

**GRADUATE STUDIES IN  
SOCIAL AND ADMINISTRATIVE SCIENCES  
IN PHARMACY**



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*of*  
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# **GRADUATE STUDIES IN SOCIAL AND ADMINISTRATIVE SCIENCES IN PHARMACY**

## **INTRODUCTION**

The Social and Administrative Sciences (SAS) Division of the School of Pharmacy focuses on the scientific and humanistic bases for understanding and influencing interactions involving patients, medicines, caregivers, and health care systems. It integrates knowledge of pharmacy and pharmaceuticals with knowledge from economics, history, sociology, psychology, management sciences, communication, epidemiology, and law. Its mission is to:

1. Conduct high quality interdisciplinary research, leading to new knowledge and understanding of: drug use, patient and provider communication and behavior, health outcomes, pharmacy practice, patient care systems, and the pharmacy profession within their social, economic, administrative, and historical contexts.
2. Provide high quality MS and PhD programs, preparing students for independent, theory-based research and teaching in pharmacy administration, social and behavioral pharmacy, history of pharmacy, and pharmaceutical economics.
3. Provide professional pharmacy students with social and administrative science knowledge, understanding, and skills required for high quality, patient-centered pharmaceutical care and practice management.
4. Take on leadership and advisory roles, communicating research findings to the public, policy-makers, pharmacists, and other health professionals so as to improve health outcomes, patient care, drug use, and the health care system.

Adopted 1/29/96; last revised 3/29/05

## **SAS GRADUATE PROGRAM**

### **Historical Perspective**

Graduate programs in Social and Administrative Sciences in Pharmacy began in the early 1950s. The University of Wisconsin-Madison was one of the first universities, along with Purdue University and the University of Pittsburgh, to offer M.S. and Ph.D. programs in Pharmacy Administration. Later, UW-Madison became the first university to offer graduate programs in History of Pharmacy, Social Studies in Pharmacy and Continuing Education in Pharmacy. Now, these individual programs have been integrated into a single graduate program which permits students to pursue specialized coursework yet maintains uniform admission requirements, M.S. and Ph.D. course and credit requirements, and procedures for monitoring student progress and program quality.

## **SAS Graduate Program Focus**

The main focus of the SAS graduate program is on doctoral level education. Skills that are emphasized include:

- critical analysis of research literature,
- formulating research problems and hypotheses,
- developing proper study designs and sampling plans,
- developing and using appropriate methods for measurement,
- managing databases,
- using advanced computer and statistical techniques,
- preparing research grants and scientific reports,
- integrating theory into research designs and measurement, and
- presenting written and oral communications.

In addition, students have all the advantages of studying at a world class institution of higher learning with opportunities to interact with top faculty in other departments on campus while pursuing advanced studies and research with the SAS faculty in the School of Pharmacy.

The SAS graduate program offers a great deal of flexibility and can be tailored to the interests of individual students. Examples of general areas of emphasis and specific sub-areas include:

### **Pharmacy Economics**

- Economics of drug use
- Pharmacy practice finance
- Pharmacy labor economics
- Technology assessment and decision making

### **Pharmacy Marketing**

- Consumer behavior
- Promoting pharmacy goods and services
- Channels of distribution in pharmacy
- Pharmacy services development and marketing

### **Patient/Provider Perceptions and Behaviors**

- Patient drug behavior and self-care
- Provider decision making and behavior
- Patient and provider perceptions
- Social/cultural issues in medication use

### **Pharmacy and Health Communications**

- Patient/pharmacist communication
- Patient communication with other providers
- Interprofessional communication

### **Pharmacy Policy**

- Pharmaceutical reimbursement
- Practice regulation
- Prescription insurance design and coverage
- Pharmaceutical policy analysis/evaluation

### **Humanistic Studies of Pharmacy**

- Professional ethics
- Historical roots of the profession

### **Pharmacy Systems and Organizations**

- Pharmacy practice development
- Workplace/practice dynamics
- Organizational factors and quality of care
- Managing patient care systems

### **Client Outcomes**

- Pharmacist interventions and patient outcomes
- Health quality of life
- Adolescent health, mental health, aging
- Measuring medication outcomes

## **DIVISION GRADUATE PROGRAM COMMITTEE**

The SAS Division graduate program committee serves as an oversight committee for all aspects of the Division graduate program. Duties of the committee include: reviewing and evaluating applications for admission, monitoring progress of graduate students (at least annually), determining equivalency of alternate courses for degree credit, approving examining committees and examination materials, and resolving program-related issues. The committee is comprised of all graduate faculty within the SAS Division and is chaired by the Division chair.

## **ADMISSION REQUIREMENTS**

All qualified students interested in graduate education in the Social and Administrative Sciences in Pharmacy are invited to apply. All applicants must satisfy minimum admission requirements established by the [UW-Madison Graduate School](#). A professional degree in pharmacy and basic course work in the social and administrative sciences are desirable but not required. Written descriptions of relevant professional experiences and interests are useful to the division's admission committee when reviewing applicants.

To be admitted to the doctoral program, the student must have completed the requirements for the M.S. degree in Social and Administrative Sciences in Pharmacy and satisfy Graduate School minimum requirements. A master's degree in a related field or from a different school of pharmacy graduate program will be evaluated for equivalency and potential deficiencies.

## **M.S. DEGREE REQUIREMENTS**

### **Overview**

The M.S. program is offered to students as a foundation for continuing toward the Ph.D. program and is designed to be completed in two years. Students also may terminate graduate study at this level. The M.S. degree constitutes recognition of substantial achievement. Completing the M.S. degree should provide the student with the capability of solving problems in the Social and Administrative Sciences.

The M.S. degree requires a minimum of 32 credits, with at least 7 credits in "core" courses, 9 credits in methods of research and analysis, and 12 credits in specialty/advanced courses.

These course and credit requirements are detailed in the program summary at the end of this Handbook.

The amount, level, and content of formal courses will be tailored to the needs and background of the individual student. As in all fields of graduate study, the pace and pattern of work and the student-faculty relationship are more individualized than in undergraduate study.

Although students have latitude in the courses they may take, many courses have prerequisites. Students not familiar with health care systems and pharmacy practice in the U.S. also may be encouraged to take courses that provide a background in these areas.

During the first semester of the M.S. program, students will have the opportunity to spend time with faculty in the Social and Administrative Sciences Division. This allows students to familiarize themselves with the faculty members to select their advisor/major professor. The major professor supervises the student's research; therefore, selecting an advisor as soon as possible is advised, preferably at the end of the first semester in the program. Students are required to select an advisor/major professor no later than the end of the second semester of their M.S. program.

### **M.S. Thesis and Examination**

Students must complete a master's thesis based upon original research. The thesis should follow the form of a research article, including an introduction, literature review, methods, results, discussion, and references. The research must be suitable for publication in a scientific journal.

All students must pass an oral examination based primarily upon the student's research project, as detailed in the thesis. The examination committee is chaired by the major professor and consists of three or more graduate faculty with at least two members of the committee from the graduate faculty in the SAS Division. The student and major professor determine the examining committee composition, with approval of the Division Graduate Program Committee. There is no written examination for the M.S. degree.

After the oral examination and approval by the examining committee, a copy of the thesis is filed at the Memorial Library. Copies of the final, approved thesis are provided to the members of the thesis examining committee, either as electronic or paper versions. A traditional courtesy is to provide a bound copy of the thesis to the Ebling Library for archiving.

## **Ph.D. DEGREE REQUIREMENTS**

### **Overview**

The Ph.D. degree requires additional mastery above the master's degree, plus the responsibility of independent, original, and critical thinking. A minimum of 56 credits is required for the Ph.D. degree, 24 credits beyond the master's degree requirement. Additional credits are required in core, method and analysis, and specialty/advanced courses, as outlined in the program summary. The total amount of coursework and number of credits can vary considerably, depending on the student's demonstrated proficiency, individual research interests, and the "minor" field of study (minor requirements are specified by the Graduate School and outlined in the [Graduate School Catalog](#)).

All students in the Ph.D. program are required to have a major professor/advisor. Temporary advisors typically are not appropriate for Ph.D. students. Since many students entering the program will have completed a master's degree already, they should designate their major

professor when starting their Ph.D. program. Students entering the program with a master's degree from another university may be assigned a temporary advisor, but must select a permanent major professor before the end of the second semester enrolled in the program.

The Ph.D. program is designed to be completed in five years for students who enter the master's program and continue for the Ph.D. degree, with year-round enrollment and study.

### **Guidelines for Students Entering the Ph.D. Program with a Master's Degree from another Program or University**

In accordance with the admission requirements for admission to the Ph.D. program, requirements for a master's degree must be completed. Entering students with a master's degree in a related field or from a different school of pharmacy graduate program will be evaluated for equivalency and potential deficiencies.

#### **a. Evaluation Process**

Coursework and, if applicable, research from a different program or different university will be evaluated by two primary reviewers from the SAS graduate faculty, one of whom will be the temporary advisor. The primary reviewers will make a presentation to the SAS graduate faculty for a group vote on equivalency. If desired, other faculty may read the research report and/or review coursework.

Entering students are required to submit theses or project reports for completed research and course syllabi for all courses to be considered for equivalency by July 1<sup>st</sup>, prior to registering for courses.

#### **b. Equivalency - Courses**

Graduate courses taken in a different program or at a different university will be compared for credit, level, and content match with those required for a master's degree in Social and Administrative Sciences in Pharmacy at the University of Wisconsin – Madison. Credit will be granted for graduate-level courses with a letter grade of B or better, subject to the following maximums:

- Methods of Research: 3 credits maximum
- Methods of Analysis: 6 credits maximum
- Specialty/Advanced: 12 credits maximum

#### **c. Equivalency – Thesis Research**

Requirements for the M.S. degree in Social and Administrative Sciences in Pharmacy at the University of Wisconsin – Madison include completion of a thesis that is based on original research. The research must be of a scope and rigor suitable for publication in a scientific journal and the thesis should follow the form of a research article. Generally, this includes an introduction, literature review, methods, results, discussion, and references.

Students entering with a master's degree without a thesis or equivalent project will be required to complete an original research project and write a report on the research. The research project report must be prepared in a format suitable for publication in a scientific journal. It is expected that the research project will be completed during the first year of the student's Ph.D. graduate program.

## Preliminary Exams

Preliminary exams occur after students have completed their coursework. They are intended to assess the student's knowledge of the field and readiness for independent research.

### a. Written Preliminary Exam (Comprehensive)

Social and Administrative Sciences in Pharmacy is an interdisciplinary field. The candidate's course work and minor will be considered in preparing the examination. The examination committee is chaired by the major professor and consists of three or more graduate faculty, with at least two members of the committee from the SAS Division. The student and major professor determine the examining committee composition, with approval of the Division Graduate Program Committee. The examining committee is responsible for writing the exam and evaluating student performance on the exam.

Exam questions will test basic knowledge and theory, and their application to pharmacy problems. Typically the exam will have two components. The general section represents the major, i.e., Social and Administrative Sciences in Pharmacy. The specific emphasis section represents the individual student's specialization or concentration within the major as well as the minor area of study as described in the Graduate School's [minor requirements](#). The general section will include questions within the broad field of social and administrative sciences in pharmacy, research methods and data analysis, and current issues in pharmacy and health care. Questions within the student's area of specialization can cover micro or macro level perspectives (e.g., individual actions and behaviors vs. organizational or systems perspectives), as appropriate.

The exam may be offered in January, May, and August each year. Specific instructions are given to candidates in preparation for the exam. Examples of exam questions can be obtained from SAS faculty members. At least two weeks prior to the exam, the School of Pharmacy Graduate Office must be notified of the date the examination will occur. The notice should include a proposed dissertation topic/title.

The general and specific emphasis sections are examined on two separate days, with a four hour session on each day. Specific instructions are given to the candidate on the day of the exam. Reference materials may not be used during the exam.

The examining committee will read and grade answers to all questions. Grading will be on a pass/fail basis. The major professor will notify the candidate about the exam grade and provide feedback on his/her performance. The student may also request a meeting with other members of the examining committee to discuss his/her performance.

If the candidate fails the exam he/she will have an opportunity to pass another written preliminary exam. If the candidate does not pass the second written examination then he/she will be terminated from the program.

## **b. Oral Preliminary Exam**

The oral preliminary exam must be completed within six months after having passed the written preliminary examination and may be repeated. The examination consists of a presentation and defense of a proposal describing the research that is planned as a basis for the Ph.D. thesis. The presentation is made to an examining committee that includes five graduate faculty members, at least two of whom are from the SAS Division, including the major professor. The student may be examined on details of the proposed work as well as on the underlying principles and concepts of the field.

The proposal must contain a statement of the student's research problem, a critical analysis of the relevant theoretical and empirical literature, a description of the student's theoretical approach and hypotheses, a description of the proposed study design and procedures, and a timetable for the research project.

The proposal should be no longer than 30 pages excluding tables, figures, references, and appendices. It will be evaluated based on its originality, appropriateness of methods and design, and clarity of presentation. The proposal and oral presentation to the faculty should demonstrate proficiency in conducting independent research.

Students with exceptional performance on their written comprehensive or oral preliminary exam will be recognized with a grade of "pass with distinction."

## **Dissertation and Final Ph.D. Examinations**

The dissertation and oral final examination (dissertation defense) are linked, in that they both focus on the student's major research project. The dissertation project ensues after the dissertation proposal is defended successfully.

The dissertation research project is the major focus of effort in the Ph.D. program. The results of the research must be an original contribution to the scientific literature. However, the research program also must develop the student's research ability to the high level appropriate for a Ph.D. degree.

### **a. Dissertation Progress Reporting and Committee Involvement in Research**

Dissertators are expected to update their dissertation committee on progress, to keep the committee informed about the research project. The updates should occur approximately every semester under normal circumstances. More frequent and timely updates should be made, especially if changes are needed or warranted in the research, or if additional insight from the committee members is desired. For the dissertation committee to function appropriately, the committee should be informed (and allowed input) if changes are planned. Courtesy dictates timely notification of input desired from the committee and timely response by committee members. Students should summarize notices to the committee and corresponding feedback as part of their self-assessment in the annual graduate program progress review process.

## **b. Dissertation**

The dissertation is a detailed written report of the research proposed in the oral preliminary exam and approved by the examining (dissertation) committee. The dissertation must be prepared in accordance with Graduate School regulations.

Dissertations can be structured in the traditional thesis/dissertation monograph format or a manuscript format. The manuscript format requires two or more manuscripts of publishable quality that could be altered slightly for submission to refereed journals.

### *Traditional Monograph Option*

Dissertations in this format option have chapters including an introduction, literature review, methods, results, discussion, and conclusion. The dissertation should describe all aspects of the research in detail. Appendices are included to provide additional details and supplemental materials (e.g., data collection instruments, research protocols, administrative procedure descriptions, etc.)

### *Multiple-paper Dissertation Option*

Students have the option of writing the dissertation in the form of multiple papers. The multiple-paper dissertation option has the benefit of directing the student's effort towards the ultimate goal of publishing. Notably, the multiple-paper option is not appropriate for all students, and the choice of whether or not to use this option should not detract from the quality of the dissertation.

The multiple-paper dissertation option must be approved by the dissertation committee. Typically, this approval is given when the proposal is defended. As the research proceeds, they may decide that the multiple-paper dissertation option is not practical. Under such conditions, students may, with the approval of their committee, return to the traditional dissertation. Similarly students who initially chose a traditional dissertation may change to the multiple-paper option with permission of their dissertation committee.

Under the multiple-paper option, the final dissertation will include introduction, manuscript, and discussion chapters.

The introduction chapter(s) should describe the problem that the student proposes to study and include the theoretical framework and literature review.

The literature review component of the dissertation introduction may take the form of a manuscript and be an additional manuscript chapter.

The manuscript chapters describing the original research must be of publishable quality.

The discussion chapter should encompass all of the research. It should include limitations of the study and future directions. Conclusions can be incorporated into the discussion chapter or included as a separate chapter.

Details and supplemental information to provide a more complete documentation of the research should be included as appendices, when needed or desired.

As part of the dissertation defense under the multiple-paper option, the student will indicate the targeted, peer-reviewed journal for each manuscript. A successful defense requires that all committee members believe that each paper will be ready to submit to the identified journal after the suggestions made by the committee are incorporated.

The dissertation must be satisfactory to the dissertation committee.

### **c. Final Ph.D. Oral Exam (Dissertation Defense)**

The final examination (dissertation defense) committee, consisting of the major professor and at least four other members of the graduate faculty as noted above (oral preliminary exam committee), is appointed by the Dean of the Graduate School.

The Ph.D. defense is the final oral examination and is conducted after completing the Ph.D. dissertation project. It is the culmination of the Ph.D. program. The examination consists of two parts. The first part is a public seminar on the dissertation, followed by discussion or questions by the public audience. The second part of the examination begins with only the candidate and dissertation committee present. After the final oral examination and approval of the dissertation, a copy of the dissertation is filed at UW-Madison Memorial Library. Copies of the final, approved dissertation are provided to the members of the dissertation examining committee, either as electronic or paper versions. A traditional courtesy is to provide a bound copy of the dissertation to the Ebling Library for archiving.

The dissertation must be in final form prior to the defense. Dissertation defense dates are set only after the advisor has, at minimum, reviewed and provided feedback on a complete draft of the dissertation. The advisor also makes a determination that a defense can proceed and gives the student approval to begin contacting committee members to schedule the defense. Dissertation committee members should be allowed at least two weeks in advance of the defense date for reviewing the final, completed thesis or dissertation draft. If an iterative process of review and feedback among the committee members is desired, additional time should be allotted and the defense date only tentatively scheduled, to be finalized after the advisor and all committee members have confirmed that a defense date can be scheduled. Expectations for level of participation and responsiveness in providing feedback when reviewing drafts by committee members are negotiated by the student, major professor, and outside committee members.

**PROGRAM SUMMARIES FOR M.S. AND Ph.D. DEGREES IN S&A SCIENCES IN PHARMACY**

Course and credit requirements are detailed in the tables that follow. Also provided is a brief description of the core courses required in the SAS graduate program.

**Table 1: Course Requirements for M.S. in S&A Sciences in Pharmacy**

<p><b>A. CORE COURSES</b>  <b>Core Seminar (2 credit)</b>            Conference of Research Workers (S&amp;A Phm 911&amp; 912)</p> <p><b>Core Principles (3 credit minimum)</b>            Pharmaceutical Marketing and Policy (S&amp;A Phm 713)            Social Organization of Pharmacy (S&amp;A Phm 714)            Social Behavioral Theories in Pharmacy, Drug Use and Health Behavior (S&amp;A Phm 715)            Proseminar in Social and Administrative Pharmacy (S&amp;A Phm 622)            Proseminar in Historical Studies of Pharmacy (S&amp;A Phm 606)</p> <p><b>Core Methods (3 credits)</b>            Evaluation of Pharmaceutical Services, Programs, and Policy (S&amp;A Phm 711)</p>	8 credits
<p><b>B. METHODS OF RESEARCH AND ANALYSIS <sup>a</sup></b>            Select from approved lists:            -Additional research methods (3 credits minimum)            -Analytic techniques (6 credits minimum)            -Foreign language (History concentration only)</p>	9 credits
<p><b>C. SPECIALTY/ADVANCED COURSES <sup>b</sup></b>            Select in consultation with major professor</p>	11 credits
<p><b>D. RESEARCH</b>            S&amp;A Phm 990: Research</p>	varies
<p><b>TOTAL MINIMUM CREDITS</b></p>	32 credits

**NOTES:**

<sup>a</sup> M.S. students with a History concentration must achieve reading ability in one foreign language and are required to complete only 3 additional credits in methods of research and analysis. All other students are required to complete a total of 9 additional credits in methods of research and analysis.

<sup>b</sup> Specialty/advanced courses must include a minimum of 5 non School of Pharmacy credits and may include additional core principles courses and/or S&A PHM 911 & 912 credit. No more than 2 additional credits for repeated 911 and/or 912 courses and 6 additional core principles credits may be applied as specialty/advanced courses for the M.S. degree.

**Table 2: Course Requirements for Ph.D. in S&A Sciences in Pharmacy <sup>a</sup>**

<p><b>A. CORE COURSES</b></p> <p><b>Core Seminar (4 credits)</b> Conference of Research Workers (S&amp;A Phm 911 &amp; 912)</p> <p><b>Core Principles (9 credit minimum)</b> Pharmaceutical Marketing and Policy (S&amp;A Phm 713) Social Organization of Pharmacy (S&amp;A Phm 714) Social Behavioral Theories in Pharmacy, Drug Use and Health Behavior (S&amp;A Phm 715) Proseminar in Social and Administrative Pharmacy (S&amp;A Phm 622) Proseminar in Historical Studies of Pharmacy (S&amp;A Phm 606)</p> <p><b>Core Methods (3 credits)</b> Evaluation of Pharmaceutical Services, Programs, and Policy (S&amp;A Phm 711)</p>	<p>16 credits</p>
<p><b>B. METHODS OF RESEARCH AND ANALYSIS <sup>b</sup></b></p> <p>Select from approved list: -Additional research methods (6 credits minimum) -Analytic techniques (9 credits minimum) -Foreign languages (History concentration only)</p>	<p>15 credits</p>
<p><b>C. SPECIALTY / ADVANCED COURSES</b></p> <p>Select in consultation with major professor: - Specialty/Advanced courses (12 credits minimum) - Graduate-level courses or seminars (5 credits minimum) <sup>c</sup></p>	<p>19 credits</p>
<p><b>D. RESEARCH</b> S&amp;A Phm 990: Research</p>	<p>Varies</p>
<p><b>TOTAL MINIMUM CREDITS</b></p>	<p>56 credits</p>

**NOTES:**

<sup>a</sup> Requirements include the 32 credits for the M.S. degree; the Ph.D. requires a minimum of 24 credits beyond the M.S. degree, including 8 in core courses, 6 in research and analysis, and 8 in specialty/advanced courses. Specialty/advanced courses can include additional core principles courses and/or 911 and 912, with a maximum of 5 total credits for 911 and 912 courses counted towards the minimum Ph.D. credit requirement.

<sup>b</sup> Ph.D. students with a history concentration must achieve reading ability in two foreign languages and take a minimum of 3 credits in methods of research and analysis. All other Ph.D. students are required to take a minimum of 18 credits in methods of research and analysis, with specific courses selected in consultation with their major professor.

<sup>c</sup> Graduate-level courses are those numbered at the 700-, 800-, or 900-level.

## **COURSE DESCRIPTIONS AND SUGGESTED COURSES**

The plans of study and specific courses taken by students completing M.S. and/or Ph.D. degrees typically vary based on program level and individual student interest area(s). Our program has a small number of core courses taught within Social and Administrative Sciences in Pharmacy, and thus relies considerably on course offerings within the main disciplines on campus. This reliance offers flexibility and variability in methods, analysis, specialization content and skill development as students proceed through the program. Below is a brief description of core courses in the M.S. and Ph.D. programs, lists of some of the potential courses for research methods and analysis to meet program requirements, and the departments that offer classes potentially useful in establishing students' areas of emphasis and specialization.

### **Core Course Descriptions**

#### **a. Core Seminar**

S&A Pharmacy 911: Conference of Research Workers is a Division-wide seminar for all graduate students and faculty in S&A Sciences in Pharmacy. Faculty and/or students give presentations on current research, with topics that vary from one week to another. The aims are to: a) discuss current research being conducted in the field; b) familiarize participants with different theories, concepts, methods, and problems confronted by researchers; c) enhance communication among researchers; and d) develop students' skills in oral and written communication and in the peer-review and publication processes. It is expected that all students participate in 911 and 912 each semester they are enrolled in the graduate program.

#### **b. Core Principles Courses**

Core principles courses serve as foundation courses for graduate students since most undergraduate pharmacy program curricula do not include specialized courses in SAS areas. The courses are upper level, advanced courses covering applications of theories and principles from basic disciplines to pharmacy. They are open and appropriate for students in the professional pharmacy program and students in related disciplines seeking courses with pharmacy specific topics.

S&A PHM 606: Proseminar in Historical Studies of Pharmacy

S&A PHM 622: Proseminar in Social and Administrative Pharmacy

S&A PHM 713: Pharmaceutical Marketing and Policy

S&A PHM 714: Social Organization of Pharmacy

S&A PHM 715: Social Behavioral Theories in Pharmacy, Drug Use, and Health Behavior

#### **c. Core Methods Course**

S&A PHM 711: Evaluation of Pharmaceutical Services, Programs, and Policy is designed to develop understanding and skills in the methods, techniques, and problems encountered in conducting pharmaceutical services, program, and policy evaluation. General principles of problem identification and conceptualization, theory development, research methods, and the process of accumulating knowledge are central topics. Students concentrate on general areas of their interest and apply course concepts and principles to this research area(s).

## Courses in Methods of Research and Analysis

Potential courses in research methods and statistics are listed below. This is a partial list; additional courses are available and can be approved for a student's course of study by the Division Graduate Program Committee.

### a. Research Methods

Courses in research methods are available in a number of schools/colleges and academic departments campus-wide. Courses that are appropriate as introductory or foundation methods courses that would meet M.S. program requirements are listed below, followed by additional, upper-level methods courses for specialization and Ph.D. program requirements. Students in the M.S. program will take **one** of the introductory or foundation level courses in their first year; the selection of which specific first course is based on student interest and emphasis direction desired.

#### Introductory Research Methods Courses (M.S. Program)

Soc 357	Methods of Sociological Inquiry
Soc 358	Design and Analysis of Social Research
Pop Health 797	Introduction to Epidemiology
Marketing 710	Marketing Research

#### Advanced Research Methods Courses (Specialization/Ph.D. Program)

Curric 714	Research and Evaluation Paradigms in Curriculum and Instruction
Curric 715	Design of Research in Curriculum and Instruction
Curric 717	Introduction to Qualitative Research
Ed Psych 762	Introduction to the Design of Educational Experiments
Marketing 810	Advanced Topics in Marketing Research
Pop Health 798	Epidemiologic Methodology
Pop Health 875	Assessment of Medical Technologies
Pop Health 876	Measuring Health Outcomes
Pub Affairs 869	Workshop in Program and Policy Analysis
Pub Affairs 871	Public Program Evaluation
Pub Affairs 881	Benefit-Cost Analysis
Soc 750	Research Methods in Sociology
Soc 751	Survey Methods for Social Research
Soc 752	Measurement and Questionnaires for Survey Research
Soc 755	Methods of Qualitative Research

### b. Statistics and Analytic Techniques

There are a number of campus-wide course offerings that address the topic of statistics and analytic techniques. Course sequences and offerings in several disciplines are listed below. Courses recommended for M.S. program requirements are noted with an asterisk (\*) The M.S. recommended courses provide the foundation for other statistics or analytic technique courses that can be selected from the range of courses available for advanced work and Ph.D. requirements.

## Statistics and Analytic Techniques Courses

Biostats 551 (*)	Intro to Biostats for Pop Health
Pop Health 800 (*)	Quantitative Methods in Pop Health
Ed Psych 760	Stat Methods Applied to Education I
Ed Psych 761	Stat Methods Applied to Education II
Ed Psych 861	Statistical Analysis and Design in Educational Research
Ed Psych 862	Multivariate Analysis
Soc 360	Statistics for Sociologists I
Soc 361	Statistics for Sociologists II
Soc 362	Statistics for Sociologists III
Soc 952	Seminar - Mathematical and Statistical Applications in Sociology
Econ 709	Economic Statistics and Econometrics I
Econ 710	Economic Statistics and Econometrics II
Econ 719	Economic Statistics and Econometrics III
Acct I S 700	Financial Accounting

## **Specialty/Advanced Courses**

Students may take courses from departments across the campus, providing opportunities for students to interact with faculty in the student's area of concentration. Specific courses are selected in consultation with the major professor, based upon the student's area(s) of interest.

The [Graduate Catalog](#) of the University of Wisconsin – Madison Graduate School includes brief descriptions of courses from throughout the University. Current course offerings are identified in the campus [Timetable](#). Schools/colleges and academic departments of potential interest include:

College of Agriculture and Life Sciences  
Agricultural and Applied Economics  
Rural Sociology

School of Business  
Accounting and Information Systems  
Actuarial Science  
Risk Management and Insurance  
Finance, Investment and Banking  
Management and Human Resources  
Marketing  
Operations & Technology Management

School of Education  
Counseling Psychology  
Curriculum and Instruction  
Educational Leadership & Policy Analysis  
Educational Policy Studies  
Educational Psychology

College of Letters and Science  
Anthropology  
Communication Arts  
Economics  
Political Science  
Psychology  
Sociology

La Follette School of Public Affairs

School of Medicine and Public Health  
Biostatistics & Medical Informatics  
Medical History & Bioethics  
Population Health Sciences

School of Nursing

School of Social Work

## **FACULTY**

Our program boasts a large, experienced faculty with diverse interests and expertise. SAS faculty have active research programs and collaborate on a variety of projects within the division, the School of Pharmacy, as well as across campus, the country, and the world.

A detailed list of current faculty research projects and areas of interest can be found at:

<http://www.pharmacy.wisc.edu/sas/grad.cfm>

### **Betty A. Chewing, PhD**

Identification of client needs for health information and support

### **Michelle Chui, Pharm D, PhD**

Elevating the standard of community pharmacy practice and providing tools to practitioners in ambulatory settings

### **David H. Kreling, RPh, PhD**

Pharmacy and health care economics and policy

### **David A. Mott, RPh, PhD**

Pharmacy labor market and economics associated with drug utilization

### **Jeanine K. Mount, RPh, PhD**

Effects of organizational and professional characteristics on health service delivery

### **Josh Thorpe, PhD**

Pharmaceutical health services research, access and quality of care in informal caregivers and disabled care-recipients, influence of mental health on health-promoting behaviors, overuse/underuse/misuse of medications, secondary data analysis, latent class analysis, structural equation modeling with latent variables.

### **John Scarborough, PhD**

Greek, Roman, and Byzantine Medicine and Pharmacology

### **Henry N. Young, PhD**

Consumer/patient behavior in the medication use process