



UNC
ESHELMAN
SCHOOL OF PHARMACY

Division of Pharmaceutical Outcomes & Policy
GRADUATE STUDENT HANDBOOK

2009 - 2010

UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
UNC Eshelman School of Pharmacy

Pharmaceutical Outcomes & Policy

Tel: (919) 966-1169 Fax: (919) 966-8486

www.pharmacy.unc.edu

TABLE OF CONTENTS

I.	Welcome to DPOP	1
II.	DPOP Program Requirements	2
	2.1 Advising.....	2
	2.2 Health Insurance Portability and Accountability Act (HIPAA) Certificates.....	2
	2.3 Required Education for the Protection of Human Subjects.....	3
	2.4 Course Requirements.....	3
	2.5 Required Course Descriptions.....	4
	2.6 DPOP Graduate Seminar Series.....	8
	2.7 Elective Courses & Concentration Areas.....	9
	2.8 Grades.....	10
	2.9 Teaching and Research Practicum.....	11
	2.10 Comprehensive Exams.....	11
	2.11 Dissertation Requirements.....	14
	2.12 Time Limits in the DPOP Graduate Program.....	15
III.	Minors & Certificate Programs	16
	3.1 Ph.D. Minors.....	16
	3.2 Certificate Programs.....	16
IV.	Financial Aid	18
	4.1 Applying for NC Residency.....	18
	4.2 Graduate Teaching Assistantships and Responsibilities.....	19
	4.3 Research Assistantships.....	20
	4.4 Tuition Remission.....	20
	4.5 Travel Awards.....	20
	4.6 Travel Abroad.....	21
V.	Division Resources	22
	5.1 Offices, Computers, and Supplies.....	22
	5.2 Copiers and Copy Cards.....	22
	5.3 Telephones, Fax Machine, and Secretarial Support.....	22
	5.4 DPOP Library.....	23
VI.	AVAILABLE RESOURCES FOR THESIS WRITING	23
	6.1 The Writing Center.....	23
	6.2 Institute For Research & Social Sciences.....	23
	6.3 Academic Technology & Networks.....	23
	6.4 Statistical Consulting.....	24
	6.5 The Office of Human Research Ethics.....	24
VII.	Miscellaneous	24
	7.1 Mail and Email Accounts.....	24
	7.2 ID Cards.....	24
	7.3 Sources of Campus Information.....	25
	7.4 Division Website.....	25
	7.5 Absences From Campus.....	25
	7.6 Parental Leave.....	25
	7.7 Important Phone Numbers.....	25
	APPENDIX A – Expected Competencies of DPOP PhD Students.....	A-1
	APPENDIX B – Glossary of Terms and Abbreviations.....	B-1
	APPENDIX C – Tracking Form for PHD Program.....	C-1
	APPENDIX D - Planned Program of Study for PhD Program.....	D-1

I. WELCOME TO DPOP

The faculty and staff of the Division of Pharmaceutical Outcomes and Policy (DPOP) in the UNC Eshelman School of Pharmacy welcome you to Chapel Hill. Whether you are new to the area or a seasoned resident, we are sure that you will cherish the time you will spend here with us. This handbook has been created to help you get acquainted with your roles and responsibilities within the Division. You will be able to use it throughout your graduate studies in DPOP. It contains information about graduate studies, including advising, thesis and exam requirements, financial aid, and Division resources available to you.

Richard Hansen, PhD
Associate Professor
Director of Graduate Studies,
Division of Pharmaceutical Outcomes & Policy
919-966-7517
rahansen@unc.edu

See also: www.pharmacy.unc.edu

II. DPOP PROGRAM REQUIREMENTS

Most of the general information relating to requirements of the Graduate School can be found in the *Graduate School Handbook* of the University of North Carolina. Information that is specific to the Division is provided here, particularly as it applies to the PhD program. It should be noted that the information in this Handbook compliments and does not supersede that found in the *Graduate School Handbook*.

2.1 Advising

Each incoming student is assigned a temporary academic advisor from the Division's graduate faculty. The academic advisor will assist you in developing an initial plan of study and in identifying courses or research areas consistent with your academic and career goals. You can change academic advisors at any point in time in consultation with the DPOP Director of Graduate studies.

A student should establish a student advisory committee (SAC) prior to the end of their second semester of study. The SAC will consist of a research advisor as chairman and two other members of the graduate faculty. One of the members must be from outside DPOP. The purpose of the SAC is to assist students in planning their program of study prior to the formation of their dissertation committee. With approval of the DPOP Director of Graduate Studies, the student may change research advisors or members of the SAC over time if needed. Students are responsible for requesting in writing any proposed changes to the DPOP Director of Graduate Studies and Gwendolyn Ricks, DPOP Administrative Assistant. Each student's SAC must meet at least one time per year, beginning in the summer prior to the student's third semester of study.

2.2 Health Insurance Portability and Accountability Act (HIPAA) Certificates

All students are expected to obtain a certificate that they have received HIPAA certification. Such certification can be obtained online at <http://www.unc.edu/hipaa> or <http://www.med.unc.edu/security/hipaa>.

2.3 Required Education for the Protection of Human Subjects

All students are expected to complete training concerning ethical and regulatory requirements for the protection of human research participants in compliance with NIH and The University of North Carolina at Chapel Hill "Policy on Education and Certification of Investigators Involved in Human Subjects Research."

Additional information and access to an on-line training course may be found at <http://ohre.unc.edu/educ.php>

2.4 Course Requirements

As a minimum requirement, DPOP PhD students must complete the courses specified in Table 1 and earn a minimum of 10 hours of elective credits based on a chosen concentration area. The faculty of the Division periodically monitors and revises the list of recommended and required courses and sometimes changes their sequence, always with the intent of providing you with the best available selection of courses for your program. It is always possible for you to modify this course of study based on your background, experience, and professional aspirations. However, you must work with your advisor to make any modifications to the required program of study and all modifications must be approved by the combined graduate faculty of the Division.

To ensure smooth progression through course requirements, students must make a sequential course plan upon entry into the program. Thereafter, they must maintain an active tracking form. Samples of the planned program of study and tracking form are provided in Appendix C.

Table 1. Required Courses

Topic/course	Credit hours	Notes
DPOP Courses (16 Units Total)		
Pharmacoeconomics	3	DPOP 801 (3) (SP) <i>Offered every other year (odd years)</i>
Social and Behavioral Aspects of Pharmaceutical Use	3	DPOP 803 (3) (SP) <i>Offered every other year (odd years)</i>
Informatics: Use of Large Healthcare Databases	3	DPOP 804 (3) (F) <i>Offered every other year (odd years)</i>
Pharmaceutical Policy	3	DPOP 806 (3) (F) <i>Offered every other year (even years)</i>
DPOP Seminar	4	DPOP 899 (1) (F and SP) <i>Offered every year</i>
Proposal writing	3	HPM 872 (3) (SP) or equivalent
Ethics	1	PHCY 801 (F)
Fundamentals of epidemiology	3	EPID 600 or 710
Statistics	9	See courses recommended by concentration area.
Measurement	3	Alternatives HBHE 852/PSYC 842/NURS 978
Electives	10	Includes research credits for participation in experiential learning activities
Total	45	

2.5 Required Course Descriptions

DPOP 801 *Pharmaceutical Economics* (3). This course is focused on the investigation of the economic and health impact of major pharmaceutical policies, regulations, market conditions, prescription drug use, and pharmaceutical care. Students obtain hands-on experience on econometric modeling techniques using original data for empirical analysis of medical technologies and pharmaceutical policy interventions. (Offered odd years in the Spring)

DPOP 803 *Social and Behavioral Aspects of Pharmaceutical Care* (3). This course draws from medical sociology and health psychology to familiarize students with core theories, research, measures, and design issues relevant to conducting social/behavioral research surrounding pharmaceutical use. (Offered odd years in the Spring)

DPOP 804 *Informatics: Use of Large Health Care Databases* (3). This is an interdisciplinary course providing practical training in the analysis of large, secondary databases containing physician, hospital, and pharmaceutical data. Course topics include data preparation, algorithm development, quality control, and dataset limitations. The course will explore the challenges and opportunities of working with large health datasets, including databases created for administrative and clinical purposes. In addition, the course will help prepare students for careers in research and program evaluation. (Offered odd years in the Fall)

DPOP 806 *Pharmaceutical Policy* (3). This course examines policies that influence pharmacy. Structured methods of policy analysis are examined and used to assess theoretic and analytic applications for evaluating pharmaceutical policy. (Offered odd years in Fall)

DPOP 899 *Seminar in Pharmaceutical Policy and Outcomes Research* (1). This seminar offers presentations and discussions on current pharmaceutical policies, major issues in drug markets, and contemporary outcomes research topics in the field. Students must register every semester. (Offered in the Fall & Spring)

HPM 872 *Developing Proposals for Health Services and Policy Research* (3). Integrated study of selected theory and research as it relates to the organization and delivery of health services. Students are required to take HPM 872 as their proposal writing course. If for some reason HPM 872 is not available, the student must work with his/her Student Advisory Committee (SAC) to develop an alternative plan. The alternative plan must include writing a 10-20 page proposal similar to the AHRQ or NIH dissertation grant format which follows the PHS 398 guidelines (specific aims, background, preliminary studies, methods). (Offered in the Spring)

PHCY 801 *Ethical Dilemmas in Research* (1). (Offered in the Fall) The objective of this course is to give students a foundation in the ethical dilemmas in scientific research. Using a seminar format, with lectures and opportunities for interactive discussion, the students will:

1. Understand the relationship between research ethics and the scientific process;
2. Identify the range of ethical, legal, and social issues relevant to pharmacy research in academic, industry and government settings;
3. Explore the relationships between the moral,

professional, social and institutional responsibilities of the scientist; and 4. Develop analytic skills for evaluating arguments, positions and policy pertaining to the ethical and social implications of research.

Alternative Courses to Fulfill Fundamentals of Epidemiology Requirement

EPID 600 *Principles of Epidemiology* (3) Pre- or corequisite: BIOS 600. Permission required for non-SPH majors. An introductory course that considers the meaning, scope and applications of epidemiology to public health practice and the uses of vital statistics data in the scientific appraisal of community health. One lecture and two lab hours per week. (Offered in the Fall & Spring)

EPID 710 *Fundamentals of Epidemiology* (3). An intensive introduction to epidemiological concepts and methods for students intending to engage in, collaborate in, or interpret the results of epidemiologic studies. Some familiarity with biomedical concepts may be needed. To gain access to this class, students usually are required to declare a minor in Epidemiology. (Offered in the Fall)

Alternative Courses to Fulfill Statistics Requirements

Recommended Alternatives for Students Concentrating in Pharmacoeconomics

HPM 470, Section 2. *Statistical Methods for Health Policy and Administration* (3). Introduction of linear model approach to the analysis of data in health care settings. Topics include probability distributions, estimation tests of hypotheses, methods in multiple regression, and analysis of variance and covariance. (Offered in the Fall)

HPM 881 *Linear Regression Models* (3). Prerequisite: HPM 496 *Math Module* (16) and HPM 496 *Stats Module* (28) or equivalent. Required for all doctoral students. This course is an introduction to linear regression models. Topics include linear algebra, least squares regression, multicollinearity, heteroscedasticity, autocorrelation, and hypothesis testing. (Offered in the Spring)

HPM 882 *Advanced Methodology in Health Policy and Administration Research* (3). Prerequisite: HPM 881, or permission of the instructor. Research methodology as applied to understanding problems in health care delivery. Topics include simultaneous equation models, factor analysis, limited dependent variables, and an introduction to event history analysis. (Offered in the Spring)

HPM 883 *Analysis of Categorical Data* (3) Prerequisite: HPM 882 or equivalent. This course is an introduction to the analysis of categorical data using maximum likelihood and specification tests. Topics covered include econometric models in which the dependent variable is not continuous, including logit, probit, tobit, two-part, and duration models. (Offered in the Fall)

Recommended Alternatives for Students Concentrating in Pharmacoepidemiology

BIOS 600 *Principles of Statistical Inference* (3). Major topics include elementary probability theory, probability distributions, estimation, tests of hypotheses, chi-square procedures, regression and correlation. (Offered in the Fall)

BIOS 545 *Principles of Experimental Analysis* (3). Continuation of BIOS 600; the analysis of experimental and observational data, including multiple regression, and analysis of variance and co-variance. (Offered in the Spring)

EPID 718 *Epidemiologic Analysis Of Binary Data* (3). Prerequisite, EPID 715. Permission of instructor required for non-majors. Concepts and applications, including logistic regression, binomial regression, model building strategy, additive and multiplicative interaction, and graphical exploration. Includes computer-based experience with real data. (Offered in the Fall)

EPID 722 *Epidemiologic Analysis Of Time-To-Event Data* (3). Permission of instructor required for non-majors. Concepts and applications in survival analysis and analysis of incidence rates, including truncation and censoring, Kaplan-Meier analysis, proportional hazards regression, time-dependent exposures, Poisson regression, sensitivity analysis, bootstrapping, and multiple imputation. (Offered in the Spring)

Recommended Alternatives for Students Concentrating in Social/Behavioral Pharmacy

PSYC 830 *Statistical Methods in Psychology I* (4). Prerequisite, a course in introductory statistics. Data analysis, sampling, applied probability, elementary distribution theory, principles of statistical inference. (Offered in the Fall)

PSYC 831 *Statistical Methods in Psychology II* (4). Prerequisite, PSYC 830. Statistical estimation and hypothesis testing for linear models (ANOVA, ANCOVA, regression analysis); statistical models in the design and analysis of experiments. (Offered in the Spring)

PSYC 844 *Structural Equation Models with Latent Variables* (3). Prerequisite, PSYC 831 or permission of the instructor. Examination of a wide range of topics in covariance structure models, including their history, underlying theory, controversies, and practical use with major computer packages. (Offered in the Spring)

SOCI 708 *Statistics for Sociologists* (3). Provides an introduction to probability theory, descriptive statistics, inferential statistics, and the algebra of expectations. Emphasis is on elements useful to research sociologists, including bivariate regression and correlation. (Offered in the Fall)

SOCI 709 *Linear Regression Models* (3). The course presents regression analysis and related techniques. The major topics are: the assumptions of the regression model; dummy variables and interaction terms; outlier diagnostics; multicollinearity; specification error; heteroscedasticity; and autocorrelation. The final section introduces path analysis, recursive models, and non-recursive systems. (Offered in the Spring)

SOCI 711 *Analysis of Categorical Data* (3). Prerequisite, permission of the instructor. Introduction to techniques and programs for analyzing categorical variables and nonlinear models. Special attention is given to decomposition of complex contingency tables, discriminant function analysis, Markov chains, and non-metric multidimensional scaling. (Offered in the Fall)

SOCI 717 *Structural Equations with Latent Variables* (3). Prerequisites, SOCI 708 and permission of the instructor. This course examines models sometimes referred to as LISREL models. Topics include: path analysis, confirmatory factor analysis, measurement error, model identification, non-recursive models, and multiple indicators. (Offered in the Spring)

SOCI 718 *Longitudinal and Multilevel Data Analysis* (3). Prerequisite, SOCI 709, 711, or equivalent. This course provides an introduction to event history analysis or survival analysis, random effects and fixed effects models for longitudinal data, multilevel models for linear and discrete multilevel data, and growth curve models. (awaiting answer from department)

EDUC 684 *Statistical Analysis of Educational Data I* (4). Studies descriptive and inferential statistics for educational research, including an introduction to fundamentals of research design and computer data analysis. (Offered in the Fall & Spring)

EDUC 784 *Statistical Analysis of Educational Data II* (4). Prerequisite, EDUC 684 or permission of the instructor. A linear model approach to the analysis of data collected in educational settings. Topics include multiple regression, analysis of variance, and analysis of covariance, using computer packages. (Offered in the Spring & Summer)

Alternative Courses to Fulfill Measurement Requirement

HBHE 852 *Scale Development Methods* (3). Prerequisites, HBHE 750 or equivalent, and permission of the instructor. Covers theory and application of scale development techniques for measuring latent constructs in health research; classical measurement theory and factor analytic methods are emphasized. (Offered in the Spring)

PSYC 842 *Test Theory and Analysis* (3). Prerequisite, PSYC 831. Survey of classical test theory and more recent developments in item analysis and test construction. (Offered in the Fall)

NURS 978 *Principal Measurement* (3). Examination of measurement and techniques for assessing validity, reliability, and structure of data collection instruments. Instrumental construction and procedures for critical evaluation of instruments are included. (Offered in the Spring)

Language Requirements for International Students

ENG 601 *English for International Students* (All international students are encouraged to take this course their first semester at UNC). (Offered in the Fall)

ENG 603 *English Pronunciation* (Offered in the Spring)

2.6 DPOP Graduate Seminar Series

The DPOP Graduate Seminar meets regularly during the fall and spring semesters. This seminar is intended to be a forum for scholarly discussion of policy issues, research ideas and methods, campus and industry research resources, and the presentation of ongoing research among the Division's graduate students and faculty. The Graduate Seminar is coordinated by a Division faculty member or members on a yearly basis, usually with the assistance of a graduate student.

Graduate students are required to register for the DPOP Seminar series during each of their first four semesters of study. You will find them stimulating and enlightening. After a student passes comprehensive exams, the Division expects students to attend seminar even though they are not registered for credit since they are still an active part of the department.

Each student is expected to give a seminar presentation once yearly. Seminar format is similar to that of professional meetings, with presentation length between 1/2 and 2/3 of the allotted time, with remaining time reserved for questions and discussion. Seminar requirements differ each year depending on the seminar topic. Additional information concerning seminar requirements will be provided each semester by the faculty Seminar Coordinator(s).

2.7 Elective Courses & Concentration Areas

Students will take elective courses for a minimum of 10 credits hours. In addition to taking traditional classroom courses, credits toward elective requirements may be earned by participating in experiential research activities. The choice of electives will depend on concentration area and must be approved by the student's advisor. There are three concentration areas for PhD students in DPOP: *Pharmacoeconomics and Drug Policy*, *Pharmacoepidemiology*, and *Social/Behavioral Pharmacy*. Listed below are among the highly recommended elective courses in each of the concentration areas.

Pharmacoeconomics and Drug Policy

ECON 851	Health Economics in Developing Countries (Offered in the Fall)
HPM 652	Economic Evaluation of Healthcare Technology (Offered in the Spring)
HPM 715	Health Economics for Policy and Administration (Offered in the Spring)
HPM 762	Quality of Care (Offered in the Fall)
HPM 815	Health Economics Seminar (Offered in the Spring)

Pharmacoepidemiology

EPID 705	Introduction to Logic and Probability Logic in Epidemiology (Offered in the Fall)
EPID 715	Theory and Quantitative Methods in Epidemiology (Offered in the Spring)
EPID 733	Clinical Trials Epidemiology (Offered in the Spring)
EPID 743	Genetic Epidemiology (Offered in the Spring)
EPID 750	Epidemiologic Surveillance in Public Health (Offered in the Fall)
EPID 765	Methods and Issues in Pharmacoepidemiology (Offered in the Spring)
EPID 764	Hospital Epidemiology (Offered in the Spring)
EPID 800	Epidemiology of Medical Care (Offered in the Fall upon request)
EPID 805	Clinical Epidemiology (Offered in the Fall)
EPID 893	Pharmacoepidemiology Seminar (Offered in the Fall upon request)

Social/ Behavioral Pharmacy

HBHE 750	Applied Research Methods in Health Behavior and Health Education
HBHE 800	Social Psychological Theories of Individual Health Behavior
HBHE 801	Topics in Sociology of Health
HBHE 853	Advanced Evaluation of Health Intervention Programs
PSYC 864	Topics in Attitude Research
SOCI 802	Social Psychological Theory
SOCI 822	Sociological Theories of Aging and the Adult Life Course
SOCI 836	Social Gerontology
SOCI 862	Health Organizations and Occupations
SOCI 863	Medical Sociology: Health, Illness, and Healing

Students are also strongly encouraged to take advantage of the rich intellectual climate on campus here at UNC by attending seminars provided by other departments, such as those offered by HPM, Epidemiology, the Program on Health Outcomes, and seminars offered by the Cecil G. Sheps Center.

Students also may wish to investigate courses offered at Duke University and other departments and organizations within UNC. These courses provide course credit towards the electives.

To acquire or update specific skills, students can take short courses provided on campus. However, these short courses do not count toward academic credits. The Office of Academic Technology & Networks (ATN) and the Institute for Research in the Social Sciences (IRSS) offer regular short courses in various computer programs and software, data management, funding, and other topics. For a schedule of offerings, check out the ATN and IRSS web pages at: <http://help.unc.edu/> and <http://www.unc.edu/depts/irss/>, respectively. In addition, Durham Technical Community College offers a course in SAS (CSC section 152-070) that may be of interest to students. For more information on Durham Tech courses, see their web site at: <http://www.durhamtech.edu/html/prospective/coursedescriptions/coursedescriptions.htm>.

2.8 Grades

Grades for graduate students enrolled in courses numbered 100 or above range from H (high pass) to F (failure). The explanation of the various grades below represents the interpretation currently employed by the Division. For explanations of other grades, including incompletes, refer to the *Graduate School Handbook*. Please note that graduate students become academically ineligible to continue studies if he or she receives an **F** in any class or nine or more hours of grade *L*. The Graduate School will automatically cancel the registration of those students who become academically ineligible.

H (high pass): Excellent, outstanding work at the graduate level.

P (pass): Acceptable graduate work.

L (low pass): Work not necessarily acceptable.

F (failure): Unacceptable work.

S: Satisfactory progress in research courses, theses, dissertations, and noncredit courses in a foreign language.

2.9 Teaching and Research Practicum

Teaching Practicum Requirement

The teaching experience is a requirement for students admitted into the doctoral program. Its purpose is to enhance knowledge and skills in teaching. Optimally, it should be completed during the first two years of the program. It must be completed before taking the comprehensive exams.

To fulfill this requirement, the student must be involved in teaching a two or three credit hour course. Students should work with the DPOP faculty to determine which course they will select to satisfy their practicum requirement. **Students must fill out a contract before starting their practicum.** The student will be mentored in teaching by a DPOP faculty member and at the end of the practicum, will be evaluated by the supervising faculty member. A satisfactory evaluation is required to fulfill the teaching practicum requirement. The student must assume responsibility for major aspects of the selected practicum course (e.g., planning and teaching). Simply serving as a teaching assistant does not satisfy this requirement. Students must deliver at least four 50 minute lectures and must attend at least one seminar on teaching while doing the practicum. Seminars are offered through the graduate school and through the Center on Teaching and Learning. Additional information may be found at the following URL, <http://ctl.unc.edu/>

Research Practicum Requirement

The research practicum is a requirement for students admitted into the doctoral program. Its purpose is to enhance knowledge and skills in research by working on one or more research projects. Optimally, it should be completed during the first two years of the program to develop the skills necessary to complete the dissertation. It must be completed before taking the comprehensive exams. **Students must fill out a contract before starting their practicum.** At the end of the practicum, students will be evaluated by the faculty member who is supervising their practicum. A satisfactory evaluation is required to fulfill the research practicum requirement. The practicum may involve designing and implementing a research project, conducting data analyses, writing manuscripts, preparing a grant proposal, presenting findings at a meeting, or a combination of these activities. Data entry, photocopying, or interviewing patients alone does not satisfy the practicum requirement. The student must devote the equivalent of 15 hours per week for a regular semester (14 weeks), for a total of 210 hours to satisfy the practicum requirement.

2.10 Comprehensive Exams

PhD students are expected to complete all the required course work, proposal writing, and the research and teaching practica before they can take comprehensive exams.

The objective of the doctoral comprehensive exams is to ensure that students are proficient in three concentration areas before pursuing dissertation research. Although a student may choose

to focus his/her studies in one area, fundamental knowledge and skills in all three areas are considered necessary for a qualified PhD candidate in DPOP to pursue dissertation research. The three tested areas are: 1) Pharmacoeconomics; 2) Pharmacoepidemiology; and 3) Health Behavioral Sciences. Exams have three modules, corresponding to these three areas. Competencies evaluated by the exams are provided in Appendix A.

Schedule

Doctoral students are normally expected to take the comprehensive exam at the end of their second academic year. Each year, the exam shall be regularly given during the second week of June. In the event of time conflicts, students shall submit a written request for re-scheduling to the Division Chair and the Director of Graduate Studies.

Format

Comprehensive exams will be open-book format. Students are encouraged to use MS Word and Excel to complete the exam. For each module, up to 3 published articles will be selected by the faculty and provided to the students on the Friday prior to the exam week. Questions for the exam will focus on critically evaluating and interpreting conceptual issues, research and analytic methods, and results that are either discussed in the papers or that are relevant to the papers. Questions may address student's understanding of the theories involved, analytical frameworks employed; statistical tests conducted; interpretation of the results and policy implications; and the strengths and weakness of study design, data collection or analytical methods employed in the study compared to any alternatives.

Evaluation

Each module of the exam will be evaluated separately, with three grades possible: Pass, Marginal Pass, and Fail. To pass the exam, students must receive a "Pass" on all three modules.

A grade of "Pass" on a module indicates that the student's answers demonstrate an adequate and complete understanding of the competencies being evaluated, with no evidence of weaknesses.

A grade of "Marginal Pass" on a module indicates that the student's answers demonstrate an adequate understanding of the competencies evaluated, but that some answers are weak or deficient in a specific area. Students who receive a "Marginal Pass" on any of the three modules must meet with the faculty member(s) responsible for evaluating the module(s) immediately after receiving their grade. Remedial work will be provided to the student, and the student must develop a plan to complete the remedial work required within six weeks of receiving their grade. If the remedial work is not performed in a satisfactory manner, or within the time prescribed, the grade on this exam module will convert to a "Fail".

A grade of "Fail" on a module indicates that the student does not appear to have a mastery of the competencies being evaluated. **Students who fail one or more of the exam modules will be**

considered to have failed the exam as a whole. This has very serious consequences for program completion. Such students must meet with the faculty member(s) responsible for evaluating the module(s) immediately after receiving their grade and develop a plan of study focused on remediation of the deficiencies identified. Such students will be allowed to retake the failed module(s) one time. Although the second exam will test the same competencies as those tested in the initial exam, the specific questions included on the exam will differ. (NOTE: Students do not need to retake modules on which they have obtained a grade of "Pass.") Because a grade of "Fail" indicates that the student needs to gain a better mastery of the required competencies, students are required to wait at least three months before retaking the failed module(s). However, in most cases, the exam should be retaken within six months of the initial exam date.

A student who fails one or more modules of the exam for the second time is classified by the University as "Academically Ineligible". As such, they are not allowed to register for classes, hold TA positions, or progress in the program. When special circumstances warrant, The Graduate School may grant a student a third and final opportunity to take the examination. This third opportunity is only available to students if requested by student's director of graduate studies. However, no student may continue in a program or take an examination a third time without approval by the Administrative Board of The Graduate School. Additional information may be found in the UNC Graduate School Handbook.

2.11 Dissertation Requirements

After successfully passing the comprehensive exams, students will begin to work on their dissertation proposal. A minimum of six (6) hours of thesis credit must be taken in order to complete the requirements for the PhD degree. There is no limit to the number of dissertation hours that can be taken; however, no more than six (6) hours may be applied to the minimum of 45 hours needed to satisfy graduation requirements. The Division does not have any additional thesis requirements beyond those stated in the *Graduate School Handbook* section on Thesis and Dissertation Preparation and Requirements.

Dissertation Committee

A committee of at least five members is required. A majority of the members of a doctoral committee (and a majority of the people passing the student on an examination or approving a doctoral dissertation) must be regular members of the UNC-Chapel Hill Graduate Faculty in the UNC Eshelman School of Pharmacy (two of these three must be in DPOP). Other members may be special appointees to the Graduate Faculty. Please note that adjunct faculty appointments and graduate faculty appointments are distinct. As such, an appointment as an adjunct faculty member does not qualify an individual as a regular member of UNC-Chapel Hill Graduate Faculty. Therefore to serve on the dissertation committee, adjunct faculty members must obtain recognition as a special appointee to the graduate faculty.

You should consult the *Graduate School Handbook* for requirements concerning committee composition. It is the student's responsibility to identify a potential primary advisor who will serve as committee chair and supplementary committee members, obtain their agreement to serve on the committee, and notify the Director of Graduate Studies in writing of the committee's composition.

Students have the responsibility of keeping committee members informed of their progress with respect to all areas of the thesis writing process: data collection/acquisition, theoretical background, methodology and statistical work, etc. Each doctoral student is expected to consult with members of the dissertation committee at frequent intervals throughout the progress of his or her research and is required to submit a progress report to each member of the committee quarterly. If requesting feedback or scheduling a meeting, allow committee members at least 10 days to review any materials you submit to them.

Two oral exams are administered as part of dissertation requirements. **University policy dictates that students must be registered during the semester in which they take these exams.** Therefore, to avoid any unnecessary expenses, it is imperative that you plan well in advance of when you hope to take the exams. It is your responsibility to be familiar with Graduate School deadlines and to submit drafts and arrange defense dates accordingly.

In the first oral exam, students defend a written proposal for the dissertation project. In the second oral exam, students defend their dissertation. Both oral exams may be held only after all

members of the dissertation committee have had adequate opportunity to review a draft of the doctoral proposal/dissertation. The dissertation advisor is responsible for determining that each draft is in an appropriate form for committee evaluation. As a general rule, students should submit a draft of the proposal/dissertation to all committee members at least six weeks before the anticipated exam date. Faculty members are expected to provide feedback on the draft within two weeks. If the proposal/dissertation submitted for committee review requires substantial revisions, the student must complete these revisions before the oral examination is scheduled. A revised version of the proposal/dissertation addressing issues raised by committee members during their initial review must be provided to committee members at least two weeks prior to the oral examination. The committee may, at the time of the final oral dissertation defense but no later, require alterations and corrections, but these should constitute relatively minor changes agreed to by a majority of the committee members. The dissertation advisor is responsible for verifying that the changes required by the committee have been made and may delegate this responsibility to the committee member(s) who imposed the requirements. All committee members are expected to be present at both oral exams. On special occasions, permission may be granted for committee members to participate in the defense by telephone.

Dissertation Format

Dissertations can follow the traditional monograph or the three paper option format. The three paper option requires three journal-length manuscripts of publishable quality that could be altered slightly for submission to refereed journals, accompanied by additional sections and/or appendices that provide detail normally included in the monograph dissertation format but excluded from articles (e.g. a more detailed literature review, questionnaires, details on data collection, concluding chapter). Please consult with your dissertation advisor to determine whether this option is feasible for you.

2.12 Time Limits in the DPOP Graduate Program

University Progression Guidelines

The University's time limit for completion of all PhD requirements is eight years from the date of first registration. You must be registered during the semester in which you defend and submit your thesis.

DPOP Dissertation Progression Guidelines

Within 3 months of passing comprehensive exams, students are encouraged to identify a dissertation advisor. Dissertations must include a pharmaceutical component or have implications for pharmaceutical policy or pharmacy practice.

Within 6 months of completing comprehensive exams, students are expected to have submitted a first draft of their dissertation proposal to their advisor.

Within 12 months of completing comprehensive exams, students are expected to defend their dissertation proposal. They are also expected to have their work plan and expected date of completion approved by their committee at the time of the dissertation proposal defense.

Students must update dissertation committee members of their progress quarterly in writing. Also, students are encouraged to have an interim meeting of their dissertation committee approximately 6 months after they have defended their proposal, to update the committee of their progress and to receive feedback.

All students are strongly encouraged to try to complete their dissertation within 12 months of defending their proposal.

III. MINORS & CERTIFICATE PROGRAMS

3.1 Ph.D. Minors

Students may do a minor in any program that offers a graduate degree with approval from the Director of Graduate Studies. A minor in a Ph.D. program must comprise at least 15 hours of courses in programs other than that of the major, and cannot also be counted toward the major. The minor must be approved in advance by the Director of Graduate Studies in both the major and the minor programs. After approval by both programs, a copy of the proposed minor course of study should be signed by the Director of Graduate Studies in the major and minor programs and sent to the Graduate School to become a permanent part of the student's record. The minor must also meet all the requirements described in the *Graduate School Handbook*.

3.2 Certificate Programs

The UNC Graduate Certificate Program on Health Outcomes (PHO)

This certificate program in Health Outcomes and Quality of Care requires 9 hours of study. The Certificate is available to all graduate and professional students, pending their acceptance into the certificate program, who wish to demonstrate academic training in health outcomes and quality of care. For general purposes, the PHO defines "health outcomes" as the end result of the provision of health services to patients and their families. www.sph.unc.edu/health-outcomes/

Interdisciplinary Certificate in Aging

This certificate program is available through the Institute on Aging. The certificate in aging is a campus-wide program drawing on the University's rich set of resources to offer graduate students and community professionals gerontological knowledge essential for work in an aging society. The curriculum includes both knowledge base and skills development, allowing participants to prepare for either clinical or scholarly work or both. Students will be encouraged to have contact with older persons and/or with organizations that address the needs of older

persons, and/or to be involved in activities addressing policy issues that affect an aging society. Courses in the certificate program relate to health, mental health, policy and practice, and explore the heterogeneity of today's aging Americans and the resource they represent for our society. For more information or to apply, contact Dr. Mary Roth at mroth@unc.edu. www.aging.unc.edu/certificate/

Interdisciplinary Certificate in Health Disparities

This certificate program is available through The UNC Program on Ethnicity, Culture and Health Outcomes (ECHO). The program has been developed to train health professionals to address the need of reducing racial/ethnic variation or differences in care as related to the overall health of the nation. The science of disparity reduction addresses the need for basic science to be conducted in many health areas to understand the contributors to disparities and how that information can be translated into specific interventions to counterbalance the effects of these contributors. www.echo.unc.edu/education/

Certificate Program in Survey Methodology

This certificate program is available through the Odum Institute for Research in Social Science. The Odum Institute's Certificate Program in Survey Methodology offers training in general survey methodology including data collection methods, questionnaire design, survey computing, and data analysis. A key feature of the program is the integration of classroom training with hands-on experience in real world problems. In addition, students are required to take short courses offered through the Odum Institute that further expand the list of topics covered in the program. This certificate is available to all graduate students and working professionals who wish to demonstrate academic training and experience in designing and conducting surveys and analyzing and reporting survey results. www.irss.unc.edu/cpsm/

Certificate in Interdisciplinary Health Communication

The objective of the Certificate in Interdisciplinary Health Communication is to train students to understand the processes of health communication and the principles for communicating about health across multiple channels. Graduate students learn to use theory-informed health communication strategies in applied practice, academic and research settings. The program requires 11 hours of study, three of which may count toward PhD requirements. The certificate program also requires a thesis, master's paper, dissertation, or equivalent on a health communication-related topic, broadly defined. For more information, visit <http://ihc.unc.edu/requirements.html>

IV. FINANCIAL AID

At the beginning of each spring semester, all students will be surveyed to determine their status as continuing students, need for continued financial aid, and the form of financial aid desired [Graduate Teaching Assistantship (TA), Research Assistantship (RA), etc.] or any outside financial aid received. Preliminary financial aid decisions for the following academic year will be made by Division faculty in late spring, and students will be subsequently notified by the Director of Graduate Studies. Students will be notified as additional funding opportunities arise.

Please be aware that the Division is only able to provide financial support for a fraction of its students and that these awards are made on a competitive basis. It is the individual student's responsibility to secure financial aid. The Division has created a Funding Sources link that can be found by logging onto Blackboard (<https://blackboard.unc.edu/> and selecting DPOP Graduate Program) to assist in identifying financial aid. Students should check this site regularly for updates. In addition, the Division forwards e-mail notices concerning financial aid opportunities and position and fellowship announcements. You are encouraged to provide the department with any information you come across regarding sources of financial aid. Students applying for outside funding will be given priority for Divisional teaching and research assistantship awards.

4.1 Applying for NC Residency

Out-of-state students who are U.S. residents are urged to apply for in-state resident status after one year of residence in the state of North Carolina for tuition purposes. You are urged to familiarize yourself with the residency requirements as soon as you arrive on campus. The Graduate School provides several workshops to assist in the application process.

Information on North Carolina residence for tuition purposes can be found at:
<http://gradschool.unc.edu/student/residency/>

This site includes applications, governing law, and under "Requirements" a list of considerations for evaluating a student's status.

Residency decisions do not have to be made prior to the start of a semester, but may be retroactive to the beginning of that semester. Nevertheless, it is in your own best interest to start the process as soon as possible after arriving on campus. Residency status is generally not decided upon until after the third semester.

4.2 Graduate Teaching Assistantships and Responsibilities

Purpose

Teaching assistantships are awarded to graduate students in the pharmaceutical sciences, typically in their first and second years of study, to provide instructional support for courses and laboratory sections. These service awards include a stipend and payment of health insurance fees for the student.

Requirements

Assistantships begin with the start of classes in August and end the following August 14th. During the summer months, students are expected to assist the faculty in revising previously taught courses and developing new ones. TAs will be assigned to one or two undergraduate or graduate level classes at the beginning of each semester. Upon notification, each TA should consult with the faculty member(s) teaching his/her assigned class(es) for instructions. In general, TA duties include assisting with course preparation, grading, and holding office hours for students. TAs are expected to regularly attend the assigned courses and may also be asked to present a limited number of lectures.

Each teaching assistantship (TA) carries a service commitment of 15-20 hrs/week. Assistantships constitute full employment, so are not consistent with holding concurrent University appointments, either salaried or hourly. While course-related duties may not always require this amount of effort, particularly during summer sessions, the remaining obligated time is reserved for the student's research and professional development. Activities may include literature searches, research projects, manuscript preparation, or other scholarly activities, as agreed upon by the student's advisor and/or Director of Graduate Studies.

Supplemental Employment: Students holding assistantships are discouraged from seeking external employment, as dedicating time to other activities may adversely affect progression. Non-university employment may be undertaken only if disclosed to the advisor and/or Director of Graduate Studies, and with due consideration for both the student's academic progression and his/her responsibilities as a TA.

Students who elect to take advantage of summer internships or other field experiences that provide full-time compensation will not be eligible to hold assistantships concurrently. Such summer opportunities must be selected in consultation with the faculty advisor and Director of Graduate Studies.

TA Vacancies

If a student vacates a TA position during the academic year, the Division may select another student to fulfill the instructional requirements of the course or laboratory in progress. TA positions vacated during the summer months are not eligible for reassignment and will remain

vacant until the following academic year. Associated funds will revert to the School for use at the discretion of the Dean or Associate Dean.

4.3 Research Assistantships

Research assistantships are only available as outside research funding permits. These will be arranged individually by the faculty member requesting assistance on a particular project or grant. Research assistantships do not provide tuition remission *per se*, but the grant process may allow faculty to obtain sufficient funds to cover those expenses.

Periodically, the Division may also assign a student to be a Divisional Research Assistant. The time commitment is equal to that of a teaching assistant, but the student will instead work with each member of the Division on a rotating basis. Duties will vary by faculty and project but typically include: data collection and manipulation, literature searches, editing, and statistical work.

4.4 Tuition Remission

The University of North Carolina makes a distinction between tuition waivers and tuition remissions. Any graduate TA or RA appointment includes a tuition waiver that waives in-state tuition. Tuition remissions cover the out-of-state portion of the tuition. Each year, the Division has a limited number of tuition remissions available to students as financial aid for fall and spring semesters only. Typically, graduate teaching assistantships are accompanied by tuition remissions, but the Division may also be able to supplement outside sources of financial aid with tuition remissions.

4.5 Travel Awards

Students are encouraged to present their work at regional and national meetings. Contingent on availability of funds, DPOP will provide awards supporting thesis-related travel for eligible Graduate students. These awards are not necessarily intended to cover the full cost of travel and may be supplemented by other, non-Division funds. Preference will be given to persons presenting papers or posters and to those who have not attended a meeting previously. Table 2 lists some of the meetings at which DPOP graduate students have presented their research.

Eligibility

Any student who is currently enrolled in the Ph.D. program and is in good standing is eligible to submit an award proposal. Good standing implies, at a minimum, that course work is being or has been completed according to schedule, a major advisor and Student Advisory Committee (SAC) have been selected, and comprehensive examinations have been taken (if applicable).

Table 2. Meetings At Which DPOP Students Have Presented Their Research

Meeting	Website	Abstracts Due	Meeting Dates
Academy Health	http://www.academyhealth.org	January	June
American Pharmacists Association (APhA)	http://www.aphanet.org/	October	March
International Society for Pharmacoeconomics and Outcomes Research (ISPOR)	http://www.ispor.org/	Nov-Dec	May
American Public Health Association (APHA)	http://www.apha.org/	March	November
International Society for Pharmacoepidemiology (ISPE)	http://www.pharmacoepi.org/	Jan-Feb	August

Application Process

Application for a Division travel award is required prior to submitting a paper for presentation and committing to travel. To apply, a student must provide the Division chair with a UNC Eshelman School of Pharmacy Travel Form *and* a one-page letter addressed to the chair stating the purpose of attending (e.g., the name of the presentation), travel dates, and itemized costs (e.g., hotel, meals, ground & air transportation, registration).

Students receiving travel awards **must report the source of funding** at oral presentations and posters as: “From the Division of Pharmaceutical Outcomes and Policy, UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill”. This must appear on the first slide in a presentation and as acknowledgement on posters.

Making Travel Arrangements

Students who receive a travel award should work closely with DPOP administrative staff when making travel arrangements. They are a valuable resource in terms of University travel policies. In particular, all airline flights **must** be booked by one of the DPOP administrative staff. University policy precludes students, faculty, and staff from being reimbursed for airline tickets they purchase on their own. There are many other University policies that affect travel. Working closely with the DPOP administrative staff regarding travel arrangements is the best way to ensure that your travel expenses will be reimbursable.

4.6 Travel Abroad

The UNC *Preferred Health Plan for Study & Travel Abroad* provides health insurance when studying or traveling abroad. It was developed to protect UNC students and employees. The program is inexpensive (about one dollar per day) and due to territorial limitations with most personal medical plans, it may afford benefits not otherwise covered. The *Global Health and Safety Services and Insurance Program Guide* provides complete details of this program.

This insurance program is available to students studying abroad as well as faculty, staff and recognized agents studying or traveling on behalf of the University. Their spouses or dependants may also enroll. It is administered by HTH Students. **Enrollment in this plan is mandatory for all students traveling outside the United States for a University sponsored program.** Please speak to one of the Division administrative staff to enroll in the plan.

V. DIVISION RESOURCES

5.1 Offices, Computers, and Supplies

Each graduate student will be provided a desk and access to a computer and printer. Depending on space availability and funding, students may be required to share desk space with other graduate students. In some cases, separate areas may be designated for computer work and study/research work.

Students may use the printers for all of their course work, TA and/or RA duties, and limited personal use. There is limited access to a color printer and, due to their cost, use is limited to non-personal purposes.

Division supplies (paper, pens, CDs, etc) may *not* be used for general student needs. Graduate students may ask Division administrative assistants for Division supplies needed for TA and RA duties and preparation of presentations for seminar and dissertation proposals/defenses.

5.2 Copiers and Copy Cards

The Division maintains a copy machine for faculty and staff use. Graduate students may use the copier as needed for TA & RA duties, but not for general study or personal use. If you wish to use it for personal copying, arrangements can be made with the Administrative Assistants for reimbursement for the copies you make. At all times, faculty and staff have priority for use of this copier.

For offsite copying, library copy cards are available from the faculty member you are assisting. They are not for general or personal use.

5.3 Telephones, Fax Machine, and Secretarial Support

Telephones are located in the graduate student office areas for use by all students. Long distance calls for research and/or employment purposes must be approved by the primary advisor in advance. In such cases, you may be required to maintain a log of all long distance calls.

Regulations concerning fax machine use are the same as above. The fax machine is located in the main Division office area.

The Division Administrative Assistants are excellent sources of information and advice for you. They are always available to answer questions regarding payroll checks, admissions requirements, etc. But they cannot be asked to do large or time-consuming tasks of a personal nature.

5.4 DPOP Library

The Division maintains a small library for unrestricted use by graduate students, faculty, and staff. In order to keep the library orderly and functional for all, please promptly replace all materials borrowed according to the organization scheme in place in a timely fashion.

There are a variety of libraries on campus, and it is in your interest to familiarize yourself with their location and contents. One of the best is the Health Sciences Library, located diagonally across S. Columbia St. from Kerr Hall.

VI. AVAILABLE RESOURCES FOR THESIS WRITING

6.1 The Writing Center

The Writing Center is a valuable resource. You are advised to consult with the writing lab when working on your thesis. Appointments need to be scheduled in advance.
Phone: 962-7710

6.2 Institute For Research & Social Sciences

The Institute offers short courses in methodology and computer software programs.

Institute for Research & Social Sciences
Manning Hall
962-3061
Website: <http://www.irss.unc.edu/odum/jsp/home.jsp>

6.3 Academic Technology & Networks

Hanes Hall, Fourth Floor
Registrar: 962-1160
Website: <http://its.unc.edu/>

6.4 Statistical Consulting

Statistical consulting is available through the Institute of Research in Social Science (IRSS)

Manning Hall – Room 50

Phone: 966-1021

Website: <http://www.irss.unc.edu/odum/jsp/home.jsp>

6.5 The Office of Human Research Ethics

For all class projects and thesis work, students are required to have their research approved by the Office of Human Research Ethics (IRB). Additional information may be obtained at: <http://ohre.unc.edu/index.php>

VII. MISCELLANEOUS

7.1 Mail and Email Accounts

Each student will be allocated a mail slot in the Division's mail area. Email accounts are provided free of charge by the University. As a graduate student in DPOP, you are required to obtain an e-mail account and to provide your address to the Director of Graduate Studies.

To obtain an account, telnet to <email.unc.edu> and follow the prompts *or* use the automated forms on the ATN web page at <https://bes.isis.unc.edu/cgi-bin/atn_id/g.pl>. We also recommend that you request a research account on the mainframe statistical applications server (StatApps). The StatApps server, also known as Sunny, offers a variety of statistical packages such as SAS that you will find necessary during the thesis phase of your program. You should check both the Division mailboxes and email accounts frequently for notices.

7.2 ID Cards

Once you are a regularly admitted student at UNC-Chapel Hill, you must obtain a UNC One Card. This will serve as your official student ID card as long as you are a student. You will also use it to access campus facilities and services such as those provided by the Library, Student Health Service, and Physical Education and Intramural Recreation. To obtain your UNC One Card, take your Student Personal Data Form to the UNC One Card Office located in 210 Daniels Building (Student Stores). If you lose or damage your card or if it requires a name change, go to the Card Office for a replacement.

7.3 Sources of Campus Information

Most campus information can be found through the University's Web Site <<http://www.unc.edu/>>, accessible through any computer lab on campus. Here, you can obtain information regarding course offerings, computer lab locations and hours, libraries, campus activities, and items of local interest. The University also publishes a daily newspaper during the regular school year, which is available free at the blue paper boxes located throughout campus (the closest one is in front of the School of Nursing on S. Columbia St.). *The Daily Tar Heel* is also available online at <http://www.dailytarheel.com/>.

7.4 Division Website

DPOP maintains a website. The address is: <http://www.pharmacy.unc.edu/faculty-research/divisions/pharmaceutical-outcomes-and-policy/dpop>. We are proud of our graduate students, and a section of the site is devoted to information about you. Shortly after you arrive, you will be asked to have your photo taken and to write a brief biographical sketch that will go on the website. It is up to you to update this information over time. Potential employers frequently visit this website to learn more about our graduate students.

7.5 Absences From Campus

Students who plan to be away from campus for five or more days are required to submit a travel form to the Division chair. This form includes a space requesting a telephone number where you may be reached in the case of an emergency. Students must complete this form regardless of the reason for their absence from campus.

7.6 Parental Leave

A graduate student who is currently receiving a stipend from UNC is eligible for six weeks of **paid parental leave** to care for a new biological or adopted child. This paid parental leave must be taken within one year of the birth or placement of the child.

7.7 Important Phone Numbers

The following is a list of phone numbers for Division faculty and staff (Note: the first two digits of most campus telephone numbers are "96 or 84"). Students will be provided a listing of phone numbers, addresses, and email accounts for all graduate students 1-2 weeks after the beginning of the Fall semester.

Division Staff

- Charlotte O'Brien, 2200 Kerr Hall charlotte_obrien@unc.edu 2-0106
- Wendy Mann, 2200 Kerr Hall wendy_mann@unc.edu 6-7557

- Gwendolyn Ricks, Room 2200 Kerr Hall gricks@unc.edu 6-1169
- Fax Machine 6-8486

DPOP Graduate Student Offices and Labs (19 and 20 Beard Hall Basement)

- Beard Hall Room 19 6-6722
- Beard Hall Room 20 2-0081

Faculty

- Susan Blalock, PhD., Associate Professor s_blalock@unc.edu 2-0080
- 2213 Kerr Hall
- Lynn Dressler, Dr.P.H., Assistant Professor dressler@email.unc.edu 6-9480
- 2204 Kerr Hall
- Joel Farley, Ph.D., Assistant Professor jffarley@unc.edu 6-9973
- 2201 Kerr Hall
- Rick Hansen, Ph.D., Associate Professor rahansen@unc.edu 6-7517
- 2205 Kerr Hall
- Mary McClurg, PharmD, MHS, Assistant Professor mroth@unc.edu 3-8083
- 2203 Kerr Hall
- Michael D. Murray, PharmD, MPH, Prof. & Chair mick@unc.edu 6-9445
- 2212 Kerr Hall
- Jaya Rao, MD, MHS, Associate Professor jayarao@unc.edu 2-4334
- 2202 Kerr Hall
- Betsy L. Sleath, Ph.D, Professor Betsy_Sleath@unc.edu 2-0079
- 2215 Kerr Hall

Other Useful Numbers

- Emergency 911
- Dean's Office First Floor, 100 Beard Hall 6-1122
- Director for Graduate Education & Research 3205 Kerr 2-0013
- Dama Keck, UNC Eshelman School of Pharmacy Registrar, 1st Floor, 100-L Beard Hall 2-0099
- Campus Information 2-2211
- Graduate School Information 6-2611
- Carolina Union 2-2285
- Health and Safety Office 2-5507
- Health Sciences Library (hours) 685-8122
- Student Health Service 6-2281
- Health Affairs Book Store 6-2208

Appendix A

Expected Competencies of DPOP PhD Students

Area	Students should be able to:	
RESEARCH	Formulation of Research Questions and Hypotheses	<p>Conduct a systematic review of the scientific literature including a critical analysis and synthesis of existing information pertaining to a research area of interest.</p> <p>Formulate unanswered research questions based on a critical review of the literature.</p> <p>Translate broad research questions into testable hypotheses that are informed by empirical research and an understanding of relevant theoretical foundations.</p>
	Study Design	<p>Demonstrate a thorough understanding of the threats to internal and external validity of different experimental and quasi-experimental study designs.</p> <p>Based on a thorough understanding of the strengths and weaknesses of major research designs, design a rigorous and feasible study to test a hypothesis.</p>
	Sampling	<p>Demonstrate a thorough understanding of the strengths and weaknesses of different sampling strategies.</p> <p>Based on a thorough understanding of (1) the strengths and weaknesses of major sampling strategies, (2) tradeoffs that must be made between internal and external validity, and (3) the current state of knowledge in the substantive area of interest, identify a data source for a study to maximize the value of information to be gained from the study.</p> <p>Perform sample size calculations.</p>
	Measurement	<p>Demonstrate a thorough understanding of validity, reliability, sensitivity and specificity.</p> <p>Develop a measurement strategy to assess all relevant variables in a study, taking issues such as validity, reliability, sensitivity and specificity into consideration.</p>
	Data Collection and Intervention Procedures	<p>Demonstrate a thorough understanding of data collection and intervention principles and procedures as they relate to potential sources of bias.</p> <p>Develop data collection and intervention procedures that minimize potential sources of bias.</p> <p>Critically evaluate the strengths and limitations of data obtained from a secondary source.</p> <p>Clean and code data and prepare an analytic data set.</p>

Appendix A
Expected Competencies of DPOP PhD Students

Area	Students should be able to:	
RESEARCH (cont.)	Human Subject Issues	<p>Demonstrate a thorough understanding of issues and principles related to the treatment of human subjects in research studies, including the protection of data collected or used as part of a study.</p> <p>Demonstrate a thorough understanding of governmental and institutional regulations related to the treatment of human subjects in research studies, including the protection of data collected or used as part of a study.</p> <p>Design and conduct research studies and disseminate findings from these studies in accordance with the principles and regulations concerning the responsible conduct of research involving human subjects.</p>
	Data Analysis	<p>Demonstrate a thorough understanding of descriptive and inferential statistics, including both parametric and non-parametric procedures. This includes a mastery of parametric multivariate regression techniques for cross-sectional data with continuous and non-continuous .</p> <p>Demonstrate competency in the use of at least one major statistical program (e.g., SAS, SPSS, STATA, SPLUS).</p> <p>Based on a thorough understanding of descriptive and inferential statistics, design and execute an analytic strategy to test a hypothesis controlling for all major sources of bias and confounding.</p> <p>Use graphs, figures and tables effectively to aid in the interpretation of study data.</p> <p>Accurately interpret the findings from a study and draw appropriate conclusions, within the context of the existing literature.</p>
	Scientific Communication	<p>Demonstrate an understanding of the elements of a grant proposal, a research paper, a podium presentation, and a poster presentation.</p> <p>Demonstrate an understanding of the variability in requirements for proposals, research papers and podium/poster presentations based on funding source, journal, and scientific meeting.</p> <p>Use graphs, figures and tables effectively to aid in the presentation of study data.</p> <p>Write a grant proposal and a research paper in a manner consistent with the standards of the field.</p> <p>Prepare and present poster and podium presentations for scientific meetings in a manner that is consistent with the standards of the field.</p>

Appendix A

Expected Competencies of DPOP PhD Students

Area	Students should be able to:
Pharmacoeconomics	<p>Demonstrate a rudimentary understanding of cost-minimization, cost-utility, cost-benefit, and cost-effectiveness analysis</p> <p>Demonstrate a rudimentary understanding of time-tradeoff, standard gamble, and measurement of direct and indirect costs for cost-effectiveness</p> <p>Demonstrate a rudimentary understanding of the concept of effectiveness and the measurement of health utilities</p> <p>Describe the impact on health insurance limits on the demand for medications by individuals insured by private insurers, Medicaid and Medicare</p>
Pharmacoepidemiology	<p>Demonstrate a thorough understanding of pharmacoepidemiologic research using case report, case series, case-control, cohort, and RCT research designs and know when each is appropriate to use.</p> <p>Demonstrate a thorough understanding of the strengths, weaknesses, and potential biases of using large health care databases in pharmacoepidemiologic studies.</p> <p>Identify biases and rigorously critique published pharmacoepidemiologic studies.</p>
Social Behavioral Pharmacy	<p>Describe the basic tenets of major theories of health behavior (e.g., Health Belief Model, Social Cognitive Theory, Andersen Model of Health Service Utilization) and discuss how these theories have been used to study issues related to medication use.</p> <p>Discuss the psychosocial impact of major health problems on patients and patient support systems.</p> <p>Describe factors that influence physician prescribing and patient adherence.</p> <p>Analyze a health problem using behavioral science theories, with an emphasis on hypothesized causes and consequences</p>
Pharmaceutical Policy	<p>Demonstrate a thorough understanding of major US policies that have shaped the prescription drug market, including the Food, Drug, and Cosmetic Act; the Humphrey-Durham Amendment; the Drug Amendments of 1962; the Orphan Drug Act; the Hatch-Waxman Act; and the Medicare Prescription Drug Improvement Act of 2003, including its provision for Medication Therapy Management.</p> <p>Describe general trends in per capita prescription drug use and cost experiences among specific groups such as Medicaid, Medicare, privately insured, and the uninsured.</p> <p>Discuss specific policies (e.g., benefit structures) in terms of expenditure control, quality, and access.</p> <p>Assess strengths and weaknesses of strategies that have been implemented or proposed to improve the quality of health care and/or medication use in the United States</p> <p>Identify key issues related to the quality of medication use in the United States and challenges related to the study of quality medication use in the United States.</p>

APPENDIX B

GLOSSARY OF TERMS AND ABBREVIATIONS

TERM	DEFINITION
ABD	All But Dissertation. Term used to identify Doctoral Candidates.
Academic Technology and Networks (ATN)	Provides computer training, located in Hanes Hall fourth floor
Academically ineligible	Student is not eligible to register for classes or hold TA position
Academy Health	Professional organization focusing on health services research
AHRQ	Agency for Health Care Research and Quality
APhA	American Pharmacists Association
APHA	American Public Health Association
BIOS	Biostatistics
Cecil G. Sheps Center	Cecil G. Sheps Center for Health Services Research
Center on Teaching and Learning	UNC center which offers seminars to enhance teaching and learning
Comprehensive exams (comps)	Exams which ensure that students are proficient before pursuing dissertation
Director of Graduate Studies	Currently Dr. Anthony Hickey in the SOP Division of MOPH
Dissertation	Document describing research conducted to obtain PhD degree
Dissertation advisor	Faculty member advising PhD candidate on research paper
Dissertation committee	Group of faculty members who determine acceptability of dissertation
Division	The SOP is made up of five academic divisions.
Doctoral candidate	Student who has passed all PhD requirements except final defense of dissertation
DPET	SOP Division of Pharmacotherapy and Experimental Therapeutics
DPOP	SOP Division of Pharmaceutical Outcomes and Policy
DPOP Administrative Assistant	DPOP office staff (Charlotte and Gwen)
DPOP Director of Graduate Studies	Currently Dr. Richard Hansen
ECHO	UNC Program on Ethnicity, Culture and Health Outcomes
ECON	Economics
EPID	Epidemiology
Fellowship	Student stipend
Financial aid	Assistance with tuition and other school expenses
Graduate Teaching Assistantship (TA)	Teaching position which provides student financial aid
HBHE	Health Behavior and Health Education
Health behavioral sciences	One of three concentration areas in which students must demonstrate proficiency
HIPAA	Health Insurance Portability and Accountability Act
HPM	Health Policy and Management
Institute for Research and Social Sciences	Offers short courses in methodology and computer software programs in Manning Hall
IRB	Institutional Review Board, The Office of Human Research Ethics
ISPE	International Society for Pharmacoepidemiology
ISPOR	International Society for Pharmacoeconomics and Outcomes Research
Major	Academic field of specialization
MCNP	SOP Division of Medicinal Chemistry and Natural Products
MOPH	SOP Division of Molecular Pharmaceutics
MEPS	Medical Expenditure Panel Survey
Minor	Specialization which requires fewer courses than a major
NIH	National Institutes of Health

TERM	DEFINITION
Odum Institute (IRSS)	Odum Institute for Research in Social Science
ONYEN	"Only Name You'll Ever Need" gives you access to campus electronic resources
Pharmaceutical	Medicinal drug
Pharmacoepidemiology	One of three concentration areas in which students must demonstrate proficiency
Pharmacoeconomics	One of three concentration areas in which students must demonstrate proficiency
PHO	Program in Health Outcomes and Quality of Care
PHS 398 Guidelines	Guidelines for writing an NIH grant
POLI	Political Science
PPEE	SOP Division of Pharmacy Practice & Experimental Education
Policy	Official overall plan which governs procedures and methods of action
Progression	Sequence of advancement
Proposal	Formal research plan
PSYC	Psychology
Refereed journals	Reviewed by experts prior to publication
Research Assistantship (RA)	Research position which provides student financial aid
Research Practicum Requirement	Project(s) to enhance knowledge and research skills for doctoral students
Residence in the state of North Carolina	Status determined by UNC policies for tuition purposes
SAS	Database management and statistical software--statistical applications software
Seminars	Course of advanced study which focuses on discussion
SOCI	Sociology
ESOP	Eshelman School of Pharmacy
StatApps	The mainframe statistical applications server, also known as Sunny
Statistical Counseling	Available through the IRSS located in Manning Hall, Room 50
Student Advisory Committee (SAC)	Consists of a research advisor as chairman and two other graduate faculty members
Teaching assistant (TA)	Graduate student who assists with class
Teaching Practicum Requirement	Gives students experience to enhance knowledge and skills in teaching
<i>The Daily Tar Heel</i>	The UNC student newspaper
The Graduate School	The UNC School which administers policies governing graduate degrees
The Office of Human Research Ethics	Student research must be approved by Biomedical IRB in this office
The Writing Center	A valuable resource for assistance with writing papers
Three paper option	Three journal-length manuscripts of publishable quality
Time limit	Eight years for PhD from date of first registration
Traditional monograph	Traditional dissertation format
Travel and research grant awards	Financial assistance with research related expenses/travel
Tuition remission	Covers the out-of-state portion of tuition
UNC One Card	The official ID card for UNC students, faculty and staff

APPENDIX C

DPOP Student Tracking Report

I M Atarheel [Student ID:252525252]

1400 Personality Lane

Chapel Hill

NC

27516

Home Phone: (919) 999-9999

Work Phone: (919) 999-9999

Entered Program:

IRB Completed:

HPAA Completed:

DPOP Course Requirements

Course	Grade	Credits	Semester
Pharmacoeconomics/DPOP 801			
Social Behaviorial/DPOP 803			
Informatics/DPOP 804			
Pharmaceutical Policy/ DPOP 806			
DPOP Seminar1/ DPOP 899			
DPOP Seminar2/ DPOP 899			
DPOP Seminar3/ DPOP 899			
DPOP Seminar4/ DPOP 899			

Other Required Classes

Course	Grade	Credits	Semester
Courses to Fulfill Statistics Requirements			
Fundamentals of Epidemiology			
Proposal Writing/HPM872			
Pharmacy 801			
Course to Fulfill Measurement Requirement			
Credits Earned in Required Classes:			

Electives

Course	Grade	
	Earned	Credit Credits In Elective Classes

Scholarly Advisory Committee

SAC Formed:		Date Formed:
Committee Members:		Meeting Dates

Research and Teaching Practica

	Research Practicum	Teaching Practicum
Contract Approved:		
Date Approved:		
Advisor:		
Practicum Completed:		
Date Completed:		

Written Comprehensives

Written Comps Taken				
	Date of 1st Attempt		Date of 2nd Attempt	
	Pass	Fail	Pass	Fail
Pharmacoepidemiology				
Social Behavioral				
Pharmacoepidemiology				

Dissertation

<i>Dissertation Committee Formed</i>				
<i>Chair:</i>	<i>Date of Proposal Defense:</i>			
<i>Members:</i>	<i>Outcome:</i>	<i>Pass</i>	<i>Fail</i>	
	<i>Date of Dissertation:</i>			
		<i>Outcome:</i>	<i>Pass</i>	<i>Fail</i>
<i>Dissertation Title:</i>				

Awards

<u><i>Title of Awards</i></u>	<u><i>Date of Awards</i></u>

Leaves

Parental Leave	Dates

APPENDIX D

PLANNED PROGRAM OF STUDY FOR PHD PROGRAM
Division of Pharmaceutical Outcomes and Policy
UNC Eshelman School of Pharmacy

Student Name: _____

Semester	Course #	Course Name	Credit Hours
FALL 20__			
SPRING 20__			
FALL 20__			
SPRING 20__			
FALL 20__			
SPRING 20__			