<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Prerequisite</th>
<th>Course Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCCP 602/COP 601</td>
<td>Foundations of Pathophysiology and Pharmacology I</td>
<td>This is the first course in a 2-semester sequence providing important physiologic, pathophysiologic and pharmacologic principles and concepts that will be utilized in subsequent courses in which appropriate pharmacotherapeutic approaches towards treating diseases processes will be discussed. Course Credit Hours: 2. Prerequisite: first year professional standing.</td>
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<tr>
<td>SCCP 650/COP 605</td>
<td>Introduction to Pharmacy Practice</td>
<td>Introduction to the professional issues relevant to the practice of pharmacy. Course Credit Hours: 2. Prerequisite: first professional year standing.</td>
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<tr>
<td>SCCP 607/COP 607</td>
<td>Dosage Forms and Drug Delivery Systems</td>
<td>A study of the physiochemical principles of the formulation, preparation, properties, and performance of the pharmaceutical dosage forms including: aqueous and nonaqueous liquids, suspensions, emulsions, solid unit oral dosage forms, sustained and controlled delivery preparations as well as rectal, parenteral, and biological delivery systems. Clinical application of the various dosage forms in patient care will be discussed. Course Credit Hours: 4. Prerequisite: first professional year standing.</td>
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</tr>
<tr>
<td>SCCP 621/COP 609</td>
<td>Foundations of Pharmaceutical Chemistry and Pharmacogenomics I</td>
<td>This is the first of a 2-course sequence which begins with an introduction to the scientific principles underlying pharmaceutical chemistry and pharmacogenomics. The relationships of molecular structure to drug absorption, distribution, metabolism and excretion are explained. The chemical mechanisms of drug therapeutic actions and adverse events are explored. An emphasis is placed on the pharmacogenomic basis of individualized/optimized drug therapy. Course Credit Hours: 3. Prerequisite: first professional year standing.</td>
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</tr>
<tr>
<td>SCCP 615/COP 615</td>
<td>Pharmaceutical Biochemistry</td>
<td>The course covers the molecular and biochemical basis of human metabolism, the role it plays in disease and the biochemical basis of drug action. The properties, function and interaction of biological molecules and major biochemical pathways are covered. Emphasis is placed on the molecular basis of human metabolism, causes of human diseases, and how drugs produce biological effects. Course Credit Hours: 3. Prerequisite: first professional year standing.</td>
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<td>3.</td>
</tr>
<tr>
<td>SCCP 660/COP 620</td>
<td>Introduction to Drug Information</td>
<td>This course is designed to provide students with an overview of drug information practice and to expose them to basic drug information skills and resources that will facilitate learning in other courses and help them provide medication information to individuals. Course Credit Hours: 1. Prerequisite: first professional year standing.</td>
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<tr>
<td>SCCP 656/COP 625</td>
<td>Pharmacy Calculations</td>
<td>This course develops the mathemathic skills and knowledge required in various pharmacy practice settings. Students will be introduced to the Apothecary and Avoirdupois systems of measurement and will perform interconversions between these measurement systems and the metric system. Problem solving skills will be developed as students become proficient in basic math skills used to solve pharmacy calculations based word problems which are commonly seen in a variety of practice settings, including community, compounding, hospital, and nuclear pharmacy. Course Credit Hours: 1. Prerequisite: first professional year standing.</td>
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<tr>
<td>SCCP 657/COP 627</td>
<td>Medical Terminology</td>
<td>A thorough knowledge of medical terminology is an essential building block in pharmacy education. This course will aid the student in learning the language and terminology used in other pharmacy courses and all areas of pharmacy practice. Course Credit Hours: 1. Prerequisite: first professional year standing.</td>
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</tr>
<tr>
<td>SCCP 671/COP 630</td>
<td>Pharmacy Skills Lab I: Compounding and Applied Pharmaceutics</td>
<td>The art, science, and technology of pharmacy compounding. Course Credit Hours: 1. Prerequisite: first professional year standing.</td>
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</tr>
<tr>
<td>SCCP 603/COP 603</td>
<td>Foundations of Pathophysiology and Pharmacology II</td>
<td>This is the second course in a 2-semester sequence providing important physiologic, pathophysiologic and pharmacologic principles and concepts that will be utilized in subsequent courses in which appropriate pharmacotherapeutic approaches towards treating diseases processes will be discussed. Course Credit Hours: 4. Prerequisites: first professional year standing.</td>
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</tr>
<tr>
<td>SCCP 622/COP 611</td>
<td>Foundations of Pharmaceutical Chemistry and Pharmacogenomics II</td>
<td>This is the second of the 2-course sequence addressing the pharmaceutical chemistry and pharmacogenomics of drug therapy. Emphasis is now shifted to the molecular basis of pharmacotherapy as organized by drug class. The chemical mechanisms of drug actions are addressed in the context of current advances in personalized medicine, e.g., gene-dose effects, phenocopying, and allelic variants influencing the rational selection of first-line agents for the individual patient. Course Credit Hours: 3. Prerequisites: first professional year standing.</td>
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<td>3.</td>
</tr>
<tr>
<td>SCCP 616/COP 616</td>
<td>Pharmaceutical Biotechnology</td>
<td>The course focuses on nucleic acids (DNA/RNA) as the core theme. This includes the eukaryotic cell cycle, meiosis, replication, transcription, translation, and repair. Recombinant DNA technology is covered as applied to the study of human health and to the production of biological agents intended for use in disease therapy. Antibodies are covered from the perspective of their use in diagnostic tests, as well as the utilization of antibodies and their conjugates as therapeutics. The concepts and applications of gene therapy and RNA silencing are also taught. Course Credit Hours: 2. Prerequisites: first professional year standing.</td>
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<tr>
<td>SCCP 750/COP 618</td>
<td>Self-Care and Complementary Medicines</td>
<td>Self-Care &amp; Complementary Medicines is a course that will review the indications, contraindications, and cautions involved with the recommendation and dispensing of nonprescription (OTC) drug items and complementary medicines. The course will provide the pharmacy student with a wide range of current information regarding nonprescription therapies, including OTC products, herbs, and alternative medicine therapies, which will allow the student to make appropriate decisions regarding product selection and use by patients for self-care. Course Credit Hours: 4. Prerequisites: first professional year standing.</td>
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<td>4.</td>
</tr>
<tr>
<td>SCCP 661/COP 640</td>
<td>Clinical Applications I</td>
<td>Case-based discussions that integrate and demonstrate applicability of other course material. Course Credit Hours: 1. Prerequisite: first professional year standing.</td>
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<td>1.</td>
</tr>
<tr>
<td>SCCP 670/COP 632</td>
<td>Pharmacy Skill Lab II: Introduction to Community Pharmacy</td>
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</tbody>
</table>
SCCP 690/IP 710: Transforming Healthcare
The course goal is to lay the foundations for beginning (first year) professions students to understand the complexities of the health care system and the role of interprofessional collaboration to improve the system. Through an interprofessional context, students will explore the art and science of teamwork and communication skills, cultural competency, ethical issues, evidence-based practice, healthcare disparities and social determinants of health. Course Credit Hours: 2.

Summer

COP 650: Introductory Pharmacy Practice Experience - Community
Introduction to the practice of pharmacy in the community pharmacy setting. Forty hours of directed experience per week for four weeks. Course Credit Hours: 4. Practice experience of 4 weeks, 40 hours per week. Pass/Fail. Prerequisite: first professional year standing.

Fall

COP 702: Pathophysiology & Pharmacology I
Building on Foundations of Pathophysiology & Pharmacology I and II, this course is the first in the four-semester course sequence aimed at integrating the discussion of specific disease states and the mechanisms of action of the pharmacologic agents used to treat these disease states. This knowledge will be applied in a parallel sequence of courses in Pharmacotherapy primarily using an organ-system based approach emphasizing pharmaceutical care and disease management. Course Credit Hours: 3. Prerequisite: second professional year standing.

COP 712: Pharmacotherapy I
This course is the first in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. Course Credit Hours: 4. Prerequisite: second professional year standing.

COP 722: Biopharmaceutics and Pharmacokinetics
Study of the pharmacokinetics of drug absorption, distribution, and elimination (metabolism and excretion). Introductory application of pharmacokinetics to drug interactions and dosage regimen design and adjustment, selected disease states, and special populations. Course Credit Hours: 3. Prerequisites: second professional year standing.

COP 731: Pharmacy Skills Lab III: Introduction to Health-Systems Pharmacy
In the laboratory setting, students are introduced to various disciplines of pharmacy in the institutional setting. This laboratory environment focuses on skill sets and base knowledge required of clinical pharmacists in these settings and seeks to lay a foundation of professionalism and critical thinking skills. Course Credit Hours: 1. Prerequisite: second professional year standing.

COP 742: Clinical Applications II
Case-based discussions that integrate and demonstrate applicability of other course material in patient care. Course Credit Hours: 1. Prerequisite: second professional year standing.

Spring

COP 704: Pathophysiology & Pharmacology II
Building on Foundations in Pathophysiology and Pharmacology I, this will be the second in a 4-semester sequence of courses aimed at integrating the discussion of specific disease states and the mechanism of action of the pharmacologic agents used to treat these disease states. This knowledge will be integrated, utilized and applied in a parallel sequence of courses in Pharmacotherapy using an organ-system based approach emphasizing pharmaceutical care and disease management. Course Credit Hours: 3. Prerequisites: second professional year standing.

COP 714: Pharmacotherapy II
This course is the second in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. Course Credit Hours 4. Prerequisites: second professional year standing.

COP 720: Clinical Pharmacokinetics
Clinical application of basic pharmacokinetic principles to safe and effective patient management with emphasis on design of dosage regimens, therapeutic monitoring, and adjustment of therapy. Application illustrated and practiced through discussions and case examples. Course Credit Hours: 3. Prerequisites: second professional year standing.

COP 725: Outcomes Design and Assessment
This course teaches common statistical methods and study designs used in pharmacoepidemiology and outcomes research, as well as to issues related to the measurement, analysis, and interpretation of results of clinical trials and outcomes studies. Course Credit Hours: 3. Prerequisite: second professional year standing.

COP 733: Pharmacy Skills Lab IV: Applied Health-Systems Pharmacy
In the laboratory setting, students apply basic skills and knowledge acquired in COP 731 through various mechanisms and activities requiring critical thinking and problem solving. The laboratory continues to hone student professionalism. Course Credit Hours: 1. Prerequisite: second professional year standing.

COP 744: Clinical Applications III
Case-based discussions that integrate and demonstrate applicability of other course material in patient care. Course Credit Hours: 1. Prerequisite: second professional year standing.

Summer
COP 750: Introductory Pharmacy Practice Experience - Hospital
Introduction to the practice of the pharmacy in the institutional setting. Forty hours of directed experience per week for four weeks. Course Credit Hours: 4. Pass/Fail. Prerequisite: second professional year standing.

Fall

COP 804: Health Care Systems and Management
This course provides insight and understanding of the U.S. health care system and pharmacy's role within that system. Managerial skills and concepts are taught to allow pharmacists to maximize their contribution to this health care system and to the patients it serves. Course Credit Hours 4. Prerequisite: third professional year standing.

COP 806: Pathophysiology & Pharmacology III
Building on Pathophysiology and Pharmacology I and II, this will be the third in a 4-semester sequence of courses aimed at integrating the discussion of specific disease states and the mechanism of action of the pharmacologic agents used to treat those disease states. This knowledge will be integrated, utilized and applied in a parallel sequence of courses in pharmacotherapy using an organ-system based approach emphasizing pharmaceutical care and disease management. Course Credit Hours: 3. Prerequisites: third year professional standing.

COP 816: Pharmacotherapy III
This course is the third in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. Course Credit Hours: 4. Prerequisite: third professional year standing.

COP 821: Advanced Drug Information
This course is designed to provide students with advanced drug information practice and critical literature evaluation skills. This course provides students with the requisite skills to facilitate lifelong learning. Course Credit Hours: 2. Prerequisites: third professional year standing.

COP 846: Clinical Applications IV
Case-based discussions that integrate and demonstrate applicability of other course material in patient care. Students may also have discussions, presentations, and written assignments that incorporate new and previously learned material. Course Credit Hours: 1. Prerequisite: third professional year standing.

COP 834: Pharmacy Skills Lab V: Applied Community Pharmacy
Provide students with an advanced knowledge of prescription and drug order processing, and assist them in the development of appropriate skills necessary for provision of pharmaceutical care to patients in the community setting, through the use of medication profiles, patient counseling, personal interviews, and appropriate prescription and nonprescription drug information. Course Credit Hours: 1. Prerequisites: third professional year standing.

Spring

COP 805: Pharmacy Law and Ethics
This course teaches federal and state laws and regulations governing the practice of pharmacy and introduction to the professional and ethical issues relevant to the practice of pharmacy. Course Credit Hours: 3. Prerequisite: third professional year standing.

COP 808: Pathophysiology & Pharmacology IV
This is the fourth in a 4-semester sequence of courses aimed at integrating the discussion of specific disease states and the mechanism of action of the pharmacologic agents used to treat those disease states. This knowledge will be integrated, utilized and applied in a parallel sequence of courses in Pharmacotherapy using an organ-system based approach emphasizing pharmaceutical care and disease management. Course Credit Hours: 2. Prerequisites: third year professional year standing.

COP 818: Pharmacotherapy IV
This course is the fourth in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. Course Credit Hours: 5. Prerequisites: third professional year standing.

COP 836: Clinical Assessment
Development of clinical assessment skills necessary in the provision of pharmaceutical care to patients with a variety of disease states in both inpatient and outpatient settings. Students will combine physical assessment skills, patient counseling skills, and pharmacotherapy knowledge and apply this information to patient care related activities in various clinical settings. Course Credit Hours: 3. Prerequisite: third professional year standing.

COP 848: Clinical Applications V
A capstone course, where case studies of complex patients will bring together concepts learned throughout the previous semesters in the professional program. Students may also have discussions, presentations, and written assignments that incorporate new and previously learned material. Course Credit Hours: 1. Prerequisite: third professional year standing.

P4

COP 901 Acute/General Medicine Pharmacy Practice Experience I
This required advanced pharmacy practice experience (APPE) provides clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 902 Acute/General Medicine Pharmacy Practice Experience II
This required advanced pharmacy practice experience (APPE) provides clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease,
nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. **Prerequisite: fourth professional year standing.**

**COP 906 Acute/General Medicine Pharmacy Practice Experience VI**

This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. **Prerequisite: fourth professional year standing.**

**COP 907 Acute/General Medicine Pharmacy Practice Experience VII**

This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. **Prerequisite: fourth professional year standing.**

**COP 911: Ambulatory Care Pharmacy Practice Experience I**

This required advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. **Prerequisite: fourth professional year standing.**

**COP 912: Ambulatory Care Pharmacy Practice Experience II**

This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. **Prerequisite: fourth professional year standing.**

**COP 913: Ambulatory Care Pharmacy Practice Experience III**

This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug
COP 914: Ambulatory Care Pharmacy Practice Experience IV
This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 915: Ambulatory Care Pharmacy Practice Experience V
This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 920 Community Pharmacy Practice I
This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 921 Community Pharmacy Practice II
This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides additional pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 922 Community Pharmacy Practice III
This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides additional pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 923 Community Pharmacy Practice IV
This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides additional pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 930 Hospital/Health System Pharmacy Practice Experience I
This required advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in a hospital/health system setting. This APPE provides pharmacy experience in a variety of hospital/health system practice areas including regulatory compliance, human resources, patient care, informatics, and drug distribution process. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 931 Hospital/Health System Pharmacy Practice Experience II
This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in a hospital/health system setting. This APPE provides pharmacy experience in a variety of hospital/health system practice areas including regulatory compliance, human resources, patient care, informatics, and drug distribution process. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 932 Hospital/Health System Pharmacy Practice Experience III
This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in a hospital/health system setting. This APPE provides pharmacy experience in a variety of hospital/health system practice areas including regulatory compliance, human resources, patient care, informatics, and drug distribution process. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.

COP 940 Elective Pharmacy Practice Experience I
Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. Prerequisite: fourth professional year standing.
Elective courses are offered based on faculty availability, space availability, and sufficient enrollment.

### COP 941 Elective Pharmacy Practice Experience II
Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. **Prerequisite: fourth professional year standing.**

### COP 942 Elective Pharmacy Practice Experience III
Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. **Prerequisite: fourth professional year standing.**

### COP 943 Elective Pharmacy Practice Experience IV
Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. **Prerequisite: fourth professional year standing.**

### COP 944 Elective Pharmacy Practice Experience V
Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine. Course Credit Hours: 4; one month of supervised advanced pharmacy practice for at least 40 hours per week. **Prerequisite: fourth professional year standing.**

### COP 950: Grand Rounds
Regularly scheduled, formal, oral presentations with audiovisuals on controversial or new areas of pharmacotherapeutics, pharmacoconomics, pharmacuetics, medicinal chemistry or pharmacy practice. A follow-up question and answer period examines the student's ability to substantiate his/her conclusions. Content and presentation technique will be critiqued. Course Credit Hours: 1; seminar presentations. **Prerequisite: fourth professional year standing.**

### Elective Course Descriptions
Elective courses are offered based on faculty availability, space availability, and sufficient enrollment.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite</th>
<th>Credit Hours</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>COP 500</td>
<td>Special Project, Dept. of Pharmaceutical &amp; Biomedical Sciences</td>
<td>Second or Third Professional Year Standing</td>
<td>1-4</td>
<td>Fall or Spring</td>
</tr>
<tr>
<td>COP 501</td>
<td>History of Pharmacy</td>
<td>Second or Third Professional Year Standing</td>
<td>2</td>
<td>Spring semester</td>
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<tr>
<td>COP 502</td>
<td>Clinical Immunology/Transplant</td>
<td>Second or Third Professional Year Standing</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>COP 503</td>
<td>Special Project, Dept. of Pharmacy and Outcome Sciences</td>
<td>Second or Third Professional Year Standing</td>
<td>1-4</td>
<td></td>
</tr>
<tr>
<td>COP 504</td>
<td>Health Systems Pharmacy: Policy and Practice</td>
<td>Second or Third Professional Year Standing</td>
<td>2</td>
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<tr>
<td>COP 505</td>
<td>Personal Finance</td>
<td>Second or Third Professional Year Standing</td>
<td>3</td>
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<tr>
<td>COP 506</td>
<td>Pediatric Pharmacotherapy</td>
<td>Second or Third Professional Year Standing</td>
<td>3</td>
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This challenging course is designed to provide the student with increased exposure to disease states, medication issues, and clinical decision-making skills specific to the pediatric population. Pediatrics is an integral component to most pharmacy careers, and gaining a greater understanding of the patient population's challenges and nuances is necessary to become a confident and well-rounded pharmacist.
practitioner. This elective also seeds to provide exposure to the pediatric pharmacy community, including experts in the subspecialty areas and organizations. Course Credit Hours: 2. Prerequisite: second professional year standing.

**COP 507: Advanced Topics in Pharmacy Compounding I**
This course will build upon the knowledge acquired in the first professional year courses Dosage Forms/Drug Delivery Systems and Compounding/Applied Pharmaceutics lab. The course will provide emphasis on practical application in the evaluation of unique dosage forms, pharmacotherapy, and special pharmaceutical needs of various patient populations. This course is self-paced and delivered in an online format utilizing prerecorded lectures. Course Credit Hours: 1. Pass/Fail. Prerequisite: second professional year standing. Fall semester.

**COP 508: Advanced Topics in Pharmacy Compounding II**
This course is an elective course that provides additional insight and understanding into a variety of pharmacy compounding topics, which include nutrient depletion, drug-induced nutrient depletion, metabolic demands of athletes, men’s health, and family medicine. This course is self-paced and delivered in an online format utilizing prerecorded lectures. Course Credit Hours: 1. Self-paced, online format. Pass/Fail. Prerequisite: second professional year standing. Spring semester.

**COP 510: Acute Care Therapeutics**
A disease oriented approach and organ integrated approach to the care of patients with acute illnesses managed in the in-patient hospital setting. Students will learn common disease processes that affect the acutely ill hospitalized patient and the appropriate pharmacotherapy to treat these patients. This course focuses on developing critical thinking and problem solving skills, and integrating material from this course and previous courses in a case-based format. Course Credit Hours: 3. Prerequisite: third professional year standing. Spring semester.

**COP 511: Drug Interactions**
This course is designed to prepare students to appropriately recognize, predict, assess, and manage drug interactions that are encountered in pharmacy practice. Course Credit Hours: 2. Prerequisite: third professional year standing.

**COP 512: Senior Care Pharmacy Practice**
This course will introduce students to various topics related to the care of older patients in any setting. Course content will complement the SCCP curriculum in regard to geriatric pathophysiology, pharmacology, socioeconomics, regulations, and pharmacotherapeutics. In addition, it will expand upon the various practices of senior care pharmacy. Practicing consultants and other topic experts will serve as lecturers. In addition to class discussions and lectures, students will participate in a consultant pharmacist shadowing experience and will conduct an interview with a senior patient. Course Credit Hours: 2. Prerequisite: third professional year standing.

**COP 513: Infectious Diseases on the Adult Ward**
This course will focus on developing a working knowledge of infectious diseases and principles of pharmacotherapy for diseases that are commonly encountered in hospitalized adult patients. In addition, students will explore and critically evaluate relevant literature to answer topical questions regarding patient cases. These cases will be presented to peers in groups of 2 to 4 students. Each group will present approximately 3 cases and participate in a pro/con debate. Additional readings and exercises will be assigned to enhance preparation for class. Course Credit Hours: 2. Prerequisites: third professional year standing; and a passing grade in Pharmacotherapy.

**COP 514: Introduction to Clinical Pharmacy Practice**
This course will build upon the principles of pathophysiology, medication administration, and patient interaction to include: developing advanced skills in patient assessment (SOAP notes), taking accurate medication histories, and providing effective patient counseling. Students will understand the role of the pharmacist in discussing patient issues such as, access to medications, adherence, assessing understanding to improve compliance, and sensitive patient issues. Course Credit Hours: 2. Prerequisite: second professional year standing.