

COLLEGE OF PHARMACY

Mission, Vision, and Values

Mission: The mission of the College of Pharmacy is to advance the art and science of pharmacy through active learning, research, innovative patient care, and comprehensive interprofessional education.

Vision: In the next 10 years, CNUCOP will become a nationally recognized leader in educating the next generation of pharmacists in integrated patient healthcare.

Values:

- Innovation in student-centered teaching, scholarship, and practice
- Student success
- Open and clear communication
- Diversity of experience, culture, and thought
- Effective community partnerships
- Inspiration through altruism, empathy, and civic virtue
- Professionalism and integrity in all interactions

Goals:

- To foster critical thinking, problem-solving, clinical reasoning, and self-directed learning. To provide an integrated interprofessional experience
- To develop student skills, attitudes, values, judgment, professional behavior, and expertise in patient-centered care through experiential experiences.
- To prepare graduates to lead, collaborate, and educate others with integrity, professionalism, and compassion.
- To offer students participation in professional organizations and community projects to learn the skills required for professional advocacy
- To support faculty in discipline-related research and other scholarly activities.
- To provide a faculty development program that nurtures and supports a learning-centered curriculum and the scholarship of teaching
- To foster faculty engagement in professional and community activities
- To support a research program that promotes collaboration, innovation, and discovery

Educational Philosophy

The CNUCOP curriculum is designed to help students become active, self-directed and lifelong learners. The four (4) year curriculum is designed to facilitate and optimize student learning in a progressive and integrated manner both in didactic and experiential courses.

Active Learning

Active learning is an educational strategy that CNUCOP employs throughout the first three years of the curriculum. Active learning promotes judgment, mastery of content, communication, teamwork skills, problem-solving, and critical thinking. It emphasizes the importance of individual accountability, group collaboration, and the application of basic concepts to work through team assignments. The role of the instructor is to clearly articulate the learning objectives, create challenging problems for students to solve, and probe their reasoning in reaching conclusions. All students are accountable for their individual and group work. At the beginning of each course, the Office of Academic Affairs forms teams comprised of 5 to 6 students based on various criteria that will help achieve an even distribution of resources across all teams. Students remain with the same team throughout the semester for each course.

Learning Outcomes

Program Learning Outcomes

Upon successful completion of the CNUCOP Doctor of Pharmacy program, students will be able to demonstrate the following learning program learning outcomes:

PLO 1: Foundational Knowledge. Demonstrate the knowledge, skills, abilities, behaviors, and attitudes necessary to apply the foundational sciences to the provision of patient-centered care.

PLO 2: Essentials for Practice and Care. Demonstrate the knowledge, skills, abilities, behaviors, and attitudes necessary to provide patient-centered care, manage medication use systems, promote health and wellness, and describe the influence of population-based care on patient-centered care.

PLO 3: Approach to Practice and Care. Demonstrate the knowledge, skills, abilities, behaviors, and attitudes necessary to solve problems; educate, advocate, and collaborate, working with a broad range of people; recognize social determinants of health; and effectively communicate verbally and nonverbally.

PLO 4: Personal and Professional Development. Use the knowledge, skills, abilities, behaviors, and attitudes necessary to demonstrate self-awareness, leadership, innovation, entrepreneurship, and professionalism.

PLO 5: Interprofessional Competence. Use the knowledge, skills, abilities, behaviors, and attitudes necessary to demonstrate appropriate values and ethics, roles and responsibilities, communication, and teamwork for collaborative practice.

Co-Curricular Learning Outcomes

Upon successful completion of the CNUCOP Doctor of Pharmacy program, students will be able to demonstrate the following co-curricular learning outcomes:

1. **Social Awareness and Cultural Sensitivity.** Demonstrate awareness of and responsiveness to social and cultural differences by adapting behaviors appropriately and using effective interpersonal skills.
2. **Professionalism and Advocacy.** Demonstrate professional behavior and effective interactions with other healthcare professionals, community members, and/or patients and advocate for initiatives to improve patient care, health outcomes, and the profession of pharmacy.
3. **Self-Awareness and Learning.** Demonstrate self-awareness through reflection and the development of appropriate plans for self-directed learning and development.
4. **Innovation and Entrepreneurship.** Demonstrate innovation and creativity to develop novel strategies to accomplish professional goals, or demonstrate an understanding for how innovation and creativity influence the development of novel strategies to accomplish professional goals.
5. **Public Health and Education.** Apply skills learned in the classroom to create and effectively deliver public health initiatives and health-related education to the community.
6. **Service and Leadership.** Demonstrate the ability to lead and work collaboratively with others to accomplish a shared goal that improves healthcare.
4. Use proper grammar, spelling, and pronunciation in communications.
5. Explain medication information to patients in understandable terms.
6. Adjust communication based on contextual or cultural factors, including health literacy, language barriers, and cognitive impairment.
7. Routinely verify patient or recipient understanding of communicated information.
8. Demonstrate effective public speaking skills and the appropriate use of audio-visual media when communicating with groups of patients, peers, and other health care professionals.
9. Develop effective written materials for patients, peers, and other health care professionals.

B. Interact with patients & the health care team.

10. Articulate the pharmacist's role as a member of the health care team.
11. Establish professional rapport with patients and healthcare professionals.
12. Demonstrate sensitivity to and respect for each individual's needs, values, and beliefs, including cultural factors, religious beliefs, language barriers, and cognitive abilities.
13. Demonstrate empathy and caring in interactions with others.
14. Maintain patient confidentiality and respect patients' privacy.
15. Demonstrate ability to resolve conflict in the pharmacy practice setting.

C. Behave in a professional and ethical manner.

1. Dress professionally and appropriately for the practice setting.
2. Arrive punctually and remain until all responsibilities are completed.
3. Use time effectively and efficiently.
4. Distinguish professional interests from personal interests and respond appropriately.
5. Demonstrate awareness of personal competence and limitations, and seek guidance or assistance from preceptors when appropriate.
6. Accept responsibility for one's actions.
7. Respond appropriately to feedback from preceptors, patients, peers, and other health care professionals.
8. Show initiative in interactions with patients, peers, and other health care professionals.
9. Demonstrate passion and enthusiasm for the profession.
10. Be aware of and work appropriately within the culture of the assigned practice setting.
11. Demonstrate awareness of site or institutional policies and procedures.
12. Prioritize workload appropriately.
13. Identify issues involving ethical dilemmas.
14. Weigh and balance different options for responding to ethical dilemmas.
15. Propose steps to resolve ethical dilemmas.
16. Adhere to all state and federal laws and regulations as a pharmacy intern in the practice setting.

Experiential Educational Expectations

Experience in real pharmacy practice settings teaches judgment, and California Northstate College of Pharmacy is committed to developing and maintaining a robust experiential component to the Doctor of Pharmacy program.

Pharmacy practice experience is designed to develop a foundation of competencies that students will build upon as they progress through the program. By the end of the Introductory Pharmacy Practice Experiences (IPPE), students should be able to demonstrate competencies in basic practitioner skills at a fundamental level. During Advanced Pharmacy Practice Experiences (APPE), students should demonstrate pharmacy practice outcomes at an advanced and progressive manner that emphasize clinical judgment, professional behavior, and personal responsibility. Achievement of these competencies allows student pharmacists to embark on an independent and collaborative practice upon graduation. The following experiential outcomes were developed by a collaborative group representing seven of the California Colleges and Schools of Pharmacy.

1) Communication and Professional Behavior

A. Communicate effectively.

1. Communicate accurate and appropriate medical and drug information to a pharmacist, preceptor or other health care professional in a clear and concise manner.
2. Determine the appropriate means of communication for the situation.
3. Actively listen to patients, peers, and other health care professionals.

2) The Practice of Pharmacy

A. Organize and evaluate information.

1. Assess prescription or medication orders for completeness, authenticity, and legality.
2. Verify that dose, frequency, formulation, and route of administration on prescription or medication orders are correct.
3. Obtain any pertinent information from the patient, medical record, or prescriber, as needed, for processing prescription or medication orders (e.g., allergies, adverse reactions, diagnosis or desired therapeutic outcome, medical history).
4. Review the patient profile or medical record for any allergies or sensitivities.
5. Determine the presence of any potential medication-related problems.
6. Determine if it is legal and appropriate to refill a prescription and to contact the prescriber for authorization, if necessary.

B. Prepare and dispense medications.

1. Accurately enter patient information into the patient's pharmacy profile or medication record.
2. Select the correct drug product, manufacturer, dose, and dosage form and prepare it for dispensing.
3. Assure that the medication label is correct and conforms to all state and federal regulations.
4. Assure that the label conveys directions in a manner understandable to the patient and that appropriate auxiliary labels are attached.
5. Select an appropriate container for storage or use of medications with special requirements (e.g., child-resistant containers, compliance devices).
6. Accurately perform and document the necessary calculations to correctly prepare the medication.
7. Perform the required technical and basic compounding steps to produce a pharmaceutically elegant product.
8. Demonstrate aseptic technique during the preparation of parenteral medications.
9. Document the preparation of any medication that has been compounded, repackaged or relabeled.
10. Adjudicate third-party insurance claims using established billing systems.
11. Determine the appropriate storage of medications before and after dispensing.
12. Comply with all legal requirements and professional scope of practice.

C. Provide patient counseling.

1. Communicate pertinent information to the patient to encourage proper use and storage of medications.
2. Discuss any precautions or relevant warnings about medications or other therapeutic interventions.
3. Assure the patient comprehends the information provided.
4. Assess and reinforce the patient's adherence to the prescribed therapeutic regimen.

D. Maintain accurate records.

1. Document the preparation and dispensing of medications.

2. Maintain manual or computerized files for prescription records that conform to state and federal laws and regulations.
3. Adhere to state and federal laws and regulations related to inventory control (e.g., controlled substances, investigational drugs).

E. Assist patients seeking self-care.

1. Assess a patient's self-identified problem (e.g., common cold, fever, pain, gastrointestinal problems) to determine if the problem is appropriate for self-care or requires referral.
2. Discuss options for treatment and, if indicated, recommend appropriate non-prescription product(s).
3. Counsel the patient about the proper use of self-care products.
4. Instruct a patient about the proper use of a diagnostic agent or device, including directions for obtaining accurate results and how to interpret the results.
5. Teach a patient the proper and safe use of commonly-used health products (e.g., condoms, thermometers, blood pressure monitoring devices, blood glucose meters, metered-dose devices, ear syringes, and adherence devices).

F. Contribute to and monitor the optimal use of medications.

1. Articulate the pharmacist's role in medication use oversight (e.g. formulary management, practice guidelines).
2. Participate in established medication safety and quality improvement activities (e.g., adverse drug reaction reporting, medication reconciliation).
3. Access, select, utilize, and cite appropriate references for health information and patient education materials.
4. Demonstrate proficiency with the technology used at assigned experiential sites.
5. Formulate evidence-based pharmaceutical care plans based upon sound pharmacotherapeutic principles that take into account individual patient health beliefs, attitudes, and behaviors.

3) Public Health

A. Participate in health education programs and community-based health interventions.

1. Raise public awareness about the role of a pharmacist as a public health educator.
2. Participate in activities that promote health, wellness, and the use of preventive care measures.
3. Articulate the concept of advocacy - what it means both professionally and personally.

B. Demonstrate public health-related practice skills.

1. Administer subcutaneous, intramuscular or intradermal injections, including immunizations.
2. Screen for common medical conditions and make appropriate referrals.

3. Conduct smoking-cessation interventions when appropriate.

Professional Standards

Communication Skills

Pharmacists must be able to effectively communicate with individuals from within and outside of the health care professional environment to engender a team approach to patient care. Those individuals may include other health care providers such as physicians and nurses; non-health care providers, such as patients, family members, caregivers; and other community members, such as policy makers. Influential communication focuses on the ability to adapt language style and vocabulary to meet the health-care literacy needs of each individual or unique community. Pharmacists must display an in-depth knowledge of medications and be able to convey pharmaceutical information in a clear and concise manner to ensure safe and effective medication use.

Students at CNUCOP must exhibit in-depth medication knowledge, effective interpersonal communications skills, the ability to work as an effective member of a health care team, and the ability to collaborate with all members of the health care team to ensure continuous quality patient care.

Patient Care Commitment

To provide patients with unparalleled health care, pharmacists must focus on disease treatment and management as well as wellness and disease prevention. Pharmacists must practice on inter-professional teams that focus on patients, patient populations, and outcomes. Pharmacists, in collaboration with patients and other health care providers, can ensure proper medication use by focusing on evidence-based medicine, quality improvement, cultural competence, health care disparities, and advocacy.

Students at CNUCOP should advocate for patient-centered pharmacist care to ensure safe and effective medication use.

Knowledge of the Profession

Revelation occurs when wisdom of the past is combined with current reality. Pharmacists must be aware of the evolutionary steps within the profession and continue to advocate for improved patient-centered care.

Students at CNUCOP are required to attend didactic, laboratory, discussion, and experiential programs. They should understand how the practice of pharmacy has continually evolved to benefit the needs of society and develop visionary thinking capabilities to continue to advance the science and art of pharmacy.

Technical Abilities

All students will be certified in cardiopulmonary resuscitation (CPR), first aid, and immunizations. Therefore, student pharmacists are required to perform immunizations, cardiopulmonary resuscitation, and physical assessments suitable for medication therapy management to fulfill all academic requirements of the College.

General Abilities

Students should have the cognitive ability to critically and analytically think, to make compassionate and ethical decisions, and to engage in self-assessment and self-directed learning.

Licensure

Completion of Program and Licensing

Completion of the educational program leading to a degree and/or diploma is dependent upon student performance and success. The requirements for licensure in the profession are established by the state where licensure is sought. Completion of the educational program and obtaining a degree or diploma does not by itself guarantee licensure. Students are expected to remain current with other licensing requirements, including but not limited to the licensure examination and technical standards they may be required to meet in order to be licensed by the state in which they seek to practice. In addition, maintaining such technical standards is a condition for continued enrollment in this program; reasonable accommodations as defined and required by law may apply to persons with disabilities.

California Intern Pharmacist

Registration Requirements

To register as an intern pharmacist in California, candidates must be currently enrolled in a school of pharmacy recognized by the Board or accredited by the Accreditation Council for Pharmaceutical Education (ACPE) and have fingerprint and background clearances. Complete registration instructions can be downloaded from the California State Board of Pharmacy website at: http://www.pharmacy.ca.gov/forms/intern_app_pkt.pdf.

California Pharmacist

The standard processing time for Pharmacist Examination and Licensure Applications by the California Board of Pharmacy is approximately 30 days after submission; however, the Board will process applications submitted by schools within 10 business days if these applications are submitted as a batch by the school. Students interested in participating in the batch processing of applications must submit their completed applications to the Office of Student Affairs and Admissions by May 1st, prior to graduation. The Office of Student Affairs and Admissions reviews each application prior to submission to the Board; however, it is the responsibility of the applicant to ensure all information is correct and that all required application materials have been included as part of the final application packet. These applications will then be hand-delivered to the Board of Pharmacy after graduation, since official transcripts, which are a component of the application, are not complete until after graduation has occurred.

To qualify for a pharmacist license, you must submit one of the following to document your education (A or B).

A. Graduate of a School of Pharmacy - If you are a graduate from an ACPE accredited college of pharmacy or a school of pharmacy recognized by the board, please request an official transcript to be sent directly to the board by your school. The

official transcript must indicate your degree earned and date conferred.

Eligibility Requirements

To be licensed in California you must pass the North American Pharmacist Licensure Examination (NAPLEX) and the California Pharmacist Jurisprudence Exam (CPJE).

To be eligible to take the licensure examination for California, you must:

- Be at least 18 years of age
- Be a graduate of a domestic school of pharmacy or be a graduate of foreign school of pharmacy and be certified by the Foreign Pharmacy Graduate Examination Committee (FPGEC)
- Have completed at least 150 semester hours of collegiate credit, 90 of which must be from a school of pharmacy
- Have earned at least a baccalaureate degree in a course of study devoted to pharmacy
- Have completed 1,500 hours of approved pharmaceutical experience as a registered intern or one year of experience as a licensed pharmacist in another state
- Have fingerprint and background clearances.

The registration instructions, requirements, and application form for licensure as a pharmacist in California may be obtained and downloaded at the California State Board of Pharmacy website:
http://www.pharmacy.ca.gov/forms/rph_app_pkt.pdf.

NAPLEX/MPJE

The MPJE exam is for students pursuing licensure out of the state of California.

To take the NAPLEX and/or MPJE, candidates must meet the eligibility requirements of the board of pharmacy from which they are seeking licensure. The board will determine your eligibility to take the examinations in accordance with the jurisdiction's requirements. If the board determines that you are eligible to take the examinations, it will notify the National Association of Boards of Pharmacy (NABP) of your eligibility. If you have questions concerning eligibility requirements, contact the board of pharmacy in the jurisdiction from which you are seeking licensure.

Registration instructions, requirements, and application form can be obtained and downloaded from the National Association of Board of Pharmacy (NABP) website at <http://www.nabp.net>.

Admission to the PharmD Program

California Northstate University College of Pharmacy (CNUCOP) uses the Pharmacy College Application System (PharmCAS), a centralized application service for pharmacy programs, for applicants seeking to apply to the four-year Doctor of Pharmacy program. An electronic application must be submitted to PharmCAS. A supplemental application, available at:

https://californianorthstateuniversity.formstack.com/forms/cop_supplemental_application_2020, must be electronically submitted to the College of Pharmacy as well. For applicants wishing to enter the 0-6 Direct Entry Doctor of Pharmacy program, an electronically application must be submitted through PharmDirect, a centralized application service for Direct Entry PharmD programs at <https://pharmdirect.liaisoncas.com/applicant-ux/#/login>. No supplemental application is required for these applicants.

The Admissions Committee evaluates applicants for admission on an individual basis. Applicants are required to have completed all prerequisites prior to entering the program. Prerequisites may be substituted with courses the Admissions Committee evaluates to be equivalent. One or more members of the Admissions Committee review and evaluate each completed admission packet to determine if an invitation for an interview should be extended.

All qualified applicants must interview for admission into the Doctor of Pharmacy program. The interview is conducted on campus. A modified multiple mini interview (MMIs) approach is used. A writing sample is also a required component of the onsite interview. The interview is designed to assess a variety of factors including: interest, oral and written communication skills, maturity, dedication, critical thinking, and an assessment of the applicant's ability to complete the program successfully and advance in the field of pharmacy. The interview may also be used to determine if the student has the English language proficiency to complete instruction in the English language since English is the only language of instruction.

All accepted students who matriculate must have all official transcripts for all courses taken since high school on record in the Admissions Office by September 30th. Please note financial assistance may be limited for non-U.S. applicants. Personal transportation, such as a vehicle, will be necessary to participate in experiential education at clinical sites.

Traditional Four-Year Doctor of Pharmacy Requirements

While a minimum GPA of 2.7 is preferred, the Admissions Committee of California Northstate University College of Pharmacy uses a holistic review process to evaluate each application, thereby taking into account a variety of factors, in addition to an applicant's academic standing, including but not limited to: work or research experience, socioeconomic status, resilience, extracurricular activities, and other non-academic related activities. California Northstate University College of Pharmacy does not require a Bachelor's degree or PCAT; however, a Bachelor's degree is preferred.

According to the United States Department of Education guidelines, all applicants deemed eligible to be admitted as regular students into the College of Pharmacy must be:

- Persons who have a high school diploma or its recognized equivalent, or
- Persons who are beyond the age of compulsory school attendance in the State of CA, i.e. at least 18 years of age and pass a test that demonstrates the student's ability to benefit (ATB) from the educational program in which the student is enrolled.

A minimum of 44 semester units (61 quarter units) of prerequisite credit must be completed prior to matriculation into the program. Science and math prerequisite coursework must be designed for science majors. Prospective students are strongly encouraged to carry full course loads (15 units per semester) during their undergraduate studies. AP exam scores of 3 or higher, with 4 preferred will be accepted for prerequisite coursework and/or general education requirements. AP credit must be reported by subject and credit and must be mailed directly from your institution or testing services to the College of Pharmacy by using college code: 7306. Additionally, the AP exam must have been taken no greater than ten years from the date of matriculation. Please note, AP exam scores will only count towards the first course in a series of science courses. For instance, an AP exam score of 3 or higher for chemistry would only count towards the General Chemistry I requirement.

Course(s)	Semester Hours	Quarter Hours
General Chemistry I with lab	4	6
General Chemistry II with lab	4	6
General Biology I	3	4
General Biology II	3	4
General Biology I or II lab	1	1
Organic Chemistry I with lab	4	6
Organic Chemistry II with lab	4	6
Human or Mammalian Physiology*	3	4
Calculus	3	4
Public Speaking	3	4
English Composition I	3	4
English Composition II	3	4
General Education Requirements**: Psychology and Economics preferred; other General Education courses will be accepted	6	8
Total	44	61 (est.)

*If taking a combined Anatomy and Physiology course, both Anatomy and Physiology I and II must be taken to fulfill the Physiology course requirement.

In addition to the requirements described above, all prerequisite coursework must meet the following requirements:

1. Must be completed at a regionally accredited US institution or its equivalent abroad.
2. Science and math courses, along with any AP credits, must have been completed no greater than ten years from the planned date of matriculation. Exceptions to this requirement may be made based on a case-by-case basis if the applicant has been applying the skills learned in the older course directly to their position or research.
3. Must be completed with a grade of C- or higher.
4. May not be taken on a pass/no pass or credit/no credit basis.
5. All prerequisite coursework taken from non-US institutions (including Canada) must be submitted to the World Education Services (WES), Inc. for an evaluation of coursework. WES evaluations should be sent directly to PharmCAS.
6. International applicants who have not completed at least two years and at least 44 semester units (61 quarter units) at a US college or university are required to take the TOEFL IBT or IELTS exam. Exam scores are only valid for a two year period from the date of the exam. The minimum TOEFL IBT and IELTS scores, along with minimum section requirements, are provided below.
 - The minimum total TOEFL IBT score is 88 with minimum section score requirements of:
 - Reading: 20
 - Listening: 20
 - Speaking: 25
 - Writing: 23
 - The minimum total IELTS score is 6.5 with minimum section score requirements of:
 - Reading: 6.5
 - Listening: 6.5
 - Speaking: 7.5
 - Writing: 6.0
7. General Education requirements are waived for applicants who have or will be receiving a Bachelor's degree or US equivalent prior to matriculation in the pharmacy program. For additional information about CNUCOP and the application process, please visit our website: pharmacy.cnsu.edu. For questions, please contact COPadmissions@cnsu.edu.
8. Qualified applicants will be invited to interview.

9. All prerequisites, including general education requirements, must be completed prior to orientation, which is held in mid-August of each year; however, applicants may still interview prior to the completion of all prerequisite coursework.

For an in-depth overview of admission requirements, how to apply, and key dates, please visit the Admissions website at <http://pharmacy.cnsu.edu> and the PharmCAS School Pages at www.pharmcas.org.

Professional and Technical Standard Requirements

CNUCOP endeavors to select applicants who have the ability to become highly competent pharmacists. The college adheres to the guidelines promulgated by the American Council for Pharmacy Education in its "Guidelines for Accreditation Standards." Within these guidelines, the college has the freedom and ultimate responsibility for the selection of students; the design, implementation, and evaluation of its curriculum; the evaluation of students; and the determination of who should be awarded a degree. Admission and retention decisions are based not only on satisfactory academic achievement, but also on non-academic factors that serve to ensure that the candidate can complete the essential functions of the academic program required for graduation. The professional and technical standards, as distinguished from academic standards, refer to those physical, cognitive, and behavioral abilities required for satisfactory completion of all aspects of the curriculum, and the development of professional attributes required by the faculty of all students at graduation. The essential abilities required by the curriculum are in the following areas: motor, sensory, verbal and written communication, intellectual (conceptual, integrative, and qualitative abilities for problem solving and decision-making), and the behavioral and social aspects for the performance of the profession of pharmacy.

Pharmacy is a physically and mentally demanding profession in which practitioners are asked to place the interests of their patients above their own which requires commitment to a life of service and dedication to continuous learning. The rigorous four year pharmacy school curriculum is where students begin to develop the qualities necessary for the practice of pharmacy. It is during this period of professional pharmacy education that the candidates acquire the foundation of knowledge, attitudes, skills and behaviors that they will need throughout their professional career. The abilities that pharmacists must possess to practice safely are reflected in the technical standards that follow. Students to the CNUCOP program must be able to meet these standards.

Technical Standards

Visual

Students must be able to observe and participate in experiments in the basic sciences. In order to make proper clinical decisions, Students must be able to observe a patient accurately. Students must be able to acquire information from written documents, films, slides or videos. Thus, functional use of vision is necessary (close and at a distance).

Oral-Auditory

Students must be able to communicate effectively and sensitively and rapidly with patients (must be able to speak and hear) and members of the health care team (both verbal and written). Students must be fluent in English. In emergency situations Students must be able to understand and convey information essential for the safe and effective care of patients in a clear unambiguous and rapid fashion. In addition, Students must have all the ability to relate information to and receive from patients in caring and confidential manner.

Motor

Students must possess the motor skills necessary to perform palpation, percussion, auscultation, and other diagnostic maneuvers. Motor skill demands require reasonable endurance, strength, and precision. A candidate should be able to execute motor movements reasonably required to provide general care and emergency treatment to patients as well as complete the CPR and First Aid component of the program. Such actions require coordination of both gross and fine muscular movements, equilibrium and functional use of senses, of touch, and vision.

Sensory

Students need enhanced sensory skills including accuracy within specific tolerances and functional use for laboratory, classroom, and clinical experiences. Students who are otherwise qualified but who have significant tactile sensory or productive disabilities must be evaluated medically. These disabilities included individuals who were injured by significant burns, have sensory motor deficits, or cicatrix formation.

Professional Standards

Students must demonstrate the judgment and emotional stability required for full use of their intellectual abilities. Possess the perseverance, diligence, and consistency to complete the College of Pharmacy curriculum and prepare to enter the profession of pharmacy.

Students must: exercise good judgment in the treatment of patients; function within both the law and ethical standards of a healthcare professional; be able to work effectively and professionally as part of a team during the pharmacy curriculum and as a member of a health care team after graduation.

Students must be able to participate in a culturally diverse classroom and practice environments; be sensitive and behave in a professional manner during interactions with patients, their families, and with health care personnel; maintain regular, reliable, and punctual attendance for classes, experiential education and clinical responsibilities; and be responsible for contributing to collaborative, constructive learning environments, accept constructive feedback from others, and respond with appropriate modification in a professional manner.

Strength and Mobility

Students must have sufficient posture, balance, flexibility, mobility, strength and endurance for standing, sitting, and participating in the laboratory, classroom and clinical sites.

Cognitive

In order to effectively solve clinical problems, Students must be able to measure, calculate, reason, analyze, integrate and synthesize in a timely fashion. In addition, they must be able to comprehend three-dimensional relationships and to understand the spatial relationships of others.

Social

Students must possess the emotional health required for the full utilization of their intellectual abilities, the exercise of good judgment for the prompt completion of all responsibilities, and for the development of effective relationships with patients. Students must be able to tolerate physically taxing workloads and function effectively under stress. They must be able to adapt to changing environments, display flexibility and learn to function in the face of uncertainties inherent in the clinical problems of patients.

The unpredictable needs of patients are at the heart of becoming a pharmacist. Academic and clinical responsibilities of students must require their presence during day and evening hours. Students will be considered not only for their scholastic accomplishments, but also on their physical and emotional capacities to meet the full requirements of the school's curriculum, and to graduate as skilled and effective practitioners of pharmacy.

Transferring from Other Institutions

Transfer requests for entry to the Doctor of Pharmacy program at California Northstate University College of Pharmacy (CNUCOP) will be reviewed and determined for acceptance on a case-by-case basis, based on specific provisions and contingent on space/seat availability. Students interested in transferring to CNUCOP must complete a Transfer Student Application available on the CNUCOP webpage. COP does not have any articulation or transfer agreements with any other college or university at this time to accept students into the CNUCOP PharmD program.

Credit for coursework completed at other institutions for recognition of advanced standing at CNUCOP will be transferred subject to the following considerations.

- The comparability of the completed coursework with CNUCOP coursework
- The appropriateness of the completed coursework towards meeting CNUCOP PharmD degree requirements
- COP does not grant credit for prior experiential learning other than IPPEs completed at an ACPE accredited School/College of Pharmacy that have been deemed equivalent to COP degree requirements and eligible for transfer.
- Determination of both the institutional source and quality of professional coursework, as reflected by the accreditation standing of the originating institution.

A student approved to transfer does not guarantee that the transferring student will be granted entry into the same academic year of standing as that of the pharmacy school/college of origin.

Acceptance of transfer courses and the award of University transfer credit shall not express nor imply that all transfer

credits will be fully accepted towards advanced standing for the PharmD degree requirements at CNU.

The total number of credits transferred shall not exceed the maximum allowable units as defined by accrediting institutions.

Transfer applicants must meet the same eligibility and progression policy standards required of students enrolled at CNUCOP.

The institutional residency requirement for a transferring student includes a minimum of two years of enrollment as a full-time student at CNUCOP to receive the PharmD degree from CNUCOP.

International Applicants

California Northstate University College of Pharmacy accepts applications from international students provided they meet the same prerequisite requirements as U.S. applicants. CNUCOP will work with international students admitted to the PharmD program to complete the I-20 and will report the student's status to SEVIS. Please see the International Student Handbook available on the CNUCOP website for detailed instructions and timeline.

Student Enrollment Agreement

The Student Enrollment Agreement must be completed and submitted to the college in order to show intent to enroll in the program. The Student Enrollment Agreement is a legally binding contract when it is signed by the incoming student and accepted by the institution.

By signing the Enrollment Agreement, the student is acknowledging that the catalog, disclosures, and information located on the website have been made available to the student to read and review.

Any questions or concerns regarding the Student Enrollment Agreement should be directed to the college or university department.

Catalog, Performance Fact Sheet, and Website

Before signing the Student Enrollment Agreement, the prospective student is strongly urged to visit the University and College website at www.cnsu.edu, and to read and review the CNU General Catalog and School Performance Fact Sheet (SPFS). The SPFS contains important performance data for the institution. The Catalog contains important information and policies regarding this institution.

Student's Right to Cancel, Withdraw, and Refund

Applicants have the right to cancel the Student Enrollment Agreement until 12:01 AM on the first calendar day after the first classroom instruction session attended, or until 12:01 AM on the eighth calendar day after a student has signed the Enrollment Agreement, whichever is later.

Cancellation shall occur when the applicant gives written notice of cancellation to the Admission Office at the

University's address shown at the top of the first page of the Enrollment Agreement. This can be hand delivered, emailed, faxed, or mailed. Written notice of cancellation sent by hand delivery, email, or facsimile is effective upon receipt by the University. Written notice of cancellation sent by mail is effective when deposited in the mail properly addressed with postage prepaid.

After the cancellation period described above, the applicant has the right to withdraw from the University at any time. Withdrawal shall occur when the applicant gives written notice of withdrawal to the Registrar at the University's address shown at the top of the first page of the Enrollment Agreement. When withdrawing from the college/university, please complete the Official College Withdrawal form available from the Registrar's request form website: <http://www.cnsu.edu/office-of-the-registrar/registrar-services>. Do not use this form to indicate your intent to cancel your enrollment agreement.

For information on refund calculations due to cancellation or college withdrawal, please see the FINANCIAL SERVICES & DISCLOSURES on page 215 of this catalog.

Tuition & Fees

All tuition, fees, expenses, and policies listed in this publication are effective as of June 2020 and are subject to change without notice by California Northstate University.

In the tables below, P1, P2, P3, and P4 indicate the student's year in the program (e.g. P1 is a first-year student; P2 is a second-year student, etc.).

Tuition is charged on a full-time, semester basis, except during the fourth program year in which tuition is charged on a full-time, annual basis. Generally, tuition and fees are charged to a student's account thirty (30) days prior to the start of each semester term. The above is based on the assumption that a student will attend each semester term on a full-time basis, which allows for a student to graduate after successfully completing four (4) years of coursework consisting of 147 semester credit hours.

International students are not charged additional fees or charges associated with vouching for student status.

Payment deadlines, loan obligations, refund calculations due to cancellation and withdraw, and the Student Tuition Recovery Fund (STRF) disclosures are located in FINANCIAL SERVICES & DISCLOSURES (page 217).

2020-2021 PharmD Tuition & Fees

Tuition & Fees	Amount	Class
Tuition	\$49,000.00	P1, P2, P3, P4
Student Activity Fee	\$100.00	P1
Pharmacy Lab Fee / Skill Lab Fee	\$500.00	P1, P2, P3
Technology Fee	\$100.00	P1, P2, P3
Professional Career Development Fee	\$60.00	P1, P2, P3
Orientation Fee	\$75.00	P1
Aseptic Compounding Certification Fee/ Pharmacists Letter Trainings	\$70.00	P1
White Coat Ceremony Fee	\$90.00	P1
Immunization Fee	\$95.00	P1
BCLS/CPR Certification Fee	\$30.00	P1
Student Activity Fee	\$200.00	P2
Student Activity Fee	\$200.00	P3
BCLS/CPR Certification Fee	\$30.00	P3
NAPLEX Review	\$250.00	P3
Graduation Fee	\$500.00	P4
P1 Total Estimated Tuition & Fees per Year ¹	\$50,120.00	
P2 Total Estimated Tuition & Fees per Year ¹	\$49,860.00	
P3 Total Estimated Tuition & Fees per Year ¹	\$50,140.00	
P4 Total Estimated Tuition & Fees per Year ¹	\$49,500.00	

Total estimated cost for the 4-year Doctor of Pharmacy program ranges from \$199,630 to \$210,000.¹

Estimated Other Educational Related Costs ²	Amount	Class
Health Insurance premium ³	\$3,200.00	P1, P2, P3, P4
Books and Supplies (estimate) ⁴	\$1,600.00	P1, P2, P3, P4
Background Check/Drug Screen/Health-Related costs ⁵	\$500.00	P1, P2, P3, P4
Room and Board ⁵	\$20,972.00	P1, P2, P3
Transportation ⁵	\$4,025.00	P1, P2, P3
Room and Board ⁵	\$25,166.64	P4
Transportation ⁵	\$4,830.00	P4
P1 Total Estimated Cost per Year ⁶	\$80,417.00	
P2 Total Estimated Cost per Year ⁶	\$80,157.00	
P3 Total Estimated Cost per Year ⁶	\$80,437.00	
P4 Total Estimated Cost per Year ⁶	\$84,796.64	

¹ Based on estimated annual tuition increases of 3% to 5%. Range amounts are estimated and nonbinding on CNU.

² Costs and expenses a student may incur during the applicable year of the PharmD program, whether or not paid directly to CNU or CNUCOP. These expenses include estimated out-of-pocket cost of living expenses for the year.

³ Provided and charged by outside healthcare plan insurance company; optional, estimated, and may increase or decrease based on number of participants and other factors.

⁴ Estimated cost

⁵ Estimated amounts

⁶ Includes tuition, fees, and educational related costs from Tuition & Fees chart.

Scholarships

The Northern California Education Foundation and the College of Pharmacy award various scholarships to students during the academic year. The scholarships are awarded on the basis of financial need, academic performance, leadership, and/or promoting diversity in the profession.

Information regarding various scholarships can be found on the CNU Student Financial Aid Tools webpage, <http://www.cnsu.edu/student-financial-aid-office/student-financial-aid-tools/student-financial-aid-tools>. For scholarships and awards specific to the College of Pharmacy, please visit <http://pharmacy.cnsu.edu/shareddocs/Scholarship/CNUCOP-Scholarship-and-Awards-List.pdf> for a description of the different scholarships and awards available. Students are also encouraged to apply to external scholarships.

General Policies

Orientation and Registration

New Student Orientation is mandatory for all incoming students. The Office of Student Affairs and Admissions must be notified of any absence due to illness or emergency, if a student is not able to attend the scheduled orientation. The student will be required to provide documentation of the absence and complete a make-up orientation within the first week of school, in addition to attending scheduled classes and maintaining course requirements.

Registration for classes requires:

1. All admission contingencies be fulfilled.
 - a. Admission contingencies include proof of medical insurance coverage, all required immunizations, a cleared background check, and any other institutional requirements. Students may enroll in the Student Health Insurance Plan to satisfy the insurance requirement. For a complete list of required immunizations, please review the [COP Student Handbook](#)
2. Completion of all new student paperwork.
3. Financial aid clearance from the Financial Aid Office.

Students who are not in compliance with institutional requirements or who have a financial hold at the time of registration are required to satisfy the requirement and submit an approved Add/Drop form by the end of the Add/Drop period.

New students must submit the *Emergency Contact and Medical Information Form* to the Office of the Registrar by the end of Orientation. To make updates, a new form must be submitted to the Registrar. The Office of the Registrar requires submission of the *Authorization to Release Student Records* if a student desires to grant a personal third-party (such as a parent, spouse, etc.) access to his/her student record. Please refer to the "[Directory Information and Access to Student Records](#)" section of this catalog for more information.

New students should review their local, home, and billing contact information via the Student Portal and update as needed. It is the student's responsibility to maintain valid contact information throughout their enrollment at CNU. Instructions for accessing the Student Portal is sent by the CNU IT department to the student's CNU email address.

Registration is conducted by the Registrar prior to the start of each semester for new and continuing students. Students with business, financial, or other registration holds on their account will not be registered until the Registrar is notified that the hold has been cleared. Students who are non-compliant with institutional requirements or who have a hold on their student account at the time of registration are required to satisfy the requirement and may also be required to submit the Course Add/Drop form by the end of the Add/Drop period to register or make schedule changes.

All accepted students who matriculate must have all official transcripts for all courses taken since high school as well as evidence of high school diploma or equivalent on record in

the Admissions Office by September 30 of the Fall semester that they matriculate.

Intern License

Enrolled CNU students must have a valid, current California Pharmacy Intern License. Incoming students are required to apply for a Pharmacy Intern License at the start of the Professional Year 1 (P1). Accepted students must download the application and complete the requirements prior to the orientation program. During orientation week these applications are collected by the Office of Experiential Education and submitted to the California Board of Pharmacy. Once the applications are received and processed, the California Board of Pharmacy mails the Intern License to the Office of Experiential Education where a copy is kept in the student's permanent file.

It is not possible to participate in the experiential component (the IPPE or APPE rotations) without a current California Pharmacy Intern License.

Address Where Instruction Will Be Provided

Class sessions are conducted at 9700 West Taron Drive, Elk Grove CA 95757 or online. Experiential education, clinical rotations, and service learning activities are conducted at assigned professional clinical locations and community sites as established by agreement among the student, professional preceptor, and College.

Thermal Camera Use for Temperature Checks

In response to the COVID-19 pandemic and in order to protect the health and safety of all persons on California Northstate University's ("CNU") campuses, CNU has implemented the use of thermal cameras at the entrances to both campuses. These cameras are used to determine if a person seeking entry to one of our buildings is displaying a fever. If after two scans the cameras indicate the person has a fever, entry will be denied to that individual. No exceptions shall be made to this policy. Anyone failing to abide by this policy will be removed from campus. Absences due to failing the thermal camera scan is considered as excused and approved absence for students. Student must communicate with the faculty on record for that session for any required makeup. Failure to complete the required "makeup" will affect the course performance.

Instruction/Course Delivery

The College of Pharmacy offers a didactic component of the curriculum that is usually in a classroom instruction setting comprised of an initial sequence of biomedical, clinical, pharmaceutical, and social and administrative science courses, followed by a series of organ-system based modules that integrate pathophysiology, pharmacology, medicinal chemistry, and pharmacotherapy concepts into the management of acute and chronic conditions. Selected classes may be delivered virtually.

The experiential component of the curriculum includes 300 hours of introductory pharmacy practice experience over the first three academic years and 1440 hours of advanced pharmacy practice experience in the final academic year. Students complete the pharmacy practice experience throughout various offsite locations.

The College of Pharmacy provides learning experiences through the use of team-based learning to deliver the curriculum. Team-based learning (TBL) prepares students to play a key role in a multidisciplinary team setting.

All courses are delivered in English and English language services are not provided.

Academic Policies & Procedures

Academic Calendar

The COP Academic Calendar consists of two didactic course semesters lasting approximately 15 weeks long. Summer classes are not offered by CNUCOP with exception of designated online elective courses. Second and third-year students complete IPPE and fourth-year students complete APPE experiential education modules throughout the calendar year as assigned.

Credit Hour Policy

For each 15 week semester, 1 credit is assigned per hour each week of classroom or direct faculty didactic instruction (that is, per hour of lecture or student in class time) and a minimum of 2 hours of out-of-class student work (homework) (*TBL*). 1 credit is assigned per 3 hours each week of student time spent for courses that include workshop and/or laboratory time, and for experiential education (*AL/LAB/EL*). Students complete 300 hours of IPPE and 1440 hours of APPE as part of their experiential education training (*EL*).

Code	Course Type	Code	Course Type
AL	Active Learning course	LEC	Lecture course
EL	Experiential Learning	TBL	Team- Based Learning course
LAB	Laboratory course		

Grading

A letter grade equal to or greater than a C is considered satisfactory performance (passing) for completion of a course. In order to progress from one semester to the next, students must pass all courses with a letter a grade of C or higher and maintain a minimum cumulative grade point average (GPA) of 2.0. The breakdown for assignment of letter grades and grade points for each letter grade are as follows:

Grade	Definition	GPA Unit
A	90.0- 100%	4.00
B	80.0- 89.9%	3.00
C	70.0- 79.9%	2.00
D	60.0-69.9%	1.00
F	<60%	0.00
Y	Remediation Placeholder	Not in GPA
I	Incomplete	Not in GPA
W	Official Course Withdrawal	Not in GPA

Incomplete or Withdrawal from a Course

During a semester, a student may withdraw or fail to complete all required assignments and/or examinations due to extenuating circumstances, such as, but not limited to, an illness or a family emergency. In such cases, the course coordinator may give a grade of Incomplete for the course.

All missed assignments and exams must normally be completed within 10 business days after the end of the semester in which the Incomplete was received, or within a timeframe determined by the course coordinator. Failure to successfully complete the course will result in an earned F grade for the course and placement on Academic Probation.

Withdrawal from a course must first be approved by the course coordinator and the Office of Academic Affairs. Where a student has had to withdraw from a course a grade of W will be applied and the student will have to repeat the course next time it is offered.

GPA Calculation

To calculate cumulative GPA, letter grades will be converted to their numeric grade point value using the grading convention table above, and then added together. The sum is then divided by the number of courses taken. Grades received in retaken classes will be used in determining cumulative GPA. The grade initially received in the course will not be included in the calculation, but is recorded on the transcript.

Academic Honors

The Registrar compiles a list of *full-time P1-P3* students who have demonstrated academic excellence in each didactic semester. Honors are noted on the student's transcript for each qualifying semester.

President's List: 3.75-4.00 GPA

Dean's List: 3.50-4.00 GPA

Rho Chi Honor Society – Invitation requires a minimum 3.50 cumulative GPA and class standing within the top twenty percent (20%) determined after the first semester of the student's second (P2) year. New members will be inducted into Rho Chi in the Spring semester of their P2 year. Any P2 or P3 students who become newly eligible in subsequent semesters will be inducted in the spring semester of their P3 year.

Course Grade Appeal Policy

Students may file an appeal if there is a disagreement with a final course grade. Students wishing to appeal a grade received in a College of Pharmacy course must follow the three steps listed below.

First Step - Student statement to course coordinator

A student can initiate the formal grade appeal process in writing using the Course Grade Appeal Form. The student must complete sections I and II and submit the form to the Course Coordinator within 3 business days of online grade posting.

The Course Coordinator, in collaboration with the Department Chair, will respond to the student's grade

appeal in writing within 5 business days of receipt of the appeal. The Course Coordinator will return copies of the grade appeal form, with section III completed, to the Associate Dean for Academic Affairs and the Registrar, while returning the original copy to the student in case they wish to pursue the matter further. If the appeal is approved by the Course Coordinator and Department Chair, the Course Coordinator returns the completed grade appeal form to the Office of the Registrar along with a completed Grade Change Form. If the appeal is denied, and the student accepts the outcome, the process ends here.

Second Step - Appeal to the Associate Dean for Academic Affairs

If the appeal is denied by the course coordinator/department chair, and the student wishes to pursue the matter further, the student has 3 business days from the date the Course Coordinator returns the form to sign and complete section IV of the form and submit it to the Associate Dean for Academic Affairs.

The Associate Dean for Academic Affairs will render a decision in writing to the student within 5 business days of receipt of the formal appeal. If the appeal is approved the form will be returned to the Office of the Registrar with a completed Grade Change Form. If the appeal is denied, and the student accepts the outcome, the process ends here.

In the event the Course Coordinator is the Associate Dean I for Academics, the student may appeal the decision directly to the Dean.

Third Step – The Dean of the College

If the Associate Dean for Academic Affairs denies the appeal, and the student wishes to pursue the matter further, the student has 3 business days from receipt of the decision to submit an appeal in writing to the College Dean. The Dean will render the final decision in writing within 5 business days of receipt of the formal appeal. The final Course Grade Appeal form must be submitted to the Office of the Registrar for processing.

Milestone and Capstone Exams

An examination on course material presented during the previous program years will be administered yearly. The exam for the P1 and P2 classes is referred to as the Milestone Exam while the exam for the P3 class is referred to as the PCOA Exam. Each exam is made of multiple choice questions developed by faculty, practitioners, or outside trainers. Exam questions cover all courses offered up to the students' present status in the program. The P1 Milestone Exam covers the content of the first year courses including the top 100-200 drugs and pharmacy calculations. The P2 Milestone Exam primarily covers material presented in courses offered during the immediate previous year with some general concept questions from first year curriculum, including calculations. The PCOA Exam primarily covers pharmacotherapeutic content presented in all three didactic years at CNUCOP, including calculations and is designed to introduce and

help develop the skills necessary for taking the NAPLEX and CJPE. Academic.

The Milestone exams are held on the week prior to the beginning of the next fall semester.

Early Alert Policy

An Early Alert is designed to allow a course coordinator to refer a student for academic support at any point during the semester. Such a step may be taken based on a quantifiable assessment such as an exam grade of less than 70% or a cumulative iRAT score of less than 70%. It could also be based on observation of behavior, such as participation in team work.

Process

The course coordinator activates the academic alert and requests to meet with the students within 5 business days. A plan for academic support will be determined by the course-coordinator and the student. The completed Academic Alert form will be submitted to the Office of Academic Affairs (OAA) which then notifies the student's academic advisor. The OAA may request to meet with students who have alerts in multiple courses. The Office of Student Affairs (OSA) will also be notified to provide tutoring assistance if requested by the student. The student is encouraged to work with the course coordinator, academic advisor, the OAA, and OSA, to assure all resources are being utilized to improve academic performance.

Academic Progression

I. POLICY STATEMENT

The College of Pharmacy (COP) at California Northstate University (CNU) has a rigorous academic progression policy that facilitates students' progress through the curriculum in a timely manner while ensuring the development of effective and safe practitioners. The typical curriculum schedule is found in the student handbook.

II. PURPOSE

The purpose of this policy is to ensure students reach and maintain high standards of learning throughout their time at COP and accomplish all course learning objectives. The policy is intended to delineate the process for academic progression. A student must complete the program within 5 years (60 calendar months) from the time they registered and attended their first core course, with the exception of medical leaves of absence. A grade of D or below in a course indicates a lack of understanding of the fundamental concepts of the course material necessary for progression.

III. SCOPE/COVERAGE

This progression policy applies to all didactic classes and all annual summative exams in the PharmD program (i.e., Milestone 1, Milestone 2, PCOA, P4 Capstone) for students enrolling.

IV. DEFINITION OF SATISFACTORY ACADEMIC PROGRESSION

For a student to successfully progress through the COP PharmD program, they must pass or remediate all

courses each semester and maintain a minimum grade point average (GPA) of 2.0. Students must also pass or remediate all annual summative exams (e.g., the Milestone Exam 1, Milestone 2, PCOA, and the Qualifying Exam).

Progression Issues

1. Course Remediation

- A. In the event that a student receives a D or F, the Course Coordinator will complete a Remediation Form and send it to the Office of Academic Affairs, which will subsequently notify the chair of the Professional and Academic Standards Committee (PASC). The student will receive a Y grade as a place-holder until retesting and/or remediation is completed.
- B. **The retesting and/or remediation of course work is a privilege, not a right. Eligibility is determined by PASC.** Their decision will be based on the number of courses where an F or D grade is achieved in a semester prior to remediation and the student's demonstrated effort in the course, including but not limited to attendance, completion of all high stakes course assessments, the student's required responses to academic alerts, participation in recommended tutoring, and advising from the course instructor.
- C. **Retesting for a D grade** will consist of retaking a final examination that covers the material tested in the original final exam.
- D. The format of the retest examination is at the discretion of the course coordinator.
- E. Preparation for retest examinations is the sole responsibility of the student, and may consist of, but is not limited to, self-study, tutoring, and/or meetings with the course instructor(s) as the student and instructor(s) feel necessary for the student to gain a fundamental understanding of the course material.
- F. A score of 70% or higher on the retest examination is considered satisfactory mastery of the material.
- G. Course retesting must be completed within 10 business days after the last day of final exams. Failure to retest within this timeframe will result in review by PASC.
- H. If the retest grade brings the final grade above 70%, faculty will replace a grade of D with a grade of C on the Remediation Form for the course for which the retest examination was satisfactorily completed. If the retest does not bring the final grade

above 70%, the student must remediate the course during the remediation period.

- I. The Office of Academic Affairs will report a grade of C to the Registrar for the course for which the retest exam and course grade was satisfactorily completed. The student's semester and cumulative GPA will be recalculated using the C grade. However, a note will be placed in the transcript as follows: "Student successfully completed class by re-examination"
- J. If a student fails the retest examination or if the student received an F in the course, they will be required to remediate the class. Preparation for remediation is the sole responsibility of the student and may include meeting with the course instructor to review areas of weakness, self-study, and tutoring.
- K. The period for remediation should occur during the semester break following the semester when the D or F grade was earned. At the conclusion of the remediation period the student must complete a remediation exam. The Office of Academic Affairs will determine the test date. The format of the remediation examination will be at the discretion of the course coordinator.
- L. If the student passes the remediation exam, a grade of D will be replaced with a grade of C, and a grade of F will be replaced with a grade of D. A note will be placed in the transcript as follows: "Student completed class by remediation."
- M. A minimum cumulative GPA of 2.0 must be maintained even if remediation is successful.
- N. If the course is not successfully remediated, the initial D or F recorded for the course will remain on the transcript and the student must repeat the course. The D or will be used in the calculation of the student's semester and cumulative GPA and the student must go on a five year plan as developed by the Office of Academic Affairs.
- O. A student who achieves an un-remediated D or F in any core course may repeat the course only once. Thus, failure to pass a repeated course will result in dismissal from the program. In the case of un-remediated elective courses, the student will need to enroll in and successfully complete another elective course at the same level (P2 or P3).

2. Annual Summative Exam Remediation

Each academic year concludes with an Annual Summative Exam:

- P1 – Milestone
- P2 – Milestone

P3 – PCOA

P4 – Qualifying

Students must pass the Annual Summative Exam to progress. Students who fail an Annual Summative Exam will have two opportunities to remediate. If a student does not pass the remediation, they must meet with the Office of Academic Affairs to develop a 5-Year Academic Plan. The 5-Year Plan for repeating a course or courses will be based on the content areas of the summative exam that were not passed satisfactorily.

3. Five-Year Academic Plan

The CNU College of Pharmacy offers a sequential curriculum that is designed for completion in 4 years. Under certain circumstances a student may be placed on a 5-Year Academic Plan. Students must complete the program within five years from the time a student registers and attends their first course except in exceptional cases of medical leave of absence.

- A. Leave of Absence - A student may request a leave of absence for up to one year for medical or personal reasons. Leaves of absence must be approved by the Office of Academic Affairs. Appropriate documentation may be required for approval. For details, please see the Leave of Absence Policy.
- B. Un-remediated or Failed Course Work - If a student fails to remediate a D course grade or receives an F in a course, then the course must be repeated the next time it is offered. In either the case, the student must contact the Office of Academic Affairs to develop a 5-Year Academic Plan.

4. Academic Probation

A student will be placed on Academic Probation if the student:

- receives an F in a course
- does not successfully remediate a D course grade
- fails to comply with the conditions of an I grade

If any of these three conditions occur, the Office of Academic Affairs will automatically place the student on Academic Probation and notify them in writing of the action. When a student has been placed on Academic Probation, the following apply:

- A. Academic Probation means a student is placed on a five-year Academic Plan to complete the program. The program must be completed within five consecutive years of the date of the first day the student begins the program except in exceptional circumstances approved by the dean.
- B. Within one week of the date that the student receives notification of his/her Academic Probation, the student must meet with the Office of Academic Affairs to discuss their Academic Probation and develop their 5-year Academic Plan.
- C. Once the plan has been agreed, the Office of

Academic Affairs (or designated individual) will draw up documentation outlining details of the Academic Plan, which the student must sign. Failure to sign will mean the student will not be allowed to continue in the program. A copy of the plan will be shared with the Office of the Registrar, the Business Office, and the Dean's Executive Council and the student's advisor.

- D. While on Academic Probation, the student may not hold office in any College or University organization.
- E. Students may be removed from academic probation after they have successfully completed the course(s) that triggered the probation.

5. Withdrawal from a course

- A. During a semester, a student may withdraw from a class by the end of the first week of classes without restrictions.
- B. From the beginning of the second week through the twelfth week of instruction, withdrawal from a course will be allowed for compelling reasons determined and approved by the Office of Academic Affairs. Additionally, the student must meet with the Office of Academic Affairs to develop a 5-year Academic Plan.
- C. Withdrawals shall not be permitted after the twelfth week of instruction except in cases, such as accident or serious illness, where the cause of withdrawal is due to circumstances clearly beyond the student's control and the assignment of an Incomplete is not practicable. Such withdrawals require documentation and the approval the Office of Academic Affairs, who will develop a 5-year plan with the student.
- D. Withdrawals must be student-initiated.
- E. For Withdrawal from the program see the College of Pharmacy Withdrawal Policy.

6. Incomplete Grade

During a semester, a student may not complete all required assignments and/or examinations due to extenuating circumstances, such as, but not limited to, an illness or a family emergency. In such a case, the course coordinator may give a grade of Incomplete for the course, meaning that the course work is incomplete but of passing quality. (See CNU Grading Convention Policy and Procedure Policy for more information.)

7. Dismissal

A student may be dismissed from CNUCOP for a variety of reasons:

- A. Unsuccessful coursework may result in dismissal based on the following point system:
 - F = 2 points
 - D = 1.0 point

A student earning more than 4 points for combined Ds and Fs will be dismissed
- B. Earning a cumulative GPA of **less than 2.0**
- C. Failure to meet any terms of **Remediation or Academic Probation**
- D. Conduct subject to dismissal as described in the Honor Code section of the Student Handbook and decided by PASC

- E. Foregoing an academic semester without obtaining an approved leave of absence
- F. Failure to complete the degree requirements in five consecutive academic years from the date of the first day the student begins the program.

All dismissals must be reviewed and approved by PASC.

8. Appeal of Dismissal

Students dismissed from the College may appeal the decision in writing within ten (10) business days of notification of dismissal to the Dean of the College. The Dean will render a decision in writing within 3 business days of receipt of the formal written appeal. The Dean's decision is final. Dismissal can only be appealed once.

9. IPPEs and APPEs

A failed IPPE or APPE cannot be remediated except by retaking the rotation. If the IPPE or APPE is not successfully remediated, the student will be dismissed from the program. If more than one APPE Block is failed the student will be dismissed. Having to retake an IPPE may delay entry into the fourth year of the program, while having to retake an APPE block may delay graduation from the program.

Students should refer to the Experiential Education Handbook for specific requirements regarding progression through IPPEs and APPEs.

Remediation

In the event of a student receiving a D or F grade in a course the instructor will complete a Remediation Form which will be used to notify Instructors of a student's eligibility to remediate or repeat a course. Eligibility is determined by the Office of Academic Affairs based on the number of courses where an F or D grade is achieved in a semester. If eligible, Instructors will make arrangements with the student to remediate.

- a. Remediation will consist of taking a comprehensive remedial examination that covers the material presented throughout the course. Only a course grade of D is eligible for remediation. A course grade of F must be repeated next time it is offered.
- b. The format of the remediation examination is at the discretion of the course coordinator.
- c. Preparation for remedial examinations is the sole responsibility of the student, and may consist of, but is not limited to, self-study, tutoring, and/or meetings with the course instructor(s) as the student and instructor(s) feel necessary for the student to gain a fundamental understanding of the course material.
- d. Satisfactory mastery of the material will be decided by the course coordinator/director/instructor(s), but generally will be a score of at least 70 percent on the comprehensive remedial examination.
- e. Remediation must be completed within 10 business days after the last exam to ensure timely submission of grades to the Registrar. Failure to remediate within this timescale will result in dismissal, unless there are exceptional

circumstances making remediation within this time frame impossible.

- f. Faculty will report a grade of C to the Registrar for the course for which the remedial comprehensive examination was satisfactorily completed.
- g. The grade of C earned as a result of passing the remedial examination will be used in the calculation of the student's cumulative GPA. A minimum cumulative GPA of 2.0 must be maintained even if remediation is successful.
- h. If the course is not successfully remediated, the initial D recorded for the course will remain on the transcript and be used in the calculation of the student's GPA.
- i. Any student who receives an F or fails to remediate a D will be placed on Academic Probation.
- j. Remediation is not a substitute for lack of full course participation. To be eligible for remediation a student must have taken all exams, course assessments, and any graded activities (unless excused absences for these have been permitted).

Graduation & Commencement

Graduation Requirements

Students at CNUCOP are approved to receive the Doctor of Pharmacy degree by the COP faculty and the Board of Trustees (BOT). Students must meet the following requirements:

- Has conducted oneself in an ethical, moral, professional, and lawful manner;
- Has satisfactorily completed all of the CNUCOP curricular requirements in a timely fashion, not to exceed five (5) years from the date of initial enrollment (including approved leave of absence); exceptions may be granted in unusual circumstances.
- Has fulfilled all tuition and financial requirements and completed all necessary paperwork for CNUCOP;
- Attends graduation and commencement ceremonies in person. Students cannot attend commencement if they have not fulfilled all the above requirements. Under special circumstances the Dean of the College may excuse the attendance requirement.

Students must file a completed Petition to Graduate with the Office of the Registrar by the semester deadline.

Degree Honors

Students who meet the cumulative GPA listed below will be honored with special recognition at graduation. The honor is noted on the degree.

Summa Cum Laude: CGPA of 3.90 or higher

Magna Cum Laude: CGPA of 3.70- 3.89

Cum Laude: CGPA 3.50-3.69

Commencement

Each student is expected to attend commencement and wear traditional academic regalia consisting of a cap, gown, and academic hood. Hoods of academics regalia are conferred upon the graduates at commencement by

faculty. The hood is lined with the California Northstate University colors of cabernet and gold, and is adorned with olive green denoting Doctorate of Pharmacy. Honor cords and/or medallions will distinguish honor graduates. Any additional ornamentation must signify recognized College organizations and must be approved in advance of commencement.

Attendance Policy

Students are required to attend all classes and all courses, including laboratory sessions, IPPEs, and APPEs, on a regular basis. The University/College recognizes that circumstances may cause a student to miss an occasional class. The student may make up the work missed if the absence has been excused. What constitutes an acceptable rate of class attendance is a matter between students and their instructors, although the University/College expects instructors to maintain reasonable standards. Students requiring absence during a semester should refer to the Excused Absence Policy and the Leave of Absence Policy.

Pharmacy Practice Experience

Refer to Introductory Pharmacy Practice Experience and Advanced Pharmacy Practice Experience manuals for attendance information.

Excused Absence Policy

The College of Pharmacy expects students to attend and participate in all classes, participate in all introductory and advanced practice experiences, and complete all exams and assessments as scheduled (together defined as "coursework"). Missed coursework has the potential to disrupt individual and team learning, invalidate assessment of learning outcomes, create unfair advantages, and divert faculty and student resources away from teaching and learning. However, occasionally an absence from coursework will be unavoidable.

A student may request an excused absence for personal, emergency, compassionate, professional, or health-related reasons. Please refer to detailed policy for a full list of reasons for which an excused absence may be requested.

High stakes absence requests will be held to the highest standard for documentation and communication. A student requesting to receive an excused High Stakes Absence must satisfy FIVE criteria described in the detailed policy available on the website.

A student may request no more than three academic days of excused absences per semester or APPE Block. In total, excused and unexcused absences shall not exceed five academic days per semester or three per APPE Block. Absences exceeding five academic days per semester may require a student to request a leave of absence or a withdrawal. Please contact the Office of Academic Affairs for further information.

A student seeking an excused absence should complete the Excused Absence Request Form (available from the CNUCOP website) and seek the Course Coordinator's

signature for each missed course within 3 business days upon return to courses or campus. The Course Coordinator will determine if an absence will be excused or unexcused for their course based on the categories and criteria outlined in the detailed policy; the completed form should be emailed or handed in to the Office of Academic Affairs for final approval.

Professional Conferences

California Northstate University College of Pharmacy supports the learning and professional development opportunities professional conferences can provide students; thus the college has a policy to allow student participation and attendance. A student in good academic standing, and not on Academic Alert, may submit an excused absence request to attend a professional conference. The request must be submitted no later than one week before the early registration deadline for the conference. For a more detailed description of the Student Travel Guidelines, please review the Student Handbook located on our webpage.

Approved Absences

A student may request an excused absence for the following circumstances:

- Medical (self or immediate family)
- Military Duty
- Immigration & Naturalization
- Emergency
- Jury Duty
- Legal
- Bereavement (Immediate Family)
- Professional Conference (requires verification of academic standing)
- Involvement in traffic accident documented by law enforcement report

Course Add /Drop Policy

Changes in course registration may be made without penalty up to the end of the first week (5 class days) for fall and spring terms. COP students are block scheduled into their didactic classes by the Registrar. The COP Add/Drop Policy only applies to elective courses.

Students must obtain permission from the course director or coordinator for each course added to their official registration during the add/drop period. Permission will be signified by the course director or coordinator's signature on the add/drop form. Students must also obtain approval from the Office of Academic Affairs. Approval from the Office of Academic Affairs will be indicated by the signature on the Course Add/Drop form.

Even though a student obtains approvals and signatures, the completed Course Add/Drop form must be submitted to the Registrar during the add/drop time period in order to be valid. Students may not make changes in their course registration after the add/drop period has ended.

For experiential education courses, please refer to the experiential education manuals. Students are not allowed to drop a rotation.

Leave of Absence

A leave of absence is approved for a specific period of time, not to exceed more than a year, and the institution agrees to permit the student to return to the University/College without formally reapplying for admission to the University/College.

The student will be required to return to the University/College at the beginning of the semester in which the leave was granted. All students requesting a Leave of Absence should fill out a Leave of Absence Form after discussing their decision with the Associate Dean of Academic Affairs. If a student is requesting a leave of absence, the Designated Academic Official for Academic Affairs must sign the form. If the student is approved for a leave of absence, the student is eligible to return without reapplication if the absence is within the approved time frame. A student requesting a leave of absence should also meet with the Financial Aid Manager and Business Office to determine impact of their decision and any requirements needing fulfillment prior to the leave.

Non-attendance does not constitute notification of intent to apply for leave of absence status. The date of leave status is the date the Registrar receives the signed form.

Return from Leave of Absence

The Office of the Registrar will contact a student on Leave of Absence (LOA) approximately 90 days before the LOA expires via certified US mail and the email addresses on record. The student will receive the Intent to Return Form and instructions for re-enrollment and for withdrawing from the University. Submission of the completed Intent to Return Form to the Office of the Registrar is required to be eligible for course and APPE/IPPE registration.

The student will have 30 days of the date of the notice to reply to the Office of Registrar with their intent to return to the University/College or officially withdraw.

If a student does not return within 1 year of approved LOA they are no longer eligible to return as a continuing student and must reapply to the University/College for admission (See Withdrawal/Readmission in this handbook).

Withdrawal from the College/University

Students may voluntarily withdraw from the University/College at any time during the academic semester. The student will earn a "W" grade for a course(s) that is (are) not complete at the time the withdrawal is initiated. Informing CNUCOP, your academic advisor or instructor does not constitute official withdrawal from the program.

All withdrawals must be processed by the Office of the Registrar. Students must submit a completed Official University/College Withdrawal form to the Office of the Registrar. The form is available online at

<http://www.cnsu.edu/office-of-the-registrar/registrar-services> and in the Office of the Registrar.

A student must meet with and receive signatures from the following departments before the form can be filed with the Office of the Registrar: Office of Academic Affairs, Business Office, Financial Aid, and Office of the Registrar.

A student who officially withdraws from the University/College is entitled to apply for readmission.

Readmission to the College/University

Students who fail to return from a leave of absence, who are dismissed, or withdraw from the program can reapply for admission. Candidates seeking readmission must apply through PharmCAS and adhere to the guidelines for all new applicants. Applicants for readmission will be evaluated by the admissions committee. The committee's decision is final. Applicants will not be given special consideration over new applicants and will be evaluated equally on their overall academic record.

If readmitted, the student may be required to restart the program beginning with the first professional year, regardless of their professional standing prior to dismissal or withdrawal.

Complaint/Grievance Policy

All academic related complaints regarding a course, courses or a faculty member should be filed with the Associate/Assistant Deans of Academic Affairs or Student Affairs. An electronic Grievance/Complaint form is available at <http://pharmacy.cnsu.edu/forms>.

For complaints related to accreditation standards, please see Accreditation Information on page 10 of this catalog.

COP Course Descriptions

Clinical & Administrative Sciences (CAS)

CAS 606 Biostatistics and Pharmacoepidemiology (3 cr)

This course is designed to introduce major concepts in biostatistics and pharmacoepidemiology. Students will develop the ability to interpret and critically evaluate medical literature and to identify findings that have implications for their practice. Emphasis will be placed on an examination of how observational study designs draw upon epidemiologic techniques to address drug effectiveness, safety, outcome assessment and regulatory decision making. Students will also acquire skills in applying statistical analysis concepts learned throughout this course with the use of common computer software. (Prerequisite: none) *Formerly PHAR 634*

CAS 608 Introduction to Clinical Topics (4 cr)

Self-Care is an interactive course designed to introduce a systematic approach for evaluating a patient's self-care needs, including assessing, triaging and making appropriate treatment recommendations. This course also provides an introduction to over-the-counter medications used for self-treating common medical conditions in the community and ambulatory care settings. Selected prescription products in smoking cessation and ophthalmic disorders will be discussed. Students will be expected to understand how and why obtaining a comprehensive patient history is necessary to objectively recommend appropriate over-the-counter medications that are safe and effective. Students will begin to appreciate the role of a pharmacist and how educating and empowering patients is a cornerstone in community and ambulatory care pharmacy practice. (Prerequisites: IPP607, PRC609) *Formerly PHAR 641*

CAS 702 Communications (2 cr)

The course is designed to teach student pharmacists the skills and techniques necessary to have productive communication encounters with patients and healthcare professionals using verbal and non-verbal skills. Utilizing techniques that evolve around oral and written communication, the students will begin to develop the skills necessary to conduct effective patient interviewing/counseling encounters, initiate problem solving & conflict management techniques, and expand their awareness regarding cultural competence and health literacy. (Prerequisite: none) *Formerly PHAR 712*

CAS 703 Drug Literature Evaluation & Drug Information (3 cr)

This course will provide a systematic approach to drug information and literature evaluation to formulate and implement appropriate drug therapy decisions. This includes effective searching, retrieval, evaluation and dissemination of electronic and print resources. Students will utilize skills learned in this course to effectively communicate and tailor drug information at the appropriate level for providers, other health professionals, caregivers, patients and the public. Additionally, this course will provide introductory knowledge on the state of the art in pharmacy informatics and decision support systems needed to implement patient-centered care. Students will be able to define basic terminology used in

health informatics and describe the benefits and current constraints in using information and communication technology in health care. (Prerequisite: CAS606) *Formerly PHAR 743*

CAS 705 Pharmacotherapy I (6 cr)

This course will focus on the clinical foundations of pharmacotherapy, integration of pathophysiological and pharmacological mechanisms, and the pharmacotherapeutic interventions used in the management of disorders that are specific to or have a high prevalence in psychiatry or neurology. (Prerequisite: PBS602 – Co-requisite PRC 709) *Formerly PHAR 575*

CAS 706 Pharmacotherapy II (6 cr)

This course focuses on the development of highly skilled clinical pharmacists. Students are taught to integrate knowledge of therapeutic interventions with the pathophysiological and pharmacological mechanisms and patient specific data to optimally manage cardiovascular, pulmonary, and endocrine disorders. Students will gain understanding of disease state management through the interpretation of case reports, laboratory findings, application of pharmacologic principles and evidence based guidelines. (Prerequisites: PBS701 & CAS703 – Co-requisite: PRC 710) *Formerly 752*

CAS 801 Pharmacy and the Health Care System (3 cr)

This course will introduce the major healthcare stakeholders and elucidate the manner by which their interests and interactions have shaped the current US healthcare financing and delivery system, and set the stage for healthcare reform. Students will learn how to use this information as a framework to identify existing and future healthcare needs, and develop potential pharmacist-driven initiatives to improve value and patient care in general. (Prerequisite: none) *Formerly PHAR 811*

CAS 802 Pharmacy Law and Ethics (3 cr)

This course is designed to prepare student pharmacists to identify, evaluate, and resolve the legal and ethical issues arising within the context of pharmacy practice. Upon completion, a student will have an understanding of the current regulatory environment duties and responsibilities of the Pharmacists in Charge and the standards of care to which pharmacists must adhere. Students will be able to identify, interpret and apply relevant laws and regulations within the context of pharmacy practice. (Prerequisite: IPP607) *Formerly PHAR 813*

CAS 804 Pharmacy Management and Economic Principles (3 cr)

In order to provide optimum care and services as a healthcare professional, pharmacists should understand the basic principles and key concepts of managerial, organizational, and financial management. Therefore, the objective of this course is to provide an opportunity for students to learn important management, organizational, accounting, marketing skills, and entrepreneurial and innovation

applications for their future practice in pharmacy. The course emphasis will be focused on business planning, organization, motivation, control, and marketing as they relate to community and health system pharmacy management. This course will also provide a basic introduction of pharmacoeconomic principles and its application to improve patient outcomes. The course material will provide this introduction to students by developing skills to assist them in understanding the methods to choose a cost-effective drug therapy for patient populations in order to achieve quality clinical, economic and humanistic outcomes. A combination of classroom mini-lectures, class discussion, required readings, and in-class learning assignments will be used to facilitate the student's understanding of these important concepts. A final team and individual capstone project will be developed to ascertain attainment of knowledge learned in the course.

(Prerequisite: CAS801) *Formerly PHAR 815*

CAS 805 Pharmacotherapy III (6 cr)

This course will cover the pathophysiology and treatment of bacterial, viral, and fungal infections, as well as the principles of antimicrobial regimen selection and antimicrobial prophylaxis. By the end of this course the student should be able to: identify the principles of the practice of infectious diseases, identify the impact of the use of antimicrobial agents on the population, describe basic properties of common pathogenic microorganisms, list pharmacological properties of selected antimicrobial agents, identify likely pathogens responsible for a particular infectious disease process, select first line and alternative antimicrobial agents for selected disease states, and identify appropriate actions to monitor for efficacy and toxicity. To accomplish these goals, the student will be required to comprehend common microbiologic laboratory tests used to identify microorganisms. The student will be expected to know the mechanisms of action, antimicrobial spectrum, mechanisms of bacterial resistance, common adverse reactions, pharmacokinetics/pharmacodynamics properties of antimicrobial agents discussed in course materials, and the dosing of select antimicrobials. (Prerequisites: PBS604, CAS703, & PBS803) *Formerly 853*

CAS 806 Pharmacotherapy IV (6 cr)

This course covers several topics of pharmacotherapy: renal, nutrition, gastrointestinal and hepatic disorders as well as hematology and oncology with a focus on patient care. The student will need to integrate physiologic, pathophysiologic, pharmacologic, pharmacodynamic, pharmacokinetic, laboratory monitoring, and pharmacotherapeutic principles to assess and/or formulate disease specific pharmacotherapy care plans. The course will focus on optimizing drug therapy through the design, recommendation, implementation, monitoring, and modification of individualized pharmacotherapeutic plans using updated pharmacologic principles, clinical recommendations, and evidence based guidelines. (Prerequisite: PBS704 & CAS706 – Co-requisite: PRC 810) *Formerly PHAR 856*

Pharmaceutical & Biomedical Sciences (PBS)

PBS 601 Cell and Molecular Biology and Biochemistry (4 cr)

This course is designed to provide the pharmacy students with a fundamental understanding of current concepts of cellular and molecular biology, and human biochemistry. Students are provided an overview of eukaryotic carbohydrate, lipid and protein metabolism, cellular signal transduction, biomedical aspects of human nutrition, genetic regulation, the molecular basis of inherited genetic diseases and acquired diseases like cancer, principles of commonly used biotechnologies, drug targets screening, and biopharmaceutical products generation. (Prerequisite: none) *Formerly PHAR 621*

PBS 602 Pathophysiology and Pharmacology I: (The Nervous System) (6 cr)

This course reviews the basic mechanisms of pathophysiology and pharmacology, and then integrates these disciplines through the study of the etiology, pathogenesis, clinical manifestations, treatment and prevention of major neurologic, psychiatric, and neuroendocrine diseases/disorders. Following an introduction to normal tissue types and adaptive responses, the course will cover basic etiological and pathophysiological mechanisms; mechanisms of injury will be reviewed; the central and peripheral nervous systems (CNS & PNS) are reviewed, major CNS, PNS and neuroendocrine diseases and disorders are covered. Students will learn the mechanism(s) of action and common or serious adverse effects of pharmacological agents and identify appropriate pharmacological treatments or adjust pharmacotherapy in the face of adverse effects. In addition, each student team will research a topic in depth, including a systematic search of peer-reviewed literature, to develop and present a formal case study, given at a level appropriate for an audience of healthcare professionals. To promote information literacy, teams will use systematic PubMed searches using MESH terms to identify and incorporate current literature reviews, guidelines, or other advanced professional sources, and carefully cite the information and sources on their slides.

(Prerequisites: PBS601 & PBS 603) *Formerly PHAR 622*

PBS 603 Medicinal Chemistry & Physical Pharmacy (5 cr)

The course consists of four components: (1) Fundamentals of Medicinal Chemistry – which introduces the concepts required to understand the principles of Medicinal Chemistry, including drug structure-relationships, prediction of the physico-chemical properties of a drug, basic knowledge of the major pathways of drug metabolism and factors that can contribute to drug-drug interactions; (2) students will be able to predict the solubility, metabolism and pharmacological activity/potency of drugs classes based on the contribution of their functional groups to their structures; (3) the course is designed to provide students with a fundamental understanding of drug assay and the application of chemical and physico-chemical methods of analysis to pharmaceutical substances; (4) the course provides students with a fundamental knowledge of the active constituents of natural

medicines with emphasis on the top selling medicinal herbs. (Prerequisite: none) *Formerly PHAR 631*

PBS 604 Pharmacokinetics (5 cr)

This course focuses on understanding and applying pharmacokinetic principles for optimizing drug dosage. It is divided into three modules: descriptive, quantitative, and pharmacokinetics of special populations. Descriptive pharmacokinetics provides a basic introduction to the key pharmacokinetic principles. This module enables the student to conceptualize principles such as drug bioavailability, distribution, clearance, and excretion. Concepts of drug absorption, metabolism, protein binding, and pharmacokinetic drug interactions will be discussed as well. Quantitative pharmacokinetics covers the mathematical aspects, including the calculation of pharmacokinetic parameters following drug administration and compartment modeling. The third module covers the process of using pharmacokinetic principles to optimize the dose for special populations. (Prerequisite: PBS 605, PBS 611)

Formerly PHAR 633

PBS 605 Pharmaceutics (4 cr)

This course is designed to provide students with the deep understanding of the drug physicochemical properties and its effects on drug formulation and compounding, dosage form as well as an understanding of the interactions between drug delivery systems and biological systems. The course covers the traditional and nontraditional dosage forms as well as drug delivery systems. (Prerequisite: none)

PBS 611 Pharmaceutical Calculations (1 cr)

The course covers pharmaceutical calculations and an overview of drug quality control and regulation. (Prerequisite: knowledge of Algebra)

PBS 701 Pathophysiology and Pharmacology II: Cardiovascular, Diabetes, Thyroid (6 cr)

This course describes and evaluates underlying pathogenesis of major cardiovascular disorders and cardiovascular pharmacology. Upon completion of this course students gain an understanding of major cardiovascular disease states, drug targets based on understanding the pathophysiology, and the mechanism of action and adverse effects of drugs used to treat cardiovascular disorders. Selected topics include: hypertension, atherosclerosis, dyslipidemia, thrombosis, arrhythmia, ischemic heart diseases, heart failure, venous thromboembolism, peripheral arterial diseases, stroke, valvular disease and cardiovascular shocks. In addition, this course describes the pathophysiology of two of the endocrine glands: thyroid and pancreas. Students gain an understanding of underlying pathogenesis of hypothyroidism, hyperthyroidism and Diabetes Mellitus, and the mechanism of action and adverse effects of pharmacological classes and agents to treat these endocrine disorders. (Prerequisites: PBS601, PBS602, PBS603, & PBS604) *Formerly PHAR 724*

PBS 704 Pathophysiology and Pharmacology III (6 cr)

In this course, students will learn to identify drug targets based upon an understanding of the pathophysiology of major diseases of the respiratory, renal, gastrointestinal, genitourinary, and endocrine system and oncology. Students will learn to recognize the major disorders of these systems,

the mechanism of action and adverse effects of pharmacological classes of drugs used in the treatment of these disorders. In addition, students will learn the alternative pharmacological agents for patients who exhibit significant adverse effects to existing pharmacological therapy of these disorders. (Prerequisite: PBS602)

PBS 803 Immunology and Rheumatology (4 cr)

The course will present an overview of the human immune system with the inclusion of both arms of immunity (innate and adaptive). The course will also cover the development and biology of B and T cells as the key players of the adaptive immunity. A special emphasis will then be placed on understanding the different types of autoimmune diseases and the up-to-date strategies for the management of autoimmune diseases. The autoimmune diseases will include TH1, TH2 (e., Allergy), and TH17 driven mediated diseases. Other topics covered in the course include organ transplantation, passive and active immunity (vaccination), immunodeficiency diseases, AIDS, as well as interactions between the immune system and cancer. Students will be provided with detailed information about immune system, immune cells and tissues, and soluble proteins (cytokines) that orchestrate the function of different cells of the immune system. The specific roles of immune cells and cytokines will be discussed with respect to human diseases. Students will gain an understanding of specific disease state management through the interpretation of basic scientific findings, application of pharmacologic principles, relevant clinical reports/data and evidence-based clinical guidelines. These principles will be emphasized in reading assignments, assigned applications, and in-class discussion. Team-based and evidence-based patient case discussion, as well as patient pharmacological treatment plan recitation will be applied throughout the course. cal. (Prerequisites: PBS601, PBS603, & PBS704) *Formerly PHAR 827*

Experiential Education (EED) - IPPE

IPP 607 Introduction to Pharmacy Practice (2 cr)

This didactic class prepares students for their IPPEs. It covers introductory and contemporary pharmacy issues, practice history, pharmacy organizations and medical terminology, and certificate programs as required by experiential practice experiences. Additionally, students will be introduced to pharmacy law and professionalism issues, and they will be provided with an opportunity to develop introductory knowledge of the top 100 dispensed prescription medications. (Prerequisite: none)

IPP 707 Introduction to Pharmacy Practice Experience: Community Practice (4 cr)

This is an introductory Pharmacy Practice Experience (IPPE) in a community practice setting. This IPPE requires 150 hours on site in a community practice setting. Summer placement is strongly encouraged, and the work schedule suggested should incorporate 4 x 40 hour weeks. (Prerequisites: IPP607)

IPP 807 Introductory Pharmacy Practice Experience: Institutional Practice (2 cr)

This is an introductory Pharmacy Practice Experience (IPPE) in an institutional practice setting. This IPPE requires 75 hours on site in this practice setting. (Pre-requisite: IPP607)

**IPP 808 Introductory Pharmacy Practice Experience:
Specialty Practice (2 cr)**

This is an introductory Pharmacy Practice Experience (IPPE) in specialty practice setting. This IPPE requires 75 hours on site in this practice setting. (Prerequisite: IPP607)

Experiential Education (EED) - APPE

Advanced Pharmacy Practice Experiences

APPE prerequisite: students must successfully complete all P1-P3 courses before commencing APPEs. Collectively, APPEs provide students with the opportunity to hone the practice, skills, professional judgement, behaviors, attitudes, values, confidence and sense of personal and professional responsibility required for each student to practice independently and collaboratively in an inter-professional, team-based environment.

**APP 901 Advanced Pharmacy Practice Experience:
Community (6 cr)**

In the *Community Pharmacy Practice APPE*, the student will have an opportunity to practice contemporary pharmacy in a community setting, balancing the changing demands of the healthcare system with those of the retail market. Whether in the large chain or independent pharmacy, activities will include managing the prescription verification process, selecting over-the-counter products for patient-specific needs, patient counseling, and delivering medication therapy management services. (Prerequisite: P4 standing)

**APP 902 Advanced Pharmacy Practice Experience:
Hospital/Health Systems (6 cr)**

Students in the *Hospital/Health System APPE* will apply knowledge of sterile technique, pharmaceutical calculations, pharmaceutical compounding, medication use evaluation and pharmacokinetic monitoring in activities that enhance the safe and effective use of medications in the hospital environment. (Prerequisite: P4 standing)

**APP 903 Advanced Pharmacy Practice Experience:
General Medicine (6 cr)**

Students in the *General Medicine APPE* apply critical thinking skills and drug information knowledge to evaluate a patient's medical information, identify drug therapy problems, design therapeutic interventions, and communicate medication therapy recommendations to other healthcare providers. (Prerequisite: P4 standing)

**APP 904 Advanced Pharmacy Practice Experience:
Ambulatory Care (6 cr)**

In the *Ambulatory Care APPE*, students apply drug knowledge and communication skills with both patients and other healthcare team members to formulate and implement pharmacotherapy care plans, including monitoring and follow-up to assure the best possible outcomes for their patients. (Prerequisite: P4 standing)

**APP 905 Advanced Pharmacy Practice Experience:
Specialty I (6 cr)**

This rotation allows students to explore areas of interest and focus in pharmacy practice. Specialty APPE offered in the CNUCOP curriculum include (but are not limited to) Infectious Disease, Critical Care, Emergency Medicine, Geriatrics, Pediatrics, Academia, Management, Leadership,

Compounding, Home Infusion and Long-term Care. (Prerequisite: P4 standing)

**APP 906 Advanced Pharmacy Practice Experience:
Specialty II (6 cr)**

This rotation allows students to explore areas of interest and focus in pharmacy practice. Specialty APPE offered in the CNUCOP curriculum include (but are not limited to) Infectious Disease, Critical Care, Emergency Medicine, Geriatrics, Pediatrics, Academia, Management, Leadership, Compounding, Home Infusion and Long-term Care. (Prerequisite: P4 standing)

**APP 910 Advanced Pharmacy Practice Experience:
Seminar 1**

This is the first of a required, two-semester sequential course for pharmacy students during their advanced pharmacy practice experiences. This course is designed to: 1) prepare students for practice in the profession of pharmacy, 2) build upon didactic knowledge gained previously in the Doctor of Pharmacy program, and 3) help students become life-long learners through self-assessment and reflection on learning.

**APP 911 Advanced Pharmacy Practice Experience:
Seminar 2**

This is the second of a required, two-semester sequential course for pharmacy students during their advanced pharmacy practice experiences. This course is designed to: 1) prepare students for practice in the profession of pharmacy, 2) build upon didactic knowledge gained previously in the Doctor of Pharmacy program, and 3) help students become life-long learners through self-assessment and reflection on learning.

Longitudinal Practicum Education

PRC 609 Longitudinal Practicum I (1 cr)

Longitudinal Practicum I is the first in a series of six practicums designed to provide students with the opportunity to practice essential skills, and use knowledge learned in didactic courses to build and develop these skills in a sequential and integrated way. Longitudinal I provides a hands-on introduction to bench-top pharmaceutical compounding and calculations. Practicum I will provide an overview of the value of compounded dosage forms, and their limitations and relationship to FDA-approved drugs. Some insight will be given to the use of compounding pharmacies for the preparation of clinical trial materials, and various compounded preparations will be made. (Prerequisite: none)

PRC 610 Longitudinal Practicum II (1 cr)

Longitudinal Practicum II will provide students with a hands-on introduction to intravenous (IV) sterile compounding calculations and regulations, aseptic techniques, and personal safety measures using the sterile IV hood. In addition, students will learn how to perform manual blood pressure and blood glucose readings and to counsel patients on their manual blood pressure and blood glucose results, at a skill sufficient to partake in a community health screening environment. The course will be comprised of a total of 11 sessions over 11 weeks, including a total of two practical sessions and one practical assessment session for aseptic Technique/IV Sterile Compounding and one Immunization

Training Certification full day event. (Prerequisites: IPP607 & PRC609)

PRC 709 Longitudinal Practicum III (2 cr)

The third in the series this Practicum will enable students to apply their knowledge of pharmacotherapy to clinical scenarios through the use of an oral clinical exam. Basic laboratory elements will be introduced and skill sets related to conducting MTM/motivational interviewing will be further refined. Students will also have the opportunity to enhance their oral communication skills through patient counseling exercises and debates on topics related to psychiatry and/or neurology. Professionalism, including behaviors and attitudes that are consistent with being a health care professional, will be reinforced. (Co-requisite: CAS705)

PRC 710 Longitudinal Practicum IV (2 cr)

This Practicum will provide students with an opportunity to develop and practice clinical skills through the assessment of case reports laboratory findings, pharmacologic principles and evidence based guidelines. Students will participate in various workshops, which were first introduced in Practicum III. Journal Clubs, SOAP Notes and Care Plans will all be revisited, using various cardiovascular, endocrine, and pulmonologic disease states as a platform. Students will learn to demonstrate clinical skills relevant to providing patient care in simulated learning activities with other health care professional students. Evidence-based patient case discussion and patient therapeutic treatment plan recitation will be developed throughout the practicum. Students will be expected to continue to demonstrate the professional skills, attitudes, and values necessary to enter a clinical service. (Co-requisite: CAS706)

PRC 809 Longitudinal Practicum V (2 cr)

The fifth Lab Practicum will provide students with the ability to simulate real life pharmacy inpatient and outpatient experiences and challenges in a structured environment. This includes the Advanced Pharmacy Simulation (APPS) Lab which provides hands-on community pharmacy experiences, and our NeehrPerfect software that simulates an inpatient EMR system. Students will have opportunities to review patient cases using disease states from previous or concurrent pharmacotherapeutic course topics such as cardiovascular, endocrine, respiratory, neuropsychology, geriatrics and infectious disease. (Prerequisite: CAS 703; Co-requisites: CAS 805)

PRC 810 Longitudinal Practicum VI (2 cr)

The sixth and final Practicum will provide students with practice in nutritional calculations, MTM review of cases using specific topics such as renal, gastroenterologic and oncologic disease from this semester's pharmacotherapeutic course. In particular, this longitudinal practicum will build on skills developed in previous didactic courses and practicums in order to optimize personal performance going into the Advanced Pharmacy Practice Experiences (APPEs). Students will be provided with an opportunity to participate in an additional Inter-Professional Education (IPE) Simulation exercise; and there will be team-based topic presentations to solidify communication skills. Overall, students will be provided with sufficient exposure to learn and practice their skills in the area of leadership, MTM, patient care and inter-

professional practice. (Prerequisite: CAS703; Co-requisite: CAS806)

Elective Courses

P2 and P3 students must choose one from a number of elective topics that will be offered each academic year. P2 elective courses (ELC 7XX) are offered during the Spring semester and P3 elective courses (ELC 8XX) are offered in the Fall semester. Topics vary each year. Students may complete an approved an Independent Study in lieu of an elective course offered. Completion of a minimum of 4 credits of elective coursework is required. P2 elective offerings will be distributed as an addendum.

ELC 750/850 Independent Study (1-2 cr)

The purpose of independent study is to provide interested students with an opportunity to collaborate with faculty on research or specialty projects. The interested student meets with the appropriate faculty member, and the student and the faculty determine the nature and scope of the project to be completed. In collaboration the student and the faculty member design the course, the scope of the project, project specific assignments, methods of evaluation, timeline, and expectations. Prior to starting the project/course, the student and the faculty member complete the independent study form and submit the completed form to the appropriate Department Chair for approval. Once approved by the appropriate Department Chair, the completed form is subsequently submitted to the Office of Academic Affairs for final approval. Once final approval has been granted, the form will be sent to the Office of the Registrar to officially enroll the student in the course. Request form and instructions available online: <http://pharmacy.cnsu.edu/independent-study>. (Prerequisites: P2/P3 standing and minimum 2.80 cumulative GPA; Faculty, Department Chair, and Office of Academic Affairs approval)

ELC 756 Disc & Devel of Drugs for IBD & Rheumatoid Arthritis (2 cr)

The course will focus on drug development and discovery approaches for Inflammatory Bowel Disease (IBD) and Rheumatoid Arthritis (RA). The first block of classes will focus on pre-clinical models used to discover drugs for IBD. A special emphasis will be placed on animal models of IBD. Clinical protocols for both Ulcerative Colitis and Crohn's Disease patients will also be reviewed. The second block of classes will focus on drug discovery for Rheumatoid Arthritis (RA). The anti-inflammatory and analgesic effects of various drugs will be discussed, including DMARD's. Clinical trial methodology for RA will also be discussed. The course will utilize both relevant literature references, as well as real-life experiences of the instructor. Students will be expected to actively participate by way of group presentations, as well as each class participant composing a final drug discovery/development project. Pre-Reqs PBS601, PBS603, PBS602, PBS604, & CAS703.

ELC 761 Pharmacogenomics & Genetics (2 cr)

The Pharmacogenomics (PGx) and Genetics course is designed to provide pharmacy students with a fundamental understanding of current concepts and application of genetics and genomics in light of the relevance and the scope of pharmacy practice. The course is designed with a learner-

centered perspective, leading step-wise through introductory content emphasizing PGx research design including utilization of key knowledge from the human genome and genome projects and Big "Omics" data such as genomic, transcriptomics, and proteomic approaches to patient care. Students are provided an application of pharmacogenomics in drug discovery, disease diagnosis, and the value of phenotyping/genotyping in guiding drug therapy of individual patients. Examples of clinical applications will be included and will examine the relationship between PGx and personalized medicine. This course uses a combination of lectures, discussions of assigned literature, projects, and student-led presentations. Pre-req PBS604, PBS701, PBS704, & CAS705. Equivalence: ELC861.

ELC 762 Pharmacists in Public Health (2 cr)

Offered as a Hybrid-Online Course

This is a hybrid course, combining online learning modules and in-class learning experiences. This elective course introduces, develops, and integrates the skills and knowledge needed for student pharmacists who choose to explore the realm of public health through applying their unique pharmacy backgrounds and interests. Throughout the course, the learning modules are designed to illustrate how pharmacy would fit into the greater scheme of health care from a public health perspective, to demonstrate how pharmacists can contribute in inter-professional efforts on enhancing the quality of healthcare services delivered, to integrate clinical practice and population health in pharmacists' work, and to identify public health efforts of which pharmacists are already a part. A large portion of this course is devoted to program planning, implementation, execution, and evaluation, preparing student pharmacists in their future leadership roles on the healthcare team. To enhance students' skills, evidence-based practice will be discussed and applied. Lastly, journal article analyses will be conducted to familiarize students with translating research results into real-world practice to promote population health management and practice.

ELC 764 Principles of Clinical Pharmacology (2 cr)

(Part 1) Offered as an Online Course

The Principles of Clinical Pharmacology Part 1 elective course will provide students with an overview of clinical pharmacology and its real-world usage. Topics relating to the following subject areas will be covered; pharmacokinetics, drugs metabolism and transport, drug therapy in special populations. This is an online course that will run for 10 weeks. Each week, students will be expected to review assigned you tube videos that are presented by world renowned experts in each subject area and are freely available through the NIH Clinical Center. Students will also be expected to participate in weekly online discussion boards as well as complete weekly online open book quizzes. There will be an online open book final exam at the end of the course that must be completed/submitted prior to the end of the semester.

ELC 765 Principles of Clinical Pharmacology (2 cr)

(Part 2) Offered as an Online Course

The Principles of Clinical Pharmacology Part 2 elective course, a continuation of the Part 1 elective course, will provide students with an overview of clinical pharmacology and its real-world usage through the review of the following topics; Assessment of Drug Effects, Drug Discovery and Development, Pharmacogenomics and Pharmacotherapy.

This is an online course that will run for 6 weeks. Each week, students will be expected to review assigned YouTube videos that are presented by world renowned experts in each subject area and are freely available through the NIH Clinical Center. Students will also be expected to participate in weekly online discussion boards as well as complete weekly online open book quizzes. There will be an online open book final exam at the end of the course that must be completed/submitted prior to the end of the course.

ELC 766 Special Pops. Pharmacotherapy: Preg, Peds, & Ger. (2 cr)

Special Populations Pharmacotherapy: A Focus on Pregnant, Pediatric, & Geriatric Patients will focus on common disease states affecting the pediatric, geriatric, and pregnant populations and their management. These specific patient populations require special consideration as a result of their varying pharmacokinetic and pharmacodynamics profiles. Pathophysiological and pharmacological principles of each disease state and their respective treatments will be reviewed. The course will be based on team-led topic presentations and in-class discussion to enhance students' knowledge base and improve oral and written communication skills. Each team will be responsible for presenting assigned topics (pregnant, pediatric, or geriatric topic) and creating an in-class application exercise for each topic. Additionally, each student who is not presenting will be responsible for developing questions to ask each presenting team. Class participation points will be based on student engagement with in-class applications and presentation questions. Pre-reqs: PBS602, PBS603, PBS701, & CAS705. (Equivalent to PHAR781AI "Special Populations: A Focus on Pediatric and Geriatric Pharmacotherapy")

ELC 851 Demystifying Formulary Decisions: An Evidence Based Approach (2 cr)

This course will focus on common disease states affecting the pediatric and geriatric population and their management. These specific patient populations require special consideration as a result of their varying pharmacokinetic and pharmacodynamic profiles. Pathophysiological and pharmacological principles of each disease state and their respective treatments will be reviewed. The course will be based on team-led topic presentations and class discussions to enhance students' knowledge base and improve oral and written communication skills. (Prerequisite: P3 standing)

ELC 853 Preventing the Misuse & Abuse of Prescription Medications (2 cr)

This course is designed to raise awareness among the students about the misuse and abuse of prescription medications. Students will develop knowledge and understanding of drugs and substances of abuse, how to promote appropriate use of controlled substances, and minimize their abuse and diversion. (Prerequisite: P3 standing)

ELC 859 Postgraduate Pharmacy Residency and Fellowship Training Preparation (2 cr)

The post-graduate pharmacy residency and fellowship training preparation elective is an interactive course designed to provide students with the tools and skill sets necessary to obtain a residency or a fellowship position following graduation. This course will introduce students to the basic

elements of residency and fellowship, identifying programs based on one's interest, developing application materials (CV, letter of intent), and preparing for Personal Placement Service (PPS) and/or onsite reviews (interview preparation, mock interviews, and topic presentation). In addition, students preparing for a residency will gain the skills necessary to navigate the application and residency match processes and students preparing for a fellowship will gain the skills necessary to remain a competitive candidate for onsite interviews following PPS. (Prerequisite: P3 standing)

ELC 861 Pharmacogenomics and Genetics (2 cr)

The Pharmacogenomics (PGx) and Genetics course is designed to provide pharmacy students with a fundamental understanding of current concepts and application of genetics and genomics in light of the relevance and the scope of pharmacy practice. The course is designed with a learner-centered perspective, leading step-wise through introductory content emphasizing PGx research design including utilization of key knowledge from the human genome and genome projects and Big "Omics" data such as genomic, transcriptomics, and proteomic approaches to patient care. Students are provided an application of pharmacogenomics in drug discovery, disease diagnosis, and the value of phenotyping/genotyping in guiding drug therapy of individual patients. Examples of clinical applications will be included and will examine the relationship between PGx and personalized medicine. This course uses a combination of lectures, discussions of assigned literature, projects, and student-led presentations. (Prerequisite: P3 standing; PBS604; PBS701; PBS704; CAS705; & CAS706)

ELC 863 Frontiers in Translational Medicine: From Bench to Bedside (2 cr)

Translational medicine is the practice of transferring scientific knowledge "from bench to bedside" (B2B), translational medicine builds on basic research advances and uses them to develop new therapies or medical procedures. Translational medicine transforms scientific discoveries arising from laboratory, clinical or population studies into new clinical tools and applications that improve human health. This course provides students with insight into state-of-the art research and research application in the medical field. The emphasis is the dynamic relationship between laboratory research and bedside application with the purpose of providing optimal patient therapies. Students will learn how research results guide clinical therapies, and vice versa. This course will provide real-life examples of translational medicine practices and give students exposure to analyzing and developing diagnostic tools and treatment protocols. Students will be required to actively participate in individual journal clubs and develop a review of literature presentations. Finally, each team will write a review literature on a selective topic appropriate for peer-review publication. (Prerequisite: P3 standing and PBS 601)

ELC 865 Advanced Topics in Diabetes (2 cr)

This hybrid course combines online learning modules and in-class learning experiences. Students are expected to be in class for a number of live sessions and the final exam/final presentation. This elective course introduces students to advanced topics in diabetes, such as Cardiovascular Outcomes Trials for Diabetes Medications, Technology in the Diabetes World, Psychosocial Aspect of Diabetes

Management, etc. The online learning modules integrate the fundamental learning content and the application of main concepts with students' reflection. Throughout the course, the learning modules are designed to enhance students' competency in each of the chosen advanced topics with opportunities in class to further consolidate and integrate the learned information through clinical cases. (Prerequisite: CAS 706)

ELC 867 Pediatrics Pharmacology (2 cr)

This course is designed to familiarize students with pediatric specific disease states, pathophysiology, diagnosis as well as safe and effective drug use to optimize medication therapy in children up to 18 years of age. Importance will be placed on the pharmacist's role in individualizing drug therapy through proper product selection, dosage calculations, patient counseling and patient monitoring. (Prerequisite: P3 standing)

COP PharmD Curriculum

Course #	COURSE TITLE	Credits
Semester I		
PBS 601	Cell and Molecular Biology and Biochemistry	4
PBS 603	Medicinal Chemistry & Physical Pharmacy	5
PBS 605	Pharmaceutics	4
PBS 611	Calculations	1
IPP 607	Introduction to Pharmacy Practice and Professionalism	.5
PRC 609	Longitudinal Practicum I	.5
	Semester total	18
Semester II		
PBS 602	Pathophysiology & Pharmacology I: (Neuro & Psychiatric)	6
PBS 604	Pharmacokinetics	5
CAS 606	Biostatistics and Pharmacoepidemiology	3
CAS 608	Self-Care	4
PRC 610	Longitudinal Practicum II	1
	Semester total	19
Semester III		
PBS 701	Pathophysiology & Pharmacology II: (CV, Diabetes Mellitus & Thyroid)	6
CAS 703	Drug Literature Information & Evaluation	3
CAS 705	Pharmacotherapy I	6
PRC 709	Longitudinal Practicum III	2
	Semester total	17
Semester IV		
ELC 7XX	Elective I	2
CAS 702	Communications	2
PBS 704	Pathophysiology & Pharmacology III: (Pulmonary, Renal, GI & GU)	6
CAS 706	Pharmacotherapy II	6
PRC 710	Longitudinal Practicum IV	2
	Semester total	18
Semester V		
ELC 8XX	Elective II	2
CAS 801	Pharmacy and the HealthCare System	3
PBS 803	Immunology and Rheumatology	3
CAS 805	Pharmacotherapy III	6
PRC 809	Longitudinal Practicum V	2
	Semester total	16
Semester VI		
CAS 802	Pharmacy Law and Ethics	3
CAS 804	Pharmacy Management and Economic Principles	3
CAS 806	Pharmacotherapy IV	6
PRC 810	Longitudinal Practicum VI	2
CAS/PBS (TBD)	Clinical Pharmacology/Pharmacokinetics (TBD)	1
	Semester total	15
*IPPE Requirements (available in Summer, *Fall, Winter, or Spring Term)		
IPP 707	Introductory Pharmacy Practice Experience I	4
IPP 807	Introductory Pharmacy Practice Experience II	2
IPP 808	Introductory Pharmacy Practice Experience III	2
	IPPE total	8
Semester VII and VIII		
APP 901	Advanced Pharmacy Practice Experience: Community	6
APP 902	Advanced Pharmacy Practice Experience: Hospital/Health System	6
APP 903	Advanced Pharmacy Practice Experience: General Medicine	6
APP 904	Advanced Pharmacy Practice Experience: Am Care	6
APP 905	Advanced Pharmacy Practice Experience: Specialty I	6
APP 906	Advanced Pharmacy Practice Experience: Specialty II	6
	Year total	36
Program Total Credits		147
<i>*Denotes Fall starting 2nd year or after successful completion of IPP 607</i>		

COP 2020-2021 Academic Calendar

SUMMER 2020

Summer Semester: 05/12/2020 – 08/14/2020		
Event	Start Date	End Date
Summer Term	05/12/2020 - Tuesday	08/14/2020 - Friday

FALL 2020

Event	Start Date	End Date
PI Orientation Week	08/11/2020 - Tuesday	08/14/2020 - Friday
White Coat Ceremony	08/29/2019 - Saturday	
Fall Semester: 08/17/2020 – 12/09/2020		
Event	Start Date	End Date
Instructional Period	08/17/2020 - Monday	12/01/2020 - Tuesday
Course Add/Drop Period	08/17/2020 - Monday	08/21/2020 - Friday
Finals Exam Period	12/03/2020 - Thursday	12/09/2020 - Wednesday
Final Grades Due	12/16/2020 - Wednesday	
Remediation Exam Period	12/11/2020 - Friday	12/17/2020 - Thursday
Winter Break	12/18/2020 – Friday	01/03/2021 - Sunday
Remediation Grades Due	21/21/2020 - Monday	

WINTER 2020 – 2021

Winter Semester: 12/10/2020 – 01/06/2021		
Event	Start Date	End Date
Winter Term (IPPE Only)	12/10/2020 - Thursday	01/06/2021 - Wednesday

SPRING 2021

Fall Semester: 01/04/2021 – 04/30/2021		
Course	Start Date	End Date
Instructional Period	01/04/2021 - Monday	04/23/2021 - Friday
Course Add/Drop Period	01/04/2021 - Monday	01/08/2021 - Friday
Spring Break	03/05/2021 - Friday	03/09/2021 - Tuesday
Final Exam Period	04/27/2021 - Tuesday	04/30/2021 - Friday
Final Grades Due	05/07/2021 - Friday	
Remediation Exam Period	05/05/2021 - Wednesday	05/10/2021 - Monday
Remediation Grades Due	05/14/2021 - Friday	
Graduation Clearance Day	05/14/2021 - Friday	
Graduation Ceremony	05/15/2021 - Saturday	