University of Minnesota, College of Pharmacy
Twin Cities & Duluth

HANDBOOK FOR STUDENTS & FACULTY

Social & Administrative Pharmacy

www.pharmacy.umn.edu/pchs/saph

Graduate Program in Social & Administrative Pharmacy
College of Pharmacy, University of Minnesota

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ADDITIONAL INFORMATION AVAILABLE

Course recommendations (from Director of Graduate Studies, Jon Schommer)

Graduate School Information for Current Students website:
http://www.grad.umn.edu/students

1. Degree Completion Steps: Doctor of Philosophy & Doctor of Education & MS
2. Examination Committees Rules and Updates
3. Faculty Role List Database
4. Forms (including exam scheduling)
5. Graduate School Catalog
6. Graduation Packet Request
7. Registration, Readmission, and Change of Status
8. Dissertation Submission (PhD/EdD only)
9. Thesis Writing and Submission (MS)
This handbook describes important characteristics of the Graduate Program in Social and Administrative Pharmacy. General Graduate School requirements are also provided. A more detailed discussion of the Graduate School's rules and procedures will be online in the Graduate School Catalog at the following website: http://www.catalogs.umn.edu/grad/index.html.

Graduate School contact information website: http://www.grad.umn.edu/about/contact. The Graduate Student Services and Progress (GSSP) office is located at 333 Robert H. Bruininks Hall: http://www.grad.umn.edu/students/index.html

Questions may be directed to your advisor, Dr. Jon Schommer as Director of Graduate Studies, other faculty members, or the Graduate School.

1. GENERAL INFORMATION

A. Program

1. Philosophy:
The widespread use and dependency on drugs and drug products in today’s society, coupled with an increased utilization and application of pharmaceutical services, has created a need for individuals who can study the social, psychosocial, political, legal, historic and economic factors that impinge upon the use, non-use and abuse of drugs. A number of critical factors shaping the health policies in the United States and around the world emphasize the need for increased research concerning the role of pharmaceuticals and the pharmacy practitioner in new and old systems of health care. In order to accomplish this goal, the University of Minnesota College of Pharmacy offers a graduate program in Social and Administrative Pharmacy.

Objectives:
This graduate program is designed for the student who is looking for an education and experience quite unlike physically and biologically oriented programs in pharmacy. This program fosters the application of behavior-oriented interdisciplinary theories to pharmacy problem solving and pharmacy system development. Positions of responsibility and leadership are available for graduates of this program in the pharmaceutical distribution systems of industrial and wholesaling practice, in clinically centered environments, in professional pharmacy organizations, in agencies of government, and in educational institutions.

The Graduate Program focuses on drug use from an individual and societal perspective. At the societal level the program's emphasis is on the examination of the system and environment in which pharmacists, patients and other health care providers interact. At the individual level the program emphasizes the interaction of biological, pharmaceutical and sociobehavioral sciences with direct patient care to assure the safe, appropriate and economic use of drugs in patients.
Mission:
The mission of the Graduate Program in Social and Administrative Pharmacy is to educate and mentor graduate students in the discovery and dissemination of new knowledge to foster appropriate use of drugs in order to improve patient outcomes at the individual and societal level.

Vision:
Develop leaders and scholars to effect systems change that optimizes medication use and improves the health of all people. (adopted 2010, affirmed 2015)

Core Values: (adopted 2010, affirmed 2015)
This program values:

1. Graduate students educated and mentored to become leaders, scholars, and educators.
2. Faculty engagement in mentoring graduate students.
3. The conduct and application of theory-driven research.
4. Enhancement of the graduate student experience to ensure the development of strong leaders and scholars.
5. Innovations in pharmacy practice and policy.
6. The difference in the diversity of people, cultures, health systems, and methods of inquiry.
7. Engagement at local, national, and international levels.
8. Collaboration (including interprofessional and interdisciplinary).
9. Continued development of individuals and professional advancement of both faculty and graduate students.
10. Preparation of graduate students who want to become educators.

2. Background and history:
Originally referred to as the "Graduate Program in Pharmacy Administration," it was approved by the University in 1970. Now in its fifth decade, the program maintains its original goals and objectives. The character of the studies and educational offerings has changed as developments have dictated. Nevertheless, the principles guiding the program—to offer a high-caliber opportunity to prepare researchers, educators, and administrators to deal with the complex questions seen in the drug use process - continue. As of January 2017, this program has awarded 147 Ph.D., 15 Combined MS Residency, and 38 MS degrees. Research performed within the program has been supported by millions of dollars in external funding.

Graduates of the program have assumed positions of responsibility and leadership in academia, health care organizations, government, industry, and with professional organizations.

3. Location:
The College of Pharmacy has campuses in both the Twin Cities and Duluth and is well situated with respect to education for Social and Administrative Pharmacy. The University of Minnesota is a major university with strong social science supporting programs in business, psychology, sociology, policy, education, and economics. The
Academic Health Center of the University includes strong programs in medicine, pharmacy, dentistry, nursing, public health and veterinary medicine. In addition to the resources of a major city, it offers, as a laboratory, a cross-section of socioeconomic groups. Students have access to urban, suburban, and rural environments. The Twin Cities metropolitan area is home to the State government offices, regulatory agencies, several HMOs and hospitals and colleges.

4. **Program emphasis:**

Emphasis in any area in terms of breadth and depth will be determined by the students in cooperation with the program faculty. Individual needs and objectives will be primary determinants of the direction of the course of study.

Graduates of this program may expect to tailor their programs toward careers, such as:

1. **College of Pharmacy and other Health Sciences faculty**
   a. Graduate
   b. Undergraduate
   c. Continuing education
   d. Educational development
   e. Administration

2. **Research scientists for health planning agencies**
   a. State
   b. Federal
   c. International
   d. Private

3. **Research scientists for the pharmaceutical industry**
   a. Marketing
   b. Product management
   c. Pharmaceutical outcomes
   d. Pharmacoepidemiology
   e. Clinical trials
   f. Drug product development

4. **Directors of pharmaceutical services**
   a. Health Science Centers
   b. Hospital Systems
   c. Chain Store Pharmacy Corporations
   d. Managed Care Corporations

5. **Directors of Drug Distribution Systems**

6. **Planners and researchers**
   a. Managed Care Corporations
   b. Insurance Companies
   c. Governmental Programs
   d. Contract Research Organizations
   e. Consulting Companies
5. **Self-directed program:**
Social and Administrative Pharmacy graduate studies are tailored carefully to the specific needs and aspirations of the student. It is a flexible, interdisciplinary program that utilizes all resources of the University's many outstanding departments in an effort to provide students with knowledge and experience in areas they feel are applicable to the resolution of pharmacy-oriented problems. The wealth of academic resources located at the University of Minnesota and the Twin Cities allows students to maximize their own educational experiences.

The course of study in Social and Administrative pharmacy emphasizes the full scope of learning and application in several areas:

i. **The Economic System:** Economic theory, national income accounting, national economic policy, capitalistic enterprise, regulation of capitalism, the structure of corporations, the economic structure of society, philanthropy, and the development of unions.

ii. **The Politico-Legal System:** Structure of the Federal, state and local governments, functions of government, regulatory agencies, representation, and influence.

iii. **The Social System:** Evolution of American society, disadvantaged groups, urban problems, small communities and rural areas, community planning, community power structure, organization for social action, welfare, and social security.

iv. **The Educational Experience:** Principles of educational philosophy, psychology, measurement, evaluation, intellect and learning theory, and educational technology.

v. **Basic Management Techniques:** Behavioral sciences, data processing, organization, accounting, statistics, systems analysis, and research.

vi. **The Health Care System:** Demand for health care, problems of public and individual health, ways of organizing care, role of institutions, and comparison of systems from several nations.

vii. **Pharmacy and its Environment:** Evolution, organization, and interaction with community, interaction with other organizations, attitudes of professions, financing, and control mechanisms.

viii. **The Industrial System:** Much of the activities in research, marketing, and finance are employed in the pharmaceutical industry. Administrative and organizational skills are explored.

ix. **Futures and Planning:** Strategic planning and the study of future trends has become a significant area of involvement for persons in the health industry.
B. Degrees offered:

Please read the General Information section of the Graduate School Bulletin for requirements that apply to all major fields.

Degrees Offered - M.S. (Plan A and Plan B) and Ph.D.

Curriculum - Students are prepared for research and related activities investigating relationships between biological and physical factors in social settings that involve the drug use process. This flexible interdisciplinary program uses the resources of the University's many health and social science departments. Programs include courses and offerings from public health, management, sociology, psychology, and public affairs.

Prerequisites for Admission - Although the majority of students in the program are pharmacists, a pharmacy education is not required.

Special Application Requirements - Applicants must complete a department supplementary application form in addition to the Graduate School forms. The supplementary form along with three letters of recommendation should be uploaded to the Graduate School Apply Yourself online application. Graduate Record Examination (GRE) scores or equivalent are required.

Language Requirements - None; however the TOEFL is required for foreign applicants.

Minor Requirements for Students Majoring in Other Fields - For the master's degree minor, 6 credits are required. For the Ph.D. minor, 12 credits of coursework in the department are required.

Requirements for M.S. Degree in Social and Administrative Pharmacy (SAPh)

Students completing the MS in Social and Administrative Pharmacy have a Plan A or Plan B option.

Plan A Option
The Plan A option with thesis requires a minimum of 32 semester credits including thesis credits.

Major Field: A minimum of 16 credits in the major field is required for the Plan A Masters in the Social and Administrative Pharmacy track. Required program courses include: SAPh 5100 Pro-Seminar (1 credit); SAPh 8100 Seminar (2 credits; may be repeated); SAPh 8500 Pharmacy and its Environment (3 credits); SAPh 8235 Pharmaceutical Economics and Policy (3 credits); SAPh 8420 Social and Behavioral Aspects of Pharmacy Practice (3 credits); and STAT 5021 or Equivalent (4 credits).

Minor or Related Field: Six or more semester credits in one or more areas outside the major.

Thesis Credit: 10 thesis credits. (SAPh 8777)

Final Oral Examination: A final oral exam is required for degree completion. The basis of the oral examination is a defense of the thesis research. The examination committee is composed of 3 faculty, two from the major and one from outside the program.
Plan B Option
The Plan B option is without thesis and requires a minimum of 30 credits of academic work.

**Major Field:** A minimum of 16 semester credits in the major field is required and must include SAPh 5100 Pro-Seminar (1 credits); SAPh 8100 Seminar (2 credits; may be repeated); SAPh 8500 Pharmacy and its Environment (3 credits); SAPh 8235 Pharmaceutical Economics and Policy (3 credits); SAPh 8420 Social and Behavioral Aspects of Pharmacy Practice (3 credits); and STAT 5021 or Equivalent (4 credits).

**Minor or Related field:** Six or more semester credits in one or more areas outside the major.

**Additional Coursework:** The balance of the coursework taken to meet the 30 semester credit minimum (8 credits in addition to the 16 major field credits and 6 minor or related field credits) is determined by agreement between the student and adviser.

**Plan B Papers:** Two papers of publishable quality are required for the degree; one must include a research component in which there is analysis of data.

**Final Oral Examination:** A final oral exam is required for degree completion. The basis of the oral exam is a defense of the Plan B Papers. The examination committee is composed of three faculty, two from the major and one from outside the program.
Requirements for Ph.D. Degree in Social and Administrative Pharmacy (SPh)

Doctor of Philosophy Degree Program Coursework leading to the Ph.D. degree consists of study in major field, a minor field, or a collateral field of knowledge and/or a special research technique. The total content of the major is individually and flexibly constructed by the student in consultation with the major advisor based upon the needs of the student and the advice of the major advisor.

Doctoral Degree Requirements Core department courses are required in addition to selected studies in other departments. Before conducting the Ph.D. thesis, students must pass two written preliminary examinations. One written exam concentrates on research design, methodological issues, and statistical analysis. The second written examination covers material specific to the area of Social and Administrative Pharmacy. In addition, students must make an oral presentation to a meeting of department faculty and graduate students on the rationale for the thesis and the proposed methodology.

The Ph.D. degree requires a minimum of 35 graduate credits in the Social and Administrative Pharmacy core. In addition, 12 credits of a minor or supporting program are required. The doctoral program requires a minimum of 47 graduate credits excluding the 24 Doctoral Thesis credits required by the Graduate School.

Social and Administrative Pharmacy (SPh) core (Ph.D.) REQUIRED:

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SAPH 5100</td>
<td>Pro-Seminar</td>
<td>1</td>
</tr>
<tr>
<td>SAPH 8100</td>
<td>Seminar (enrollment required each semester for at least 8 semesters for a total of 8 credits)</td>
<td></td>
</tr>
<tr>
<td>SAPH 8173</td>
<td>Principles and Methods of Implementing Research</td>
<td>3</td>
</tr>
<tr>
<td>SAPH 8235</td>
<td>Pharmaceutical Economics and Policy</td>
<td>3</td>
</tr>
<tr>
<td>SAPH 8420</td>
<td>Social and Behavioral Aspects of Pharmacy Practice</td>
<td>3</td>
</tr>
<tr>
<td>SAPH 8500</td>
<td>Pharmacy and Its Environment</td>
<td>3</td>
</tr>
<tr>
<td>PUBH 6806</td>
<td>Principles of Public Health Research</td>
<td>2</td>
</tr>
<tr>
<td>STAT 5021 or EPSY 8261 or PUBH 6450 or Equivalent</td>
<td>Statistics I (3 - 4 credits)</td>
<td></td>
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<tr>
<td>STAT 5302 or EPSY 8262 or PUBH 6451 or Equivalent</td>
<td>Statistics II (3 - 4 credits)</td>
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</table>

At least six credits from the following courses in addition to the above:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>SAPH 8054</td>
<td>Advanced Studies in Pharmaceutical Care Practice</td>
<td>3</td>
</tr>
<tr>
<td>SAPH 8200</td>
<td>Research Problems</td>
<td>1-4</td>
</tr>
<tr>
<td>SAPH 8255</td>
<td>Pharmaceutical Marketing</td>
<td>3</td>
</tr>
<tr>
<td>SAPH 8610</td>
<td>Pharmacoepidemology</td>
<td>3</td>
</tr>
<tr>
<td>SAPH 8700</td>
<td>Hospital Pharmacy Administration</td>
<td>3</td>
</tr>
<tr>
<td>SAPH 8702</td>
<td>Hospital Pharmacy Survey</td>
<td>1</td>
</tr>
<tr>
<td>SAPH 8810</td>
<td>Social Psychology of Health Care</td>
<td>3</td>
</tr>
<tr>
<td>SAPH 8840</td>
<td>Social Measurement</td>
<td>3</td>
</tr>
</tbody>
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C. SAPh course offerings

SAPh 5100  **Pro-Seminar** (1 credit) Garza
Focus on the history, foundational frameworks, and key research domains for Social and Administrative Pharmacy through the examination of landmark literature. Provide students the opportunity to think critically, reflect on important works, and create a cognitive map of the Social and Administrative Pharmacy discipline and their own focus for study in this program.

SAPh 8054  **Advanced Studies in Pharmaceutical Care Practice** (3 credits) Schommer
Analyzing practice/implementation of pharmaceutical care. Student confront their assumptions about pharmacy profession, pharmacy practice, and pharmaceutical care. Discussions, guest speakers, intensive literature searches/evaluation.

SAPh 8100  **Seminar** (1 credit) Schommer
Discussion of contemporary issues and research problems in the areas of Sociobehavioral Pharmacy, Pharmacoeconomics & Policy, and Clinical Research.

SAPh 8173  **Principles and Methods of Implementing Research** (3 credits) Gross/St Hill
The course integrates scientific, statistical, and practical aspects of research. Inter-relationships among design, sample selections, subject access, human subjects requirements, instrument selection and evaluation, data management, analyses plans, grant writing, and research career issues are covered. Field experiences required.

SAPh 8200  **Research problems** (1-8 credits) Faculty
An individually designed research experience directed at contemporary problems related to the drug use process.

SAPh 8235  **Pharmaceutical Economics and Policy** (3 credits) Hadsall / Schondelmeyer
Economic analysis of the pharmaceutical sector of health care systems. Emphasis on problems of pricing production and distribution of pharmaceuticals. Discussion of domestic or international policy issues relevant to price and access of pharmaceuticals.

SAPh 8255  **Pharmaceutical Marketing** (3 credits) Schommer
Historical development of distributive systems, marketing channels, institutions, policies, and practices as they relate to the pharmaceutical industry. Focus on contemporary issues and theory related to pharmaceutical marketing. Special attention to pharmaceutical promotion, especially directed to consumer advertising.

SAPh 8270  **Clinical Conferences** (2 credits) Faculty

SAPh 8420  **Social and Behavioral Aspects of Pharmacy Practice** (3 cr.) Gaither / Rodriguez. Historical development of the profession, its growth and development, with emphasis on the forces of education, professionalization, attitude modification, and the changes occurring as a product of legal and organizational forces in society.
SAPh 8500  **Pharmacy and its Environment** (3 credits) Schommer
Cultural foundations of pharmacy. Development of present state of pharmacy practice. Social-psychological factors in drug use, abuse or non-use by the patient and practitioner. Role of pharmacist as health practitioner in relation to other health practitioners. Identification of factors (Health Policy, Regulation, Economics, Research & Development, Promotion) which affect individual responses to drug therapy.

SAPh 8610  **Pharmacoepidemiology** (3 credits) St. Peter / Yusuf
Application of epidemiological principles to study the use of and outcomes (beneficial and adverse) of drugs in human populations.

SAPh 8700  **Hospital Pharmacy Administration** (3 credits) Pastor/Phelps

SAPh 8702  **Hospital Pharmacy Survey** (1 credit) Pastor/Phelps.
Hospital Pharmacy Survey is a readings course designed to provide the self-directed student an opportunity to explore contemporary issues in Hospital Pharmacy practices through individual effort.

SAPh 8777  **Thesis Credits: Masters** (1-18 credits)

SAPh 8810  **Social Psychology of Health Care** (3 credits) Johnson-Jennings
In-depth assessment of social psychological aspects of health care delivery. Topics include behavioral and social aspects of pain and suffering, emotions, disease and recovery responses to drugs and other therapies, patients’ continuity with prescribed therapies, patient counseling, relationships between the health care professional and the patient, and relationships among members of various health care professions.

SAPh 8840  **Social Measurement** (3 credits) Carlson / Garza
How social factors such as innovativeness, compliance, religiosity, and stress are measured and tested for reliability and validity. Relationships between theory, concepts, variables, and data.

SAPh 8333  FTE: Masters (1 credit)
SAPh 8444  FTE: Doctoral (1 credit)
SAPh 8666  Doctoral Pre-Thesis (1-18 credits) NA
SAPh 8777  Thesis Credit: Masters (1-18 credits)
SAPh 8888  Thesis Credit: Doctoral (1-24 credits)

Other courses taken to fulfill the major and minor requirements usually will include some of the following disciplines. (For a complete listing of courses and their descriptions, see the Graduate School Bulletin or the catalogs of the individual college offering the courses.)

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<thead>
<tr>
<th>Anthropology</th>
<th>Management</th>
<th>Public Health</th>
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<tbody>
<tr>
<td>Experimental &amp; Clinical Pharmacology</td>
<td>Political Science</td>
<td>Public Administration</td>
</tr>
<tr>
<td>Economics</td>
<td>Psychology</td>
<td>Sociology</td>
</tr>
<tr>
<td>Education</td>
<td></td>
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</tbody>
</table>
D. SAPh graduate faculty and research interests

1. Terrence Adam, Assoc Professor
2. Tim Affeldt, Adj Clinical Asst Professor
3. James R. Allen, Professor
4. Bruce Benson, Assoc Professor
5. Barbara Brandt, Professor
6. Angeline Carlson, Adjunct Professor
7. James Cloyd, Professor
8. Holly Epperly Budlong, Adj Asst. Professor
9. Kerry Fierke, Asst Professor
10. Caroline Gaither, Professor
11. Oscar Garza, Asst Professor
12. Patrick Gleason, Adjunct Clinical Professor
13. Cynthia Gross, Professor
14. Ronald Hadsall, Professor
15. Susan Haight, Adjunct Asst Professor
16. Brian Isetts, Professor
17. Kristin Janke, Professor
18. Derek Jennings, Asst Professor
19. Michelle Johnson-Jennings, Asst Professor
20. Olihe Okoro, Asst Professor
21. Serguei Pakhomov, Assoc Professor
22. John Pastor, Clinical Assoc Professor
23. Pamela Phelps, Clinical Assoc Professor
24. Amy Pittenger, Assoc Professor
25. Paul Ranelli, Professor
26. Raquel Rodriguez, Asst Professor
27. Mark Schneiderhan, Assoc Professor
28. Jon Schommer, Professor, DGS
29. Stephen Schondelmeyer, Professor
30. Randall Seifert, Professor
31. Todd Sorensen, Professor
32. Catherine St. Hill, Adj Asst Professor
33. Wendy St. Peter, Professor
34. Timothy Stratton, Professor
35. Donald Uden, Professor
36. Melissa Walls, Asst Professor
37. Akeem Yusuf, Adjunct Asst Professor

Adam, Terrence, PhD, MD (Associate Professor)
Biomedical Informatics: use of database systems for clinical outcomes evaluation; adverse drug event detection and surveillance; and population-based drug interaction evaluation.
Preoperative Perioperative Medicine: diagnostic decision making; medication management and preoperative decision support.

Tim Affeldt, PharmD (Adjunct Clinical Assistant Professor)
Director of specialty/infusion operations at Fairview Pharmacy Services.

James R. Allen, PhD (Professor)
Head, Biobehavioral Health & Population Sciences (UMD campus)
Current work focuses on multilevel community interventions for American Indian/Alaska Native, and rural community health. Current studies explore the effectiveness of culturally grounded preventive strategies for suicide, substance use, and health promotion; youth and community level resilience; prevention of vascular risk; cultural issues in health services; and community based participatory research.

Bruce S. Benson, PhD (Associate Professor)

Barbara Brandt, PhD (Professor)
Health profession workforce and education.

Angeline Carlson, PhD (Adjunct Professor)
Health services and outcomes research with an emphasis on population-based evidence of care delivery to shape health care policy and patient management strategies.
James Cloyd, PharmD (Professor)
Research interests: Clinical neuropharmacology; Antiepileptic drugs; Orphan drugs; and rare pediatric neurological disorders.

Holly Epperly Budlong, PharmD, PhD (Adjunct Assistant Professor)
Patient safety and epidemiology.

Kerry Fierke, EdD (Assistant Professor)
Corporate and health care experience in the areas of leadership, education, marketing and communication. Leadership training on developing key concepts for global leadership, intergenerational organizations, change management, accountability and organizational management.

Caroline Gaither, PhD (Professor)
Pharmacist worklife.

Oscar Garza, MBA, PhD (Assistant Professor)
International and rural health infrastructure development; evaluation of health care services; health disparities among rural and urban medically underserved populations; outcomes from the use of medical care, behavioral therapy, and pharmaceutical care services; and community engagement of health care and pharmacy professionals.

Patrick P. Gleason, PharmD (Adjunct Professor)
Prime Therapeutics—Research interest: Pharmacy Benefit Management (PBM) outcomes research using integrated medical and pharmacy claims data from over 10 million commercially insured lives to perform comparative effectiveness research (CER) and pharmacoeconomic research.

Cynthia Gross, PhD (Professor)
Interests are measurement of quality of life outcomes for persons with organ transplants or other chronic conditions, and clinical trial conduct to demonstrate impact of non-pharmacologic therapies on insomnia, symptoms of stress and quality of life in persons with chronic conditions.

Ronald S. Hadsall, PhD (Professor)
The study and evaluation of the economic and policy issues surrounding the delivery of pharmaceutical services to the patient. Study of the structures and outcomes of the pharmaceutical care system.

Susan Haight, MS, PharmD (Adjunct Clinical Assistant Professor)
Pharmacy system management.

Brian J. Isetts, PhD (Professor)
Practice of pharmaceutical care.

Kristin Janke, PhD (Professor)
Design, implementation and evaluation of online learning strategies. Incorporation of adult learning principles, needs assessment and outcomes assessment in the development of learning opportunities for pharmacists.
Derek Jennings, PhD (Assistant Professor)
Community based participatory research, qualitative research methods, photographic research methods, non-traditional research methods, American Indian health disparities, and research and meaning making.

Michelle Johnson-Jennings, PhD (Assistant Professor)
Research Interests: American Indian healthcare disparities and biopsychosocial protective factors; provider-patient relationship and influence on American Indian patient chronic pain management; prescription drug abuse and factors related to prevention among American Indian populations across the lifespan; and healthcare providers attitudes and beliefs towards patient use of traditional healing practices.

Olihe Okoro, PhD (Assistant Professor)
Research Interest: Health Disparities; Social and Behavioral issues in Healthcare Services and Medication Utilization; Linkage to care and Medication adherence in vulnerable populations living with HIV/AIDS; and Cultural Competency in Pharmacy Education and Healthcare Delivery.

Serguei V. Pakhomov, PhD (Associate Professor)
Natural language processing (NLP) and its applications to clinical research, biomedical test analysis, automatic term extraction and frame-based concept representation, syntax-semantics interface, hybrid machine learning and rule-based approaches to NLP, semantic relatedness in the biomedical domain, automatic classification and categorization, automatic speed recognition.

John Pastor, PharmD (Clinical Associate Professor)
Pharmacy systems management.

Pamela K. Phelps, PharmD (Clinical Associate Professor)
Pharmacy systems management.

Amy Pittenger, PharmD (Associate Professor)
Educational development.

Paul L. Ranelli, PhD (Professor)
Medication-use behavior among specific patient groups, including caregiver/care-recipient, children, and people with disabilities; physician-pharmacist relationship; patient/provider communication behavior.

Raquel Rodriguez, PhD (Assistant Professor)

Mark E. Schneiderhan, PharmD, BCPP (Associate Professor)
Problem-based learning paradigms with teaching responsibilities to include: coordinating and teaching psychopharmacology and therapeutics for 2nd year pharmacy students and PGY-1 psychopharmacology lectures. Research interests: study the adverse side-effects of psychiatric medications especially pertaining to the area of endocrinology including diabetes, hyperlipidemia, and weight gain side effects, especially with second generation antipsychotics agents and to provide outcome analysis of Medication Therapy Management (MTM) pharmacists in a Mental Healthcare Home Model located in community mental health clinics.
Jon C. Schommer, PhD, Director of Graduate Studies (Professor)
Problem solving and decision-making related to the provision, use, and evaluation of drug products and pharmacist services. The work is grounded in health behavior theories; decision-making theories; cognitive, social, and behavioral psychology; and marketing models of organizational and consumer behavior. Specialization includes: organization, pharmacist, and patient effects on the provision of pharmacist services; patients’ evaluation of pharmacist services; patients’ processing of medication information and resultant decision-making; outcomes from the use of specific drug products and pharmacist services; and use of drug products and pharmacist services in elderly populations.

Stephen W. Schondelmeyer, PharmD, PhD (Professor)
Health care economics and public policy as they relate to understanding the interface among patients, pharmacists, pharmaceuticals, manufacturers, various health care providers, insurers, financers, and regulators of health care. Research includes: tracking of pharmaceutical economic trend indicators, competition in the pharmaceutical marketplace, affordability of medicines, financing and design of health care benefits including drug therapy benefits, drug coverage under the Medicare and Medicaid programs, and evaluations of clinical and economic outcomes from use of pharmaceutical products and services including medication therapy management.

Randall Seifert, PhD (Professor)
Value propositions changing health care based cost management to value management; pharmacoeconomics and outcomes analysis; impact of ethnic differences in pharmacokinetics and population risk assessment of fixed drug formularies; and impact of pharmacists’ MTM interventions on health economics.

Todd Sorensen, PharmD (Professor)
Leadership development, serving the medication use needs of underserved populations, and advancement of pharmacy residency education.

Catherine St. Hill, DVM, PhD (Adjunct Assistant Professor)
Director of Research Advancement and Assistant Professor in Experimental & Clinical Pharmacology in the College of Pharmacy

Wendy St. Peter, PharmD (Professor)
Biochemical parameters, medications and associated morbidity, mortality and costs of bone-related disease in end-stage renal disease patients; hemodialysis removal of aminoglycoside antibiotics when administered during the last half-hour of hemodialysis and its impact on dosing recommendations.

Timothy P. Stratton, PhD (Professor)
The shortage of pharmacists is felt more acutely in rural communities where pharmacists often serve as one of the few local providers of first contact care – sometimes for an entire county! Based upon the place integration model, my research explores questions relating to rural pharmacy practice: What attracts pharmacists to practice in rural communities or prevents them from choosing rural practice? What keeps pharmacists in rural communities, or drives them back to the city? How do the professional and educational needs of rural pharmacists differ from those of urban pharmacists, and how can these needs be met? How might technology enhance rural pharmacy practice? What is the economic impact of pharmacy practice in rural communities?
Donald L. Uden, PharmD (Professor)
Rural health pharmacy and interdisciplinary initiatives. Pharmacotherapy of diseases in pediatric patients. Pharmaceutical care; orphan products and rare diseases; global health education.

Melissa Walls, PhD (Assistant Professor)
Community-based participatory research with American Indian and First Nations communities. To understand the historical and contemporary social determinants of health/mental health for Indigenous individuals and families.

Akeem Yusuf, PhD (Adjunct Assistant Professor)
Interested in using economic, social and behavioral theories to understand issues related to medication use, safety and effectiveness.
II. ADMISSION

A. Admission requirements
Applicants for the program must possess a Bachelor of Science, Bachelor of Arts, or professional degree (e.g. Pharm.D., M.D., J.D.), evidence of personal capability, and acceptability for admission. In general, preference will be given to candidates who have had professionally related education or experience. The student must satisfy the general requirements of the Graduate School before admission to the program.

B. Application procedure
- Application to the Graduate School must be completed online using the using the web-based application in ApplyYourself
  http://www.grad.umn.edu/admissions/application_instructions/index.html
  There is a required application fee.
- In addition to the Graduate School application, the departmental supplementary application form can be found at:
  http://www.pharmacy.umn.edu/pchs/saph/admission/home.html
- This form should be uploaded to the Graduate School web based ApplyYourself application. Three letters of recommendation are also required and should be from people who can reflect on the applicant's academic work or professional experiences.
- The department also requires the Graduate Record Exam (GRE) or equivalent to be completed prior to admittance into the program. It would be advisable to forward scores if the test already has been taken for any other institution. The TOEFL test for proficiency in the English language is required for students whose native language is not English.

C. Registration
The Graduate School will notify the individual applicants of acceptance or rejection. Because of enrollment limitations, applicants meeting admission requirements may be placed on a waiting list and will be notified, as space becomes available. All participants must register at the beginning of each term during which courses are taken.

D. Advising
Several outstanding faculty serve as program counselors and planners. Students will be provided a first-year advisor in accordance with faculty load. Students shall have one calendar year in which to choose a permanent advisor to supervise their selected program of coursework and their research.

You should meet the eligible faculty members during your first semester of study and inform the Director of Graduate Studies as to your choices for an academic advisor. This should be a person with similar professional and research interests and with whom you feel that you can get along. This individual will work with you in the construction of your plan of study, which should be turned in before you begin your second semester of study. The student's advisor must approve the student's proposed program.
E. **Financial aid**

For financial and funding options, refer to the University financial aid website: [http://onestop.umn.edu/finances/financial_aid/basics/index.html](http://onestop.umn.edu/finances/financial_aid/basics/index.html) and the Graduate School funding website: [http://www.grad.umn.edu/admissions/funding/](http://www.grad.umn.edu/admissions/funding/)

In addition, a limited number of research and teaching assistantships and fellowships are available for graduate students in Social and Administrative Pharmacy.

III. **COURSE REQUIREMENTS**

A. General Graduate School requirements

See Graduate School web pages [www.grad.umn.edu](http://www.grad.umn.edu)

IV. **RESEARCH PROJECTS**

For the M.S. - Plan B program, the general Graduate School requirement is that "Students must demonstrate familiarity with the tools of research or scholarship in the field, the ability to work independently, and the ability to present the results of investigation effectively, by completing at least one Plan B project. The graduate faculty in each major field may require as many as three such projects, equivalent to approximately 120 hours of work." Copies of previous Plan B papers are available from students' advisors. In general, the advisor is responsible for approving the definition of the project(s), determining relative worth in satisfying the entire requirement and specifying for the student the manner in which evidence of satisfactory completion is to be presented to the examining committee.

For the M.S. - Plan A thesis and Ph.D. dissertation, the student should explore and discuss research topic possibilities with the academic advisor as well as other faculty members, should look beyond the courses, attend seminars and read pertinent journals so that a wise decision as to the thesis topic is possible.

A brief, written doctoral dissertation proposal must be presented to the student's doctoral committee prior to the preliminary oral examination, and the student should be prepared to defend the proposal at this examination. The proposal should contain the research hypothesis, a statement of significance, background materials, and a current bibliography, possible methodology to be used or developed, and anticipated results. Specific details regarding proposed format, length, and level of detail should be developed with the student’s advisor.
V. EXAMINATIONS

A. Plan A Master's degree
The oral exam consists of defense of the Plan A thesis.

B. Plan B Master's degree
The student is held responsible for the content of the Plan B projects and the coursework listed on the student’s approved program of study.

Most graduate students seeking a Master's degree select the Plan B (non-thesis) option. In this path, one is expected to take 30 credit hours of coursework and complete a research project and another research paper. This is individually negotiated with one's academic advisor. Many times instructors for courses require a paper, and it is possible to speak to that instructor and determine what might be done to expand such a paper to make it eligible for a Master’s Plan B acceptable paper. More information is available from the faculty members in the department.

C. Ph.D. degree
1. Preliminary written examination
The department requires for Ph.D. students the passage of two written Ph.D. preliminary examinations. These are in the areas of research methodology, and social and administrative pharmacy. Upon the completion of these two written examinations, the student is eligible to sit for an oral preliminary examination. Your advisor and the Director of Graduate Studies will assist in scheduling and planning these examinations and in working with the members of your minor field committee as well. The department agrees to offer the two departmental written examinations no less than twice annually. Generally, they are offered in the fall and around the end of spring semester.

2. Preliminary oral examination
Students take the preliminary oral examination after completing a substantial part of the coursework and passing the preliminary written examination, but before writing the dissertation.

3. Final oral examination
The procedures for the final oral examination scheduling must be accessed at the Graduate School website:
http://www.grad.umn.edu/current-students-graduate-student-services-progress/final-schedule

4. Ph.D. seminar presentation
Ph.D. students are obligated to arrange a presentation in which members of the department, their committee members, and students and faculty are invited. This presentation should be at the point when the student is able to discuss the theory behind one’s doctoral research, hypotheses, and a proposed methodology. It is the intention of this program to assist the students in developing speaking and interactive communication skills and to receive friendly suggestions from their classmates and faculty members to assist before they finalize their dissertation plans. There is a most appropriate time for this and this should be discussed with one’s advisor.
D. Manuscripts from M.S. and Ph.D. dissertations
We expect that there is a personal and moral obligation for the student to publish works in the professional and/or scientific literature based on their research activities in the department. This is good for the student and also good for the reputation of the department and positive for recognition of the efforts of the faculty member collaborators.

VI. ADMINISTRATIVE ORGANIZATION

M.S. and Ph.D. degrees are administered through the Graduate School. Graduate School personnel or their designee review the course programs and thesis abstracts submitted by the student. They also have final authority for assigning faculty members as thesis readers and examination committee members and frequently follow the suggestions presented by the students and advisor. Other monitoring required by the Graduate School is delegated to the program’s Director of Graduate Studies.

A. Director of Graduate Studies
The Director of Graduate Studies (DGS) is elected by the program graduate faculty and has liaison responsibilities between the students of the program and the Graduate School. Students experiencing any procedural difficulties should seek assistance from the DGS. The faculty has given specific responsibilities to the DGS:

1. The advisor at program entry is assigned by the DGS.
2. All Masters and Doctoral degree programs are reviewed by the DGS. The DGS’s signature is required before it is forwarded to the Graduate School.
3. The DGS is to arrange for an evaluation of Ph.D. thesis titles and abstracts by a faculty committee. The committee is to offer suggestions for improvement, modification of goals, consideration of available facilities, etc. The DGS’s signature of approval cannot be given without committee action.
4. The DGS is responsible for an equitable distribution of faculty appointments to examining committees. This may result in modification of some of the suggestions for examining committees which are submitted by student and advisor.

B. Degree programs and timing
The Ph.D. program should be filed before the semester in which the oral preliminary examination is intended. Early filing of the course program yields an approved "contract for the program" and knowledge of the examining committee at an early date. This has obvious advantages and is encouraged; however, the program or the committee may be changed by special petition.

C. Committee membership for examinations
The assignment of members of the examination committee is the responsibility of the Graduate School or designee. However, the student and advisor have an opportunity to make suggestions; when a program or thesis title (and abstract) is submitted, it should be accompanied by a list of suggested committee members. This list should provide more names in both the major and non-major areas than are actually required. The Graduate School is not obligated to follow these suggestions in making its final selection, but often does. Both student and advisor should take this opportunity seriously.
There must be at least three examiners for M.S. programs, with at least one from a field other than SAPh. As for Ph.D. programs,

1. A committee for the preliminary oral examinations consists of at least four members, with one from a field other than the major.
2. A committee for the final oral examination also consists of at least four members, with one from a graduate program other than SAPh. Although the student’s advisor is a member of this committee, it is chaired by another full member of the graduate faculty. In addition, committee membership is determined on the basis of the thesis abstract and may differ from the membership of the preliminary oral examination committee. The three thesis readers are ordinarily members of this committee.

D. Program Governance

1. Administrative Structure:
   For information on the Administrative Structure of the College of Pharmacy Graduate Programs Governance of Graduate Education:
   [link]

2. Committee Members for Examinations:
   For information on the Graduate Faculty Appointment Process:
   [link]

3. Admissions Process:
   • When an application is received at the SAPh graduate program, at least six volunteering members that serve on the SAPh Admissions Committee will receive the full credentials of the applicant to review and complete an evaluation form with their recommendation.
   • When evaluations are completed, the Director of Graduate Studies compiles the results and, where little or no controversy exists, informs the Graduate School of the decision of the program. Applications are processed as received and qualified candidates are informed of their acceptance after an admissions committee meeting in February preceding the admitting Fall Semester. Unqualified candidates are told of their inadmissibility as soon as possible.
   • There is a third category of students who might be admissible and some of these are asked to wait until all of the candidates for the entering class can be evaluated.

VII. CODE OF CONDUCT

A. Student Responsibility and Conduct University-wide Policies

Master’s Degree: Performance Standards and Progress Policy Statement
[link]

Doctoral Degree: Performance Standards and Progress Policy Statement
[link]
1. **Performance**
   a. Maintain at least a B average in the program.
   b. Students are expected to maintain progress toward a degree and their self-assessment of their progress will be reviewed annually by the student’s advisor.

2. **Student – Advisor Interaction**
   a. Contact the Director of Graduate Studies if they are not getting reasonable assistance from their academic advisor.
   b. Initiate and maintain contact each semester with their academic advisor to review progress toward the completion of their degree.

3. **Expectations**
   a. Attend student orientations and understand the information distributed.
   b. Understand and follow University, Graduate School, and Graduate Program rules and procedures for completion of degree requirements.
   c. Keep up-to-date with announcements that may involve changes in the University, Graduate School, or Program rules and procedures for completion of degree requirements. Students are responsible for reading and understanding these announcements.
   d. Check their student mailbox and email often for information materials.

4. **Student Conduct**
   a. Read and understand policies of the Board of Regents that provide the framework under which the administration is responsible for implementation of and compliance with the intent of the board policy. Students are responsible for abiding by the Board of Regent Policies.

   These policies can be found at [www.umn.edu/regents/policies.html](http://www.umn.edu/regents/policies.html)

   Students should read and understand the following policies:

   b. Another important aspect of student conduct is to present your work honestly. Plagiarism is defined as the presentation of another's writing or ideas as your own. For more information on this policy and for a helpful discussion of preventing plagiarism, please consult University policies and procedures regarding academic integrity: [http://www.oscai.umn.edu/](http://www.oscai.umn.edu/).

   Students should be careful to properly attribute and cite others’ work in their writing. For guidelines for correctly citing sources, go to [http://tutorial.lib.umn.edu/](http://tutorial.lib.umn.edu/).

5. **Student Academic Grievance**
   Read and understand your rights regarding the academic grievance process found at: [http://regents.umn.edu/sites/default/files/policies/Conflict_Res_Process_Students.pdf](http://regents.umn.edu/sites/default/files/policies/Conflict_Res_Process_Students.pdf)

Students are ultimately responsible for the level of success that they achieve in their program of study and for the time it takes to complete that program. Violation of student responsibility and conduct is grounds for dismissal from the Graduate Program in Social and Administrative Pharmacy using a three step process: (1) verbal reprimand, (2) written reprimand which is added to the student’s file, and (3) faculty vote for dismissal. At each step of the process, students would have the opportunity to meet with faculty to discuss the issue and develop a plan to remedy the situation. In cases of dismissal, the university’s Student Judicial Affairs office will be contacted.
B. Academic Advisor Responsibility and Conduct

The academic advisor's responsibility is to monitor and facilitate the student's progress. The academic advisor should:

1. Act as a contact person for students and help direct them to the appropriate resources in the Program given whatever issues or problems the students may have.
2. Act as a resource for students when bureaucratic or political problems in the University, Graduate School, or Program may be interfering with the student’s effective progress toward his or her degree.
3. Ensure that students have a project that meets standards of performance in the program and that the project is moving toward completion in a timely fashion.
4. Ensure that students are prepared for taking preliminary examinations.
5. Attend graduate faculty meetings and understand the information distributed at the meetings.
6. Understand and follow University, Graduate School, and Program rules and procedures for completion of degree requirements.
7. Keep up-to-date with announcements from the Program's DGS and Administrative Specialist.
8. Maintain contact each semester with the student to review progress towards the degree, including timely completion of coursework and grades.

Violation of academic advisor responsibility and conduct is grounds for dismissal from serving as a Graduate Faculty member in Social and Administrative Pharmacy.
VIII. SUPPORTING ACTIVITIES/FACILITIES

A. Departmental information

1. Mail delivery and pickup
   U.S. mail is delivered to the building once a day and it is placed in student and
   faculty mail boxes in 7-170 WDH as soon as possible. You are urged to check it
   frequently. Given our limited staffing and space, we encourage you to have your
   personal mail delivered to your residence address. Do feel free to use your
   University department address for professional publications, correspondence,
   etc. Campus mail is delivered to the building once a day, once with the U.S. mail.

2. Seminar
   SAPh program policy requires that students register for the 8100 seminar course
   each semester. Students are expected to attend seminar every semester during
   their tenure as graduate students. Seminar is scheduled at times convenient to
   the majority of the department personnel and is the major means of meeting with
   and communicating news with each other. We cannot over-emphasize the
   importance of including seminar in your personal schedules. Students are asked
   to make presentations in seminar. These generally are presentations of Plan B
   Master's papers or projects which students agree to research and present,
   including book reports, paper reviews, etc. In addition, Ph.D. students have an
   additional requirement of presenting the theory, hypotheses, and proposed
   methodologies when they have reached this stage on their proposed Ph.D. thesis.
   Ph.D. students should work with their advisor in determining when a seminar
   should be scheduled when the student reaches this stage.

3. Administrative services
   The graduate program assistant in 7-155 is available to answer questions.

4. Telephones
   Telephones are available for departmental activities and students’ academic
   needs. Students are reminded to be courteous about telephone use if it interferes
   with the person with whom you share an office and to assist one another in taking
   messages. Only on extraordinary occasions should calls be transferred to the
   main departmental office. Please feel free to use this number as a backup number
   for emergencies, etc. For long distance service, speak with the departmental
   assistant for department-related calls.

5. Offices
   Students will share an office with at least one other student. The department
   provides a desk, chair, filing cabinet, bookshelf, telephone, and wastebasket.
   Speak with the department assistant about other supplies and equipment.
   Contact the department assistant for office or maintenance problems. After
   normal University hours, call the Facilities Management at 624-2900 to report a
   mechanical problem such as leaking water.
6. **Keys**
   Students receive a key to open their offices, the department library, and the 7th floor mail room. Keys may be ordered through the graduate program assistant, and students will be asked to sign for and be responsible for the key until they leave the University and it is returned. Upon graduation, **keys must be returned to 7-155 in the graduate program office.** If you are relocated to a different office, you MUST return your key and obtain a new order form from the program assistant. **DO NOT** exchange keys with fellow students. You must go through the return and new order process. Notify graduate program assistant, college payroll staff, and the Office of the Registrar of your new address upon completion.

7. **Photocopying**
   Your own academic work is to be taken care of at your expense, time and labor.

8. **Research expenses**
   While we do not have a specific budget allocated to research expenses, often we are either able to help directly, indirectly, or steer you toward some assistance for costs involved with the work on Master’s Plan B projects and papers and Ph.D. research endeavors. Speak with your advisor, who can speak with the Department Head to see if there is some way we might be able to help. In addition, each student should become familiar with the various grant and fellowship programs available through the Graduate Assistance Office in Johnston Hall.

9. **Office hours**
   The program office in 7-155 WDH and the department office in 7-159 is open Monday through Friday, 8:00 a.m. to 4:30 p.m. Limited staffing prompts us to ask that students try to anticipate their needs and plan ahead.

10. **Security**
    Unfortunately, there have been periods when items have disappeared from this building. We strongly recommend that you lock your door whenever you leave your office and keep your keys with you at all times. Don’t leave expensive or valuable items on top of your desk or within sight of outside hallways. There is no insurance through the University for losses and the University will not accept responsibility for the loss of personal property.

11. **Smoking policy**
    Smoking is prohibited in all facilities at the University of Minnesota campuses: [http://policy.umn.edu/operations/smoketobacco](http://policy.umn.edu/operations/smoketobacco)

12. **Housing sources**
    The University of Minnesota offers a limited number of on-campus housing options for graduate students. We have approximately 40 spaces reserved for graduate students in Centennial Residence Hall and University Village apartments. In addition, students can search our off campus listings page for many available apartments or rental houses in the area. Students with families can apply to live in Commonwealth Terrace Cooperative or Como Student Community Cooperative. [http://www.housing.umn.edu/graduate/index.shtml](http://www.housing.umn.edu/graduate/index.shtml)

    To apply: [http://www.housing.umn.edu/applying/index.shtml](http://www.housing.umn.edu/applying/index.shtml)
- **Housing & Residential Life:** contracts with two separate student owned cooperatives to provide housing for University of Minnesota students and their families. Each cooperative manages and maintains the University housing complexes.

- **Commonwealth Terrace Cooperative:** [http://www.umnctc.org/](http://www.umnctc.org/)
The Commonwealth Terrace Cooperative (CTC) is located south of the University of Minnesota’s St. Paul campus and west of the State Fair grounds. CTC is only a few blocks from the inter-campus bus line and has easy access to the freeway system.

- **Como Student Community Cooperative:** [http://cscc.umn.edu/](http://cscc.umn.edu/)
The Como Student Community Cooperative (CSCC) is located between Hennepin and Como Avenues and 27th and 29th Avenues Southeast approximately halfway between the St. Paul and Minneapolis campuses and on the city bus line.

13. **Graduate Assistant Health Care Plan**
   - Twin Cities: [http://www.shb.umn.edu/twincities/graduate-assistants.htm](http://www.shb.umn.edu/twincities/graduate-assistants.htm)
   - Duluth: [http://www.shb.umn.edu/duluth/graduate-assistants/index.htm](http://www.shb.umn.edu/duluth/graduate-assistants/index.htm)

   The Office of Student Health Benefits offers the Graduate Assistant Health Plan to most Graduate School or professional school students who hold an appointment as teaching assistant, research assistant, or administrative fellow. For these students, the University pays 50-100% of the insurance premium during the academic year (fall and spring semesters), the percentage depending on the level of appointment at the University of Minnesota.

   To receive this coverage, eligible students must apply for it by the enrollment deadline. An eligible student’s spouse and children may also be enrolled (at the student’s expense) in a separate plan with similar benefits and clinic locations. To apply, and for further information, contact the Office of Student Health Benefits, 410 Church Street, University of Minnesota, Minneapolis, MN 55455 (612/624-0627).

15. **Teaching Assistants** (TAs) Assignments are made by the Director of Graduate Studies, after the SAPh Admissions Approval Committee has met, and if funding is available.

16. **Student Finances:** Students are responsible for paying the University & College of Pharmacy fees assessed each semester.
   - Twin Cities: [http://onestop.umn.edu/finances/costs_and_tuition/index.html](http://onestop.umn.edu/finances/costs_and_tuition/index.html)

B. **Library facilities**

   The Bio-Medical Library supports the teaching, research, and service programs of the University of Minnesota Health Sciences schools on the Minneapolis campus. The collection includes over 350,000 cataloged volumes and current serial subscriptions of approximately 4,000. The Bio-Medical Library is the number one lender of materials among Health Sciences libraries nationally.

C. **Interdisciplinary activities**

There is a growing awareness of the breadth of many health problems and of the resulting need for a coordinated, multifaceted approach to their solution. Examples include chronic disease intervention, geriatric services, and organization of health delivery systems:

1. **Special interdisciplinary courses**

   Such courses are often of temporary existence because they deal with topics, which, although important, are specific and transitory. Students from Dentistry, Medicine, Nursing, Pharmacy, Public Health, and other health science areas participate. These courses should be considered when topics and timing are appropriate.

2. **CHIP (Center for Health Interprofessional Programs)**

   CHIP offers health professions students an opportunity to meet and collaborate with students from other colleges. Founded in 1970 by students seeking meaningful interaction with their fellow students in other colleges, CHIP now serves students in the six health professional schools and colleges and allied health programs in the Academic Health Center (AHC). CHIP Student Center, 1-425 Moos Tower, 515 Delaware Street SE, Minneapolis, MN, 612-625-7100; website: [http://www.chip.umn.edu/](http://www.chip.umn.edu/)

3. **Student committees**

   The Council of Graduate Students (COGS) represents the interests of all graduate students at the University of Minnesota, Twin Cities. Their mission is to work with the all components of the University community - most specifically the Graduate School and central administration - to make sure the needs of graduate students are known and addressed. Visit their websites: [http://www.cogs.umn.edu/about.html](http://www.cogs.umn.edu/about.html)

D. **Further information**

For further information, contact Jon C. Schommer, Ph.D., Director of Graduate Studies in Social & Administrative Pharmacy, College of Pharmacy, 308 Harvard Street S.E., Minneapolis, MN 55455, or call 612-626-9915 or the Graduate Program Assistant, Val Cremin at 612-624-2973.

Program offices are located on the seventh floor of Weaver-Densford Hall (WDH) at the southwest corner of Washington Avenue S.E. and Harvard Street S.E., on the University's Minneapolis East Bank Campus. [http://www.pharmacy.umn.edu/pchs/saph/home.html](http://www.pharmacy.umn.edu/pchs/saph/home.html)

E. **Equal opportunity statement:**

*The University of Minnesota is an equal opportunity educator and employer.*


Inquiries regarding compliance may be directed to: Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, MN 55455 (612-624-9547) or to the Director of the Office of Civil Rights, Department of Education, Washington, DC 20202, or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, DC 20210.