pharmaceutical distribution system with an emphasis on the marketing practices of manufacturers and the public policies affecting pharmaceutical firms.

Pharmacy 850: Seminar

Round-table discussion, oral and written reports dealing with recent advances in the pharmaceutical sciences.

***Pharmacy 894, 993, 970, and 999** are group, individual and thesis/dissertation study courses of selected topics also available through the graduate faculty of the Division of Pharmacy Practice and Administration.