

# Pharmacy

Doctor of Pharmacy Program  
Campbell University  
College of Pharmacy & Health Sciences  
PO Box 1090  
Buies Creek, NC 27506  
(800) 760-9734 ext. 1690

## Admission Policies

The College of Pharmacy & Health Sciences (CPHS) not only strives to produce graduates who possess a broad scientific and medical knowledge base but who also have the ability to effectively communicate this information to their patients. Students are encouraged to serve in leadership roles within the community and professional organizations. The College instills in students the importance of showing empathy, compassion and understanding to their patients.

CPHS is committed to selecting applicants who display these characteristics in order to be an asset to the profession of pharmacy.

The goals of the admissions process are:

- To understand each applicant as a whole person;
- To evaluate the applicant's potential for success in the doctor of pharmacy program;
- To assess the candidate's commitment and aptitude as a future practicing pharmacist.

Each applicant's academic background and achievements, personal statement, Pharmacy College Admissions Test (PCAT) scores, letters of recommendation and work experience within the pharmacy profession will be considered by the Admissions Committee. In addition to academic performance, the Admissions Committee places emphasis on personal merit, leadership, community involvement, maturity, communication skills, diverse pharmacy work, and dedication to professional goals.

### Admissions Criteria

Applicants must complete a minimum of 64 credit hours prior to matriculation into the doctor of pharmacy program.

All required pre-professional academic work must be completed at an accredited college or university in the United States. All prerequisite courses must be completed with earned grades of "C" or higher.

A minimum grade point average of 2.5 on a 4.0 scale in all coursework attempted will be considered for admission into the program. Students with a bachelor's degree from an accredited United States institution are only required to complete the economics, public speaking, math and science prerequisites. The

bachelor degree must be conferred prior to matriculation into the program.

Students who have not earned a bachelor's degree are required to meet the non-science prerequisites as well as the economics, public speaking math and science prerequisites. Electives coursework may include basic science, math, or liberal arts courses; however, advanced science coursework (chemistry, biological sciences, pharmaceutical sciences and clinical sciences) are beneficial in building a strong foundation for the doctor of pharmacy program.

Candidates for admission to the College's doctor of pharmacy program must also meet the requirements listed in the Technical Standards for Admission & Matriculation section of this bulletin.

### Science and Math Requirements

- Calculus (3 credit hours)
  - Examples: Calculus I, Analytical Geometry, Calculus
- Statistics (3 credit hours)
- Physics\* (4 credit hours)
  - Physics for health professions majors (does not need to be calculus based)
- General Chemistry\* (8 credit hours)
- Organic Chemistry\* (8 credit hours)
- Biological Sciences\* (12 credit hours)
  - General Biology (4 credit hours)
  - Anatomy & Physiology (4 credit hours)
  - Microbiology (4 credit hours)

\**Biological Sciences, Physics, General Chemistry, and Organic Chemistry must have a lab associated with the course.*

### Non-Science Requirements

- Economics (3 credit hours)
  - Course must be denoted as an economics course in your university catalog. Economics may count as a social science if the applicant has 64 hours of credit at matriculation.
- English Composition\*\* (6 credit hours)
  - English courses must be writing intensive. Basic literature courses will not be accepted.
- Public Speaking
  - Public Speaking may count as a humanities course if the applicant has 64 hours of credit at matriculation.
- Humanities\*\* (6 credit hours)
  - Example: Literature, Philosophy, Music, Art, Drama, Foreign Language
- Social Sciences\*\* (6 credit hours)
  - Example: Religion, History, Political Science, Psychology or Sociology

### Electives

- Electives\*\* (12 credit hours)
  - Suggested: Pharmaceutical Sciences or Clinical Research courses, advanced biology or chemistry. Several business electives may also meet the requirements of the joint dual PharmD/MBA program.

*\*\*If the applicant has completed his or her bachelor's degree, these classes are not required.*

Please note: The prerequisites for the doctor of pharmacy program will change for applicants applying during the 2016-2017 admissions cycle. We recommend that applicants in the 2016-2017 admissions cycle review these modifications and consider taking any of these courses as additional electives if possible. These course will improve your academic background; however they are NOT required during this admissions cycle:

- 4 hours each of General Biology, Anatomy & Physiology, and Microbiology, all with lab
- 3 credit hours of Public Speaking
- 3 credit hours of Statistics

### Application Deadline

Beginning each fall, members of the next class are selected using a modified rolling admissions procedure. Under this system, qualified applicants are admitted into the doctor of pharmacy program on an ongoing basis until the class is filled. Applicants are strongly encouraged to submit all required admissions documents early in the admissions cycle to maximize their admissions potential. Applications received after November 1 face significantly increased competition for admission and may be placed on a waiting list, regardless of qualifications. The final deadline for applications is March 1; all information must be received by this date.

### Application Process

- All material must be received by March 1.
- Complete online PharmCAS application at [www.pharmcas.org](http://www.pharmcas.org).
- Submit all official transcripts to PharmCAS.
- Submit Pharmacy College Admission Test (PCAT) scores to PharmCAS.
  - Information on the PCAT may be obtained at [www.pcatweb.info](http://www.pcatweb.info).
- Submit three letters of recommendation to PharmCAS. At least one letter from a science professor and a pharmacist is strongly preferred.
- Submit supplemental application with required fee of \$50 and a passport size photo to CPHS.

The applicant is responsible for ensuring the timely receipt and updating of all required application documentation. A file will not be reviewed by the Admissions Committee until all application materials have been received by the Admissions Office.

### PharmCAS

Applicants must submit an application through the Pharmacy College Application Service (PharmCAS) online at [www.pharmacas.org](http://www.pharmacas.org). Original official transcripts from all US post-secondary schools (including the planned fall courses) and Pharmacy College Admission Test (PCAT) scores must be submitted to PharmCAS. All college coursework attempted must be submitted to PharmCAS.

For applicants currently enrolled in classes, it is imperative to update newly completed coursework. When fall grades are available the applicant must submit official transcripts to PharmCAS in order to update their application. Transcripts reflecting spring grades must be sent directly to the CPHS Admissions Office. Applicants are also required to submit three letters of recommendations to PharmCAS. At least one letter from a science professor and a pharmacist is strongly preferred.

Applicants gaining acceptance to the Doctor of Pharmacy program are required to submit to a urine drug screen and a criminal background check through the PharmCAS system. Results of these screens which violate policies and procedures of CPHS, Campbell University or one of the affiliated institutions may have a negative impact on the candidate's ability to matriculate into the program.

It should be noted the Admissions Committee continues to review the results of pending coursework, test scores and behavior during the admissions and matriculation process. The Admissions Committee reserves the right to rescind the offer of admission due to poor performance or unprofessional behavior.

### Supplemental Materials

A supplemental application with the required application fee and passport size photograph must be submitted to CPHS. The supplemental application is available online at [www.campbell.edu/cphs](http://www.campbell.edu/cphs). Failure to complete the required supplemental components of the admissions process will delay the review of the application package until all elements are completed.

### Interviews

Completed application packages are evaluated by the Admissions Committee to determine the applicant's potential as a student pharmacist. Based on this evaluation, an invitation to participate in a personal

admissions interview may be extended. The interview is designed as a two-way exchange with the goal of mutually enhancing the understanding of both the applicant and the Admissions Committee. Applicants are notified by email of admissions decisions following the interview process.

### Early Decision Program

An Early Decision Program is available for eligible applicants. Through this option, applicants select one school as their preference through PharmCAS. The college and the student have the potential to benefit from this program by confirming admissions and enrollment for qualified applicants early in the admissions process.

To be eligible for the Early Decision Program at Campbell, the applicant must have taken the PCAT examination by September 30, 2016. The completed PharmCAS application with the Early Decision designation along with three letters of recommendation, the supplemental application (fee waived for Early Decision applicants) and photograph must be submitted by September 6, 2016.

All materials must be forwarded to the appropriate locations prior to the early decision deadline in order to be considered as an early decision candidate. A decision will be rendered by the deadline specified by PharmCAS.

Valid admissions decisions for an early decision candidate consist of: acceptance, denial or deferral of the applicant to the general applicant pool (applicant becomes eligible to apply to other pharmacy programs while still being considered by their primary preference).

### Tuition and Fees

Tuition and fees are determined annually, for more information visit [www.campbell.edu/cphs](http://www.campbell.edu/cphs).

### Refund Policy

Please refer to the General Information section of this bulletin for more information regarding the CPHS Refund Policy.

## Technical Standards for Admission & Matriculation

The American Council on Pharmaceutical Education (ACPE), the accrediting body for colleges and schools of pharmacy, requires that Doctor of Pharmacy curricula meet standards and guidelines which emphasize a strong scientific foundation and practice-based competency. The pharmacy curriculum

is designed to develop caring and competent pharmacists, practitioners who assume responsibility for safe and effective medication use in patients. The pharmacy curriculum is also designed to produce pharmacists who are collaborative partners in the care of patients within an interdisciplinary health care system.

Technical Standards refer to nonacademic admissions and matriculation criteria that are essential to participation in the Doctor of Pharmacy program. All students must possess the intellectual, ethical, physical, and emotional capabilities required to undertake the full curriculum and to achieve the levels of competence required by the faculty. The technical standards described below are essential functions and therefore prerequisites for entrance, continuation, promotion, and graduation from the Doctor of Pharmacy program, with or without appropriate accommodations in compliance with the Americans with Disabilities Act.

Candidates for admission to and graduation from the Campbell University College of Pharmacy & Health Sciences Doctor of Pharmacy Program must possess the following abilities:

### Observation

The candidate/student-pharmacist must be able to observe required lectures, demonstrations and experiments, including but not limited to microscopic studies, pharmaceutical lab instruction (technical quality of prepared and compounded materials), and patient care demonstrations (physical observation and physical assessment). A candidate/student-pharmacist must be able to observe a patient accurately at a distance and close at hand, noting non-verbal and verbal signals. Observation necessitates functional use of vision, hearing and somatic senses. The candidate/student-pharmacist must be capable of remaining alert and attentive at all times in the clinical setting.

### Communication

A candidate/student-pharmacist must be able to effectively speak, read and write in English. Visual and auditory senses must be intact to detect verbal and nonverbal communication signals. A candidate/student-pharmacist must be able to elicit information from and communicate effectively and sensitively with patients. The candidate must be able to communicate effectively and efficiently in oral and written form with all members of the health care team.

### Motor Abilities

A candidate/student-pharmacist must have sufficient motor function to carry out the

basic laboratory experiments and physical assessment. The candidate/student-pharmacist must be able to carry out duties within the classroom, laboratory, pharmacy and clinic settings. Motor function must be sufficient to perform fundamental patient care, such as required for disease prevention, drug therapy monitoring, emergency treatment, general care and basic physical assessment (e.g. blood pressure assessment, palpation for edema, injection of vaccines, cardiopulmonary resuscitation, etc.). Motor function must also be sufficient to perform drug distribution duties in both a community and hospital pharmacy setting. Candidates/student-pharmacists must have the ability to maintain aseptic technique in the preparation of sterile materials. This will require the ability to work under a laminar flow hood and in sterile rooms. Candidates must possess the motor function sufficient to direct and supervise the accurate compounding and preparation of medications for dispensing to patients. A candidate/student pharmacist must be able to safely and effectively operate various types of laboratory and patient care equipment such as weights and balance, a glucose meter, stethoscope and sphygmomanometer. They must be able to use computer-based information systems. These motor actions require coordination of both gross and fine muscular movements, equilibrium and functional use of the senses of touch, vision, and hearing. Additionally, some aspects of patient care require that the student-pharmacist be able to act quickly and speed of motor function may be an essential requirement.

#### **Intellectual, Conceptual, Integrative, and Quantitative**

Problem solving, the critical skill demanded of pharmacists, requires that a candidate/student-pharmacist be able to learn, retrieve, analyze, sequence, organize, synthesize and integrate information efficiently, and reason effectively. In addition a candidate/student-pharmacist should possess the ability to measure and calculate accurately, to perceive three-dimensional relationships and to understand the spatial relationships of structures.

#### **Behavioral and Social Attributes**

A candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment, the prompt completion of all responsibilities attendant to the diagnosis and care of patients, and the development of mature, sensitive and effective relationships

with patients and their family members, staff, and colleagues. Each candidate must be able to work effectively as a member of a health-care team. Candidates must be able to tolerate physically taxing workloads and to function effectively under stress. They must be able to adapt to changing environments, to display flexibility and to learn to function in the face of uncertainties inherent in the clinical problems of many patients. Compassion, integrity, concern for others, interpersonal skills, collegiality, interest, and motivation are all personal qualities that are assessed during the admission and education processes.

### **Equal Access to the CPHS Doctor of Pharmacy Program**

In accordance with Campbell University's nondiscrimination policy, the College of Pharmacy and Health Sciences does not discriminate against otherwise qualified individuals with disabilities who apply for admission to the Doctor of Pharmacy Program. It is recognized that the on-site interview may not adequately evaluate a student's ability to meet the technical standards. Students who are unsure that they meet the technical standards because of a disability are responsible for disclosing that to the Campbell University Office of Student Success. The Director of Access and Outreach in that office will consult with the student regarding possible accommodations. At the time an applicant accepts an offer to the CPHS Doctor of Pharmacy Program, students must attest in writing that they are able to meet the CPHS Doctor of Pharmacy Program Technical Standards for Admission & Matriculation with or without accommodations. Students will continue to attest in writing during orientation through the fourth year that they are still able to meet the standard. The Campbell University College of Pharmacy and Health Sciences (CPHS) Doctor of Pharmacy Program is committed to providing reasonable accommodation to ensure that equal access is provided to all otherwise qualified students in the course of study leading to the Doctor of Pharmacy degree and licensure.

### **Accommodations**

Accepted students with a disability who believe they may require accommodations to meet these standards should contact the Campbell University Director of Access and Outreach immediately upon accepting the offer of admission. The Director of Access and Outreach will consult with

CPHS faculty and administration to determine what reasonable accommodations can be made. Candidates pursuing the academic program who lack the ability to appropriately meet these standards and who do not seek accommodations may place themselves in academic jeopardy. The use of an intermediary, a person trained to perform essential skills on behalf of the student, is not permitted.

Should a candidate develop a condition during their education in the Doctor of Pharmacy Program that would affect their ability to meet the above technical standards, they must contact the Director of Access and Outreach to determine whether or not a reasonable accommodation can be made. Again, candidates pursuing the academic program who lose the ability to appropriately meet these standards and who do not seek accommodations may place themselves in academic jeopardy.

The Director of Access and Outreach will meet with the student to discuss areas of concern. The Director will then develop an accommodation plan, consulting regularly with the CPHS Office of Academic Affairs, the CPHS Office of Admissions & Student Affairs, the CPHS Office of Experiential Education, the CPHS Pharmacy Practice Department, and other offices as needed during the process. The accommodation plan will require the approval of the above departments, Student Success, and the student.

### **Appeals Process**

Accepted students who are unable to meet the Technical Standards, with or without accommodation, will not be offered admission and will be notified by the Admissions Committee. Enrolled students who are found not to meet the Technical Standards, with or without accommodation, will be evaluated by the CPHS Academic Performance and Standards Committee and will use the appeals process for that committee's work. Student-pharmacists who disagree with an accommodation decision made by the office of Student Success will use that office's grievance process which can be found in the "Student Guide to Accessing Disability Services" on the Student Success website.

*The above standards mirror our current CPHS PA program technical standards and were modified based on language incorporated from the Technical Standards documents of University of Mississippi, University of Iowa, Kentucky University, and University of California, San Francisco schools of pharmacy.*

# Academic Standards

## Retention and Promotion Criteria

Full-time students enrolled in the doctor of pharmacy program at the College of Pharmacy & Health Sciences (CPHS) are expected to make satisfactory academic progress toward completion of the degree requirements. Satisfactory academic progress is defined as successful completion in the prescribed time, maintenance of a 2.2 semester grade point average (SGPA), professionally required course grade point average (PGPA), and a cumulative grade point average (CGPA), and completion of any professional deficiencies and/or required remedial courses in the time and manner prescribed. PGPA calculations are based only on professionally required courses, and do not include grades earned in elective courses.

Students who fail to maintain satisfactory academic progress in the professional program are automatically placed on academic probation. They may be required to participate in academic counseling, be enrolled in a remedial program of study or suspended/dismissed according to the policies described in the subsequent sections. Such actions will be determined by the Academic Performance and Standards Committee, with notification to the associate dean for academic affairs. The student will be notified of these actions by the chair of the Academic Performance and Standards Committee.

Actions taken in these matters are not to be viewed as punitive, but as a recognition that it is unrealistic to continue in a course of study where there is little probability of success. These same standards will be applied to students enrolled in an approved part-time course of study.

### 1. Academic Probation

Academic probation is the initial action for a student failing to make satisfactory academic progress.

A student will be placed on academic probation for:

- Failure to maintain a minimum SGPA of 2.20;
- Failure to maintain a PGPA of 2.20; Failure to maintain a CGPA of 2.20; A failing grade in a professionally required course;
- Two or more "D" grades in professionally required courses in one semester;
- Unauthorized failure to complete any degree requirement at the prescribed time.

Depending on the nature of the academic deficiencies and overall academic record, a student placed on academic probation may or may not be permitted to continue in the regular sequence of the professional curriculum. A student failing a course in sequence may be permitted to take the next course in the sequence, if directed by the Academic Performance and Standards Committee as part of a modified course of study, or by gaining written permission from the associate dean for academic affairs.

If a student fails a professionally required course, it must be repeated during the next term the course is offered. A student placed on academic probation is typically given one semester to correct any grade point deficiencies.

The Academic Performance and Standards Committee will review the student's record at the end of the term of probation:

- If the SGPA and PGPA for that term are 2.20 or above, and the CGPA is 2.20 or above, the student will be released from academic probation. If SGPA and PGPA are 2.20 or above, but the CGPA is below 2.20, the student will remain on academic probation. A student remaining on academic probation for more than two consecutive semesters will be subject to suspension or dismissal.
- If a student fails to make satisfactory progress during the period of academic probation, and/or fails to correct academic deficiencies, within the prescribed time, that student will be subject to automatic suspension and may be dismissed from CPHS.

### 2. Academic Suspension

Academic Suspension from CPHS occurs when a student:

- Has failed to make satisfactory progress as demonstrated by SGPA or PGPA less than 2.20, or received more than a single "D" grade in a professionally required course during a period of academic probation;
- Has academic deficiencies which preclude continuation in a normal program of study, but may be expected to be able to complete the requirements for the degree under a modified program of study with or without remedial courses;
- Has received a failing grade in any two professionally required courses.

Suspensions are imposed for a specified period of time and must not exceed one year. A student on academic suspension is not allowed to continue the standard course of study. The Academic Performance and

Standards Committee will specify the length of time of the suspension, remedial work required for reinstatement, and the program of study required upon re-instatement.

### 3. Academic Dismissal

Academic dismissal from CPHS will occur when a student:

- Fails to make satisfactory progress during a period of academic probation or suspension;
- Has academic deficiencies which preclude continuation in the prescribed program of study, and may not reasonably be expected to complete the requirements of the degree.

Except under very extenuating circumstances, academic dismissal will be recommended if a student:

- Was previously suspended from the College and again failed to make satisfactory academic progress;
- Is on academic suspension under a remedial course of study and again fails to make satisfactory academic progress as demonstrated by SGPA or PGPA less than 2.20, or earns more than a single D-grade in professionally required courses for that term;
- Fails a single professionally required course more than one time, or accumulates more than two failures in professionally required courses; Accumulates a grade point deficiency which reasonably precludes the possibility of completing the degree requirements.

A student dismissed from the College may seek re-entry by applying for re-admission using the standard admissions process.

### Academic Status Appeals

At the end of each academic term, the Academic Performance and Standards Committee chair reviews the academic performances of all students enrolled in CPHS. The chair notifies each student who does not meet the academic standards as defined by the academic regulations at CPHS. The College's associate dean for academic affairs is also notified.

Each student subject to suspension or dismissal is evaluated by the Academic Performance and Standards Committee in order to determine whether to retain or promote the student in the professional program. The student may appear in person before the committee. The chair of the Academic Performance and Standards Committee notifies students in writing regarding any decision by the committee



to require a modified course of study, to suspend enrollment, or to dismiss the student from the College and informs the associate dean for academic affairs and associate dean of admissions & student affairs.

Students have the opportunity to appeal any decision made by the Academic Performance and Standards Committee by submitting a written petition to the associate dean for academic affairs within seven days of their receipt of notification. The petition must contain the specific variance requested, a description of any extenuating circumstances intended to justify granting the variance, and a proposed course of study and/or conditions for consideration should the variance be granted. The decision of the associate dean for academic affairs is final.

Any student on probation or suspension for a stated period is automatically ineligible to:

- Hold or run for elected office in student professional organizations;
- Represent the University in any capacity either on campus or away from campus (see policy below for additional information);
- Compete for honors and distinctions;
- Participate as an elected representative or member of an honorary organization;
- Obtain reimbursement monies from any funders in the College of Pharmacy & Health Sciences (see policy below for additional information).

### **Event Attendance Policy**

While on any level of probation or suspension, students are unable to represent the university in any outside event such as regional or national conferences/meetings. A student may appeal this decision by submitting a written petition to the Academic Performance and Standards Committee addressing the conference or meeting they desire to attend, why they want to attend this meeting, how attendance at this meeting would benefit their education and provide documentation of how they have improved their academic studies during the semester.

### **Reimbursement Policy**

While on any level of probation or suspension, students are unable to receive any reimbursement monies from any funders in the College of Pharmacy & Health Sciences. The student's academic status will be confirmed upon any request for such funds.

### **Remediation Policy After a Failure Occurs**

If a student fails a course despite the efforts made for early academic difficulty detection, re-taking of the course will be required.

As directed by the Academic Performance and Standards Committee (APSC), the student may take the course again in the following summer session after the original course was taken. For example, if a student fails PHAR XXX, he/she will register for and re-take it as a summer course. This will result in additional tuition charges for the summer course, which may be assessed on a per-credit hour basis. A student may only take the remediation course at the direction of the APSC with authorization by the CPHS Associate dean for academic affairs. The remediation course will be a Summer Session III registered course. The actual duration and schedule for the course will be determined by the course director. The Task Force recommends that the course duration meets the following recommendations: a minimum of 1 week per credit hour and a maximum of 2 weeks per credit hour.

The remediation course should be similar in scope and content to the original course. The remediation course will be available to the student primarily as a self-directed module with the student(s) viewing the lectures that were recorded at the time the student was originally enrolled in the course. The remediation course will be supplemented with weekly conferences with the instructor(s) to ensure student progress. Weekly conferences with the instructor(s) may be held in person, via email, by phone, or with other technology (at the discretion of the individual instructor). A comparable number of exams should be administered during the remediation course. Exams may be of a different format, with a different number of questions; however, the exams should cover the same material covered during the regular course. Exams may be given via ExamSoft.

The student will be required to take all course exams ON CAMPUS as offered through the coursemaster or his/her affiliate. Exam dates will be communicated at the beginning of the course. Exam dates, office hours, or conference times with the instructor(s) will also be specified in the syllabus. Whether the student passes or fails the remediation course, his or her progression in the curriculum will be determined by the APSC.

In addition, any student who has NOT failed a course, but has a cumulative GPA lower than 2.2, may also take a remediation course if it is recommended by the APSC and approved by the CPHS Associate dean for academic affairs. Students will only be allowed to take 1 summer remediation course per summer. If greater than 1 course is required for

remediation, the student should repeat any additional courses during the regularly scheduled Fall/Spring semester. Students may only take a summer remediation course when recommended by the APSC.

### **Grade Appeals**

Students with a just reason for appealing a grade in a course at CPHS must first appeal to the course instructor. If the issue cannot be adequately resolved with the instructor, then the student should appeal to the course master. If no resolution is achieved at that level, the student should appeal to the appropriate department chair. After efforts within the department, a student may appeal to the Academic Performance and Standards Committee to seek resolution. If the student feels that the resolution is not just, the student must submit a written petition to the associate dean for academic affairs within seven days of the student's receipt of notification of the Academic Performance and Standards Committee decision. The petition must contain the specific variance requested and a description of any extenuating circumstances intended to justify granting the variance. The decision of the associate dean for academic affairs is final.

### **Advancement to a Higher Class**

Advancement to a higher class requires:

#### **To a Second Professional Year**

1. A cumulative grade point average of 2.20 or higher;
2. Completion of all first professional year courses;
3. Completion of all pre-professional requirements
4. Exceptions may be granted by the Academic Performance and Standards Committee and/or the associate dean for academic affairs.

#### **To Third Professional Year**

1. A cumulative grade point average of 2.20 or higher;
2. Completion of all second professional year courses
3. Exceptions may be granted by the Academic Performance and Standards Committee and/or the associate dean for academic affairs.

#### **To Fourth Professional Year**

1. A cumulative grade point average of 2.20 or higher;
2. Completion of all third professional year courses

### Delayed Graduation Policy

If a pharmacy student is required to re-take classes as a result of specific course failure or a deficiency in overall academic performance, then a delay in scheduling advanced pharmacy practice experiences (APPE) will occur and the student's graduation will be delayed.

Voluntary course withdrawals or a temporary leave of absence will also cause a delay in scheduling APPE and a delay in graduation. Any alteration in the normal curriculum progression may affect a student's financial aid status or qualification for education-based financial aid. For specific counseling and advice students should contact the College's Office of Academic Affairs and the University's Office of Financial Aid.

#### Policy examples:

- If a student is forced to withdraw from any or all courses in the fall semester, then he or she returns to a delayed schedule in fall of the next year (delaying graduation by one year). To prevent entering financial aid repayment, or "grace period," a student may be able to register for six credits (half-time) of elective or required courses in the spring semester. Specific approval of this modified course plan must be obtained from the College's Office of Academic Affairs and the University's Office of Financial Aid
- A single course in each semester of the P-2 year may be repeated simultaneously with full time registration as a P-3 student. Approval must be obtained from the College's Office of Academic Affairs. A need to repeat two or more courses in either semester of the P-2 year may prevent simultaneous enrollment in any in either semester of the P-2 year may prevent simultaneous enrollment in any P-3 courses. Progression to the P-3 year will be delayed and graduation will be postponed by one year. Counseling with respect to financial aid considerations must be obtained.
- If a student earns less than a "C" grade in any single P-3 course in the fall semester, he or she may be permitted to continue enrollment in P-3 courses in the spring semester (subject to successful completion of required prerequisites). However, the student would not be able to complete any P-4 APPE until he or she has successfully completed all P-1, P-2, and P-3 courses, including Introductory Pharmacy Practice Experiences (IPPE), and the Top 300 Drug Review (PHAR 508). Assuming that all courses are passed successfully in the P-3 spring semester, a student would be able

to begin APPE after repeating necessary fall courses. This would allow the student to begin APPE in January of the following year, possibly qualifying for graduation in December depending on available APPE sites. In order to forestall educational loan repayment, a student must enroll at least half-time (six credit hours) when repeating fall courses.

- If a student fails any P-3 courses in the spring semester, he or she will be prevented from starting his or her APPE until he or she has successfully repeated the courses the following spring. After the student has successfully completed the required courses, he or she may begin his or her APPE immediately subject to preceptor and site availability. If a student begins these experiences in March, he or she may be able to graduate in December. If the student begins in May, he or she cannot graduate until the following May (one year later). If a student fails any P-3 courses, any APPE schedule in place at that time will be entirely cancelled and re-scheduling of all APPE will be necessary (without exception).
- If a student fails one or more courses, IPPE or APPE rotations, it may be necessary to delay his or her graduation due to limited course offerings or unavailability of appropriate training sites. It currently is not possible for a student to complete a rotation during the months of May, August, or December and also graduate during that month because University graduation certification occurs in the middle of each month.

#### Withdrawal

A student may withdraw from a course without penalty at any time prior to the end of the fourth week of a semester. Withdrawal from a course after that period will result in a grade being assigned. Refer to the General Information section of this bulletin for detailed information about the withdrawal policy of the College of Pharmacy & Health Sciences.

#### Transfer Students

CPHS does not accept transfer students directly into the doctor of pharmacy program. The College utilizes a process to evaluate potential students that may differ from other programs.

In addition, there is a great deal of heterogeneity among doctor of pharmacy curricula across the nation. The scheduling difficulties for correcting potential course deficits become extremely complicated.

Furthermore, the College could only consider such requests if space becomes available due to a decrease in the number of enrolled students; therefore, CPHS has determined that accepting transfer students with advanced standing is not in the best interest of the student nor the College. The College feels it would not be providing consistent opportunity for all students.

As a result, students currently enrolled in a doctor of pharmacy program in the United States should apply to CPHS as an entry-level student. Interested individuals must follow the procedures for admission. Applicants must be in good academic standing and have a letter from the dean of their institution supporting the request. These admissions decisions will be handled in the same manner as all other applicants to the College by the actions of the Admissions Committee.

Any individual admitted to CPHS who has completed coursework in another doctor of pharmacy program or another graduate/professional degree may formally request transfer of credits. All accepted transfer students seeking "advanced standing" through the transfer of credits must submit a formal request as outlined in the policy and procedure for course transfer and waiver in the CPHS Academic Bulletin.

All prerequisites must be met prior to matriculation to the doctor of pharmacy program at Campbell University. CPHS reserves the right to make changes in requirements for admission, curriculum, standards for progression, advancement and graduation, fees and rules and regulations

To apply to the doctor of pharmacy program, please follow the policies and procedures in the admissions portion of the CPHS Academic Bulletin.

#### Transfer Credit & Course Waiver Policy

Students may formally request an evaluation of previously earned professional coursework for transfer credit or the waiver of course requirements of pre-professional and professional courses. Each course transferred or waived must be by written, affirmative acceptance of the associate dean for academic affairs.

The process for transfer or course-waiver is not automatic. The review of transfer courses or course-waivers may only be initiated after a student has enrolled or been accepted for enrollment and paid the matriculation deposit for the doctor of pharmacy program. CPHS can only accept transfer of equivalent professional courses from an ACPE accredited institution. A student may transfer equivalent professional courses that meet the requirements of the curriculum.

To be eligible for transfer and replacement of a course in the professional curriculum, the requested course for transfer must meet all of the following requirements:

- Be documented on an official transcript provided by the registrar of the accredited institution
- Have an earned grade of 70% or higher, or a grade of “C” or greater
- Be of the same general content and level of instruction as the equivalent course in the CPHS doctor of pharmacy curriculum at the time requesting transfer
- Be equal or greater in the number of semester credit hours as the course required in the CPHS professional curriculum.

A student granted transfer credit will not be required to enroll or pay tuition and fees for the transferred course; however, full-time tuition is charged to all students enrolled in at least 12 semester hours. Upon approval for transfer, the student will be given credit for the transferred course on the official transcript. Credit hours for transferred courses that exceed the number of credits for the equivalent course at CPHS will not count towards elective credits in the curriculum.

A student may formally request to receive a course-waiver for a required course in the doctor of pharmacy curriculum provided the student successfully completed an upper division or graduate course that:

- Is completed from an accredited institution recognized by CPHS
- Is documented on an official transcript provided by the registrar or equivalent of the accredited institution
- Has an earned grade of 80% or higher, or a grade of “B” or greater
- Be of the equivalent general content and level of instruction as the equivalent course in the CPHS doctor of pharmacy curriculum at the time of the request for waiver
- Be equal or greater in the number of semester credit hours as the course required in the CPHS doctor of pharmacy curriculum.

A student granted a course-waiver would not be required to enroll in the equivalent professional course or be given degree program credit for the waived course. The student will be required to complete an equivalent number of semester credit hours in elective offerings to meet the total degree requirements for the doctor of pharmacy program.

### Procedure

1. An enrolled student or deposited applicant must present a signed letter to the associate dean of admissions & student affairs describing the course(s) in the professional curriculum that the student or applicant seeks to transfer or receive course-waiver.

The following should be included with the letter:

- Documentation that the student or applicant has, before submitting the letter, made a request to the registrar of the previous institution to submit official documentation of the course(s) directly to CPHS, and has paid the appropriate fees, if any, to the previous institution to process the document
  - Appropriate documentation to support the equivalence of the proposed transfer course or course-waiver as determined by CPHS.
2. Upon receipt of the letter and documentation, the associate dean of admissions & student affairs will determine the applicant’s status for enrollment or acceptance to the doctor of pharmacy program and payment of the matriculation deposit. The associate dean of admissions & student affairs will communicate in writing the status of the application to the applicant, including any requirements that must be met by the applicant prior to processing the request.
  3. The associate dean of admissions & student affairs will maintain the letter and documentation until such time as CPHS receives the official documentation from the previous institution(s). Upon receipt, the associate dean will transmit the request to the associate dean for academic affairs for evaluation and recommended disposition.
  4. The associate dean for academic affairs will evaluate the transcript, course(s) and documentation submitted. If the associate dean for academic affairs has any question as to the equivalence of the course(s), he or she may contact the previous institution to secure additional information. If the associate dean for academic affairs determines that the submitted documentation is insufficient to determine equivalency, he or she may contact the applicant or previous institution to secure adequate documentation, or return the application to the applicant with an explanation of the required documentation to determine equivalence.
  5. If the associate dean for academic affairs is not familiar with the content, he or she

shall consult with the appropriate course director to determine course equivalency.

6. The associate dean for academic affairs shall make a recommendation to the dean whether to accept or deny the course transfer or course-waiver.
7. The associate dean for academic affairs shall make the final determination of the acceptance of the course transfer or waiver and communicate his or her decision in writing to the applicant and the Campbell University registrar. The decision of the dean shall be final.

### Grading System

The following is the grading scales for the doctor of pharmacy program at CPHS with the assigned quality points:

Grade	Quality of Work	4-Pt. Scale
A	Superior/Excellent	4
B	Above average	3
C	Average	2
D	Below average	1
F	Failure	0
I	Incomplete	0
IC	Incomplete continued	0
AU	Audit	0
P	Passing (graduate only)	0

Grades of “A, B, C, D, F, and I” are included in semester hours attempted and will affect the grade point average. Grades of “IC, AU, and P” will not affect the grade point average. A grade of “I” must be removed by the completion of the work within 30 days after the opening of the next semester; otherwise, it will be recorded as an “F.” A grade of “IC” must be removed by the completion of the work within 120 days.

A student may appeal a grade within a period of one academic year from the semester in which the grade was assigned. No changes to the transcript will be made after a 12-month period unless a professor acknowledges in writing that an error in grade reporting has occurred.

### Grade Reports, Records, and Transcripts

A report of grades attained by a student in the CPHS will be available through the University’s WebAccess system at the end of each semester. The official records of each student in CPHS will be maintained securely in the Office of the Registrar. The Family Educational Rights and Privacy Act (PL93-380) will govern the release of information for this record which contains the transcript from Campbell University, transcripts and transcript evaluations from other educational agencies attended by the student, secondary school transcripts, scholastic aptitude, GRE, and other

standardized test scores. The application for admission, general correspondence with the student and, if applicable, letters concerning misconduct or disciplinary actions at Campbell University are maintained by the Office of Admissions & Student Affairs within the university archival system. The transcript and contents of the permanent record may be examined by the student upon appointment with the Registrar, or the associate dean for student affairs.

## Matriculation Policies

Students enrolled in the doctor of pharmacy program are required to fulfill the following:

- Submit the required non-refundable admissions deposit.
- Submit a signed honor code form indicating that the student has received, read, understands and agrees to adhere to the provisions of the honor code of the Campbell University College of Pharmacy & Health Sciences.
- Submit original transcripts from each college or university where any coursework was completed (undergraduate, graduate, professional, etc.) to the Office of Admissions & Student Affairs prior to the beginning of classes. It is strongly preferred that transcripts are sent at the end of each semester during the application process.
- Complete all prerequisite coursework prior to matriculation with official transcripts submitted as mentioned above.
- Complete the required vaccination and immunization requirements, including the Hepatitis A series, Hepatitis B series, varicella immunity, Tdap, IPV (polio), MMR, influenza, and a TB test. Students should note that the Hepatitis A series is delivered in two injections over a six month period and the Hepatitis B series is delivered in three injections over a six month period. Ideally while the Hepatitis A and B series should be completed by the first day of classes, students whose acceptance is not granted in a sufficient time to permit this, may complete the series during the first year providing they have started the immunization series.
- Students must maintain an up-to-date record of all required documentation (including, but not limited to: immunizations, HIPAA certification training, chest radiograph, emergency contact information, drug allergies, drug screen, and immunization certification) in Magnus.
- Submit to a criminal background check as described by the following procedure. CPHS applicants are required to self-disclose any misdemeanors and

felony convictions, other than minor traffic violations, including deferred adjudications, with the understanding that non-disclosure or falsification may lead to dismissal and disclosure may prevent enrollment. Additionally, in response to requirements in the professional practice environment stating that facilities providing care to patients must minimize the risk to patients that may be presented by persons with prior criminal activity, a criminal background check will be completed on all accepted applicants prior to matriculation. Please refer to the General Information section at the back of this bulletin for the Criminal Background Check Policy.

- Submit to scheduled and random substance abuse screens each year as necessitated by the College and its affiliates.
- Attend all mandatory orientation sessions as applicable for new and returning students.
- Complete all programmatic standards as required by the College of Pharmacy & Health Sciences.

### Graduation Requirements

- Complete all required courses with a passing grade in each course and a 2.20 cumulative GPA
- Ensure appropriate graduation paperwork is filed in the timeframe specified by the university
- Receive an approving recommendation by the CPHS faculty
- Fulfill all financial obligations to the institution
- Attend the applicable commencement ceremony

## Curriculum

Please visit [www.campbell.edu/cphs](http://www.campbell.edu/cphs) for the most up-to-date curriculum information.

### First Year

Courses	Credit Hours
PHAR 302 - Anatomy & Physiology	4
PHAR 304 - Biochemistry	4
PHAR 312 - Medical Microbiology	4
PHAR 301 - Pharmaceutical Calculations	2
PHAR 305 - Pharmacy in the US Healthcare System	2
PHAR 309 - Drug Information	1
PHAR 331 - Pharmaceutical Care Skills	1
PHAR 315 - Intro. to Pharmacy Practice I	0.5
PHAR 335 - Community Service I	0
<b>Total</b>	<b>18.5</b>

### Semester 2 Courses

Courses	Credit Hours
PHAR 306 - Anatomy & Physiology	4
PHAR 303 - Patient Counseling & Prof. Communications	2
PHAR 310 - Immunology	3
PHAR 308 - Clinical Biochemistry	3
PHAR 314 - Biopharmaceutics	3
PHAR 307 - Pharmacy Marketing & Management	3
PHAR 332 - Pharmaceutical Care Skills Lab	1
PHAR 316 - Intro. to Pharmacy Practice II	0.5
PHAR 335 - Community Service I	0
<b>Total</b>	<b>19.5</b>

### Summer (one month) Courses

Courses	Credit Hours
PHAR 505 - Introductory Pharmacy Practice Experience I	1
<b>Total</b>	<b>1</b>

### Second Year

#### Semester 3

Courses	Credit Hours
PHAR 412 - Principles of Pharmacology & Medicinal Chemistry	3
PHAR 417 - Pharmacology & Medicinal Chemistry II	4
PHAR 408 - Biology of Disease	5
PHAR 404 - Pharmaceutics I	3
PHAR 410 - Pharmacokinetics	2
PHAR 409 - Intro. to Pharmacy Practice III	0.5
PHAR 435 - Community Service II	0
<b>Total</b>	<b>17.5</b>

#### Semester 4

Courses	Credit Hours
PHAR 421 - Pharmacology & Medicinal Chemistry III	4
PHAR 423 - Pharmacology & Medicinal Chemistry IV	3
PHAR 403 - Financial Mgmt. & Pharmacoeconomics	2
PHAR 405 - Nonprescription Drug Therapy	3
PHAR 406 - Pharmaceutics II with Lab	4
PHAR 419 - Intro. to Pharmacy Practice IV	0.5
PHAR 435 - Community Service II	0
<b>Total</b>	<b>16.5</b>



## Summer (one month)

Courses	Credit Hours
PHAR 507 - Introductory Pharmacy Practice Experience II	1
<b>Total</b>	<b>1</b>

## Third Year

### Semester 5

Courses	Credit Hours
PHAR 501/503 - Therapeutics I & II	6
PHAR 528 - Experimental Design & Biostatistics	4
PHAR 511 - Jurisprudence	3
PHAR 508 - Top 300 Drug Review	1
PHAR 5XX - Electives	3
PHAR 515P - Intro. to Pharmacy Practice V	0.5
PHAR 564 – Community Service III	0
<b>Total</b>	<b>17.5</b>

### Semester 6

Courses	Credit Hours
PHAR 545/547 - Therapeutics III & IV	6
PHAR 509 - Therapeutic Drug Monitoring	4
PHAR 544 - Intro. to Clinical Research Design & Lit. Evaluation	2
PHAR 519 - Physical Assessment	2
PHAR 5XX - Electives	3
PHAR 516P - Intro. to Pharmacy Practice VI	0.5
PHAR 564 - Community Service III	0
<b>Total</b>	<b>17.5</b>

## Fourth Year

### Nine Month Rotations

Courses	Credit Hours
PHAR 6XX - Advanced Pharmacy Practice Experiences (nine one-month)	36
PHAR 699 - Prof. Presentation Seminar	1
PHAR 690 - Community Service IV	0
<b>Total</b>	<b>37</b>

### Required APPE Rotations

PHAR 604 Advanced Community Pharmacy
PHAR 605 Ambulatory Care
PHAR 606 Geriatrics
PHAR 607 Internal Medicine I
PHAR 608 Internal Medicine II
PHAR 610 Advanced Hospital Three (3) PHAR 6XX Electives

# Course Descriptions

## PHAR 301 – Pharmaceutical Calculations

Credit: 2 hours

This course covers mathematics encountered in pharmacy practice.

## PHAR 302/306 – Anatomy & Physiology

Credit: 4 hours per class

This two-course sequence presents a comprehensive study of the structure and function of all organ systems as well as basic biochemical and biophysical principles of cellular and membrane function. Relevance to clinical states and drug action is also presented in many areas.

## PHAR 303 – Patient Counseling & Professional Communications

Credit: 2 hours

This interactive course is designed to guide pharmacy students in the development of effective counseling and communication skills. Emphasis will be placed on development of effective communication to the level of the patients' understanding and education for the most commonly used drugs. Using videotape technology and role-playing techniques, students will improve their proficiency and competency in effective patient communications and counseling.

## PHAR 304 – Biochemistry

Credit: 4 hours

This is a comprehensive course in biochemistry which discusses the metabolism of amino acids, carbohydrates, lipids, and nucleic acids. Principles of enzyme kinetics and regulation, bioenergetics, thermodynamics, and macromolecular structure-function relationships are presented.

## PHAR 305 – Pharmacy in the U.S. Health care System

Credit: 2 hours

This course will focus on introducing the pharmacy student to the US Health care System and its components, health care systems of various foreign countries, the profession of pharmacy and the expanding roles of pharmacy and pharmacists in the health care system. Various teaching methods will be used including lectures from faculty and guest speakers, interactive activities in class, internet-based assignments, reading assignments, written reports and group project.

## PHAR 307 – Pharmacy Marketing & Management

Credit: 3 hours

This course will present principles of marketing and management as they may be applied in pharmacy practice with a particular emphasis on the managed care environment.

## PHAR 308 – Clinical Biochemistry

Credit: 3 hours

This course discusses the principles of quantitative analysis utilized in common clinical laboratory tests. An introduction to interpretation of abnormal clinical laboratory values is presented. Quantitative aspects of nutrition are presented, and regulatory effects of various hormones are described. Diseases such as arteriosclerosis and diabetes are discussed.

## PHAR 309 – Drug Information

Credit: 1 hour

This course is designed to introduce the student to sources of drug information and hospital pharmacy functions (e.g. ADR, MUE's). Practical experience in the Drug Information Center will allow the student the opportunity to practice these skills, evaluate the literature, and communicate this information to other health care practitioners.

## PHAR 310 – Immunology

Credit: 3 hours

This course covers basic immunology and the fundamental principles relating to the immune response in normal and disease states.

## PHAR 312 – Medical Microbiology

Credit: 4 hours

The basic principles of bacteriology, mycology, parasitology, and virology are presented. The pathogenic properties and diseases of medically important species of bacteria, fungi, protozoa, helminthes, and viruses are described.

## PHAR 315– Introduction to Pharmacy Practice I

Credit: 0.5 hours per class

This series of courses are intended to expose the student pharmacist to a variety of career pathways within the pharmacy profession and to help prepare the student or the experiential component of the Doctor of Pharmacy curriculum. The student pharmacist will be engaged in discussions related to professionalism and pharmacy practice career paths. In addition the student will gain experience in introspection through reflection and will spend time creating an electronic professional portfolio. Student pharmacists will be asked to meet various pre-experiential

requirements as a component of this course (egs., immunizations, portfolio development, HIPAA training and other requirements).

#### **PHAR 314 – Biopharmaceutics**

Credit: 3 hours

The biological and physicochemical factors of the body, drugs, and dosage forms that influence drug availability, disposition, and pharmacological and toxicological responses are presented.

#### **PHAR 316 – Introduction to Pharmacy Practice II**

Credit: 0.5 hours per class

This series of courses are intended to expose the student pharmacist to a variety of career pathways within the pharmacy profession and to help prepare the student for the experiential component of the doctor of pharmacy curriculum. The student pharmacist will be engaged in discussions related to professionalism and pharmacy practice career paths. In addition the student will gain experience in introspection through reflection and will spend time creating an electronic professional portfolio. Student pharmacists will be asked to meet various pre-experiential requirements as a component of this course (egs., immunizations, portfolio development, HIPAA training and other requirements).

#### **PHAR 331/332 – Introduction to Pharmaceutical Care Skills and Professional Practice**

Credit: 1 hour per class

This course is meant to introduce the student to a variety of skills, attitudes and behaviors important to contemporary pharmacy practice. In lab sessions, students will learn health screening skills such as taking blood pressure measurements and measuring blood glucose and cholesterol. By participating in a number of lectures, classroom discussions and a service project, the student will become familiar with professional behavior and ethical decision making as well as the significance of giving back to the community.

#### **PHAR 335 – Community Service I**

Credit: 0 hours

CPHS requires a commitment to community service. Each student pharmacist is required to provide 80 hours of community service over the four years of enrollment at CPHS. A minimum of 10 hours must be provided each year. In addition to the benefits to the community, this requirement provides the student an opportunity to learn the needs of the community and to develop as a professional.

#### **PHAR 403 – Financial Management & Pharmacoeconomics**

Credit: 2 hours

This course is designed to explore the practical applications of financial management in pharmacy practice. Emphasis is placed on quantitative aspects of effective business management and those techniques for decision making in a pharmaceutical care practice site.

#### **PHAR 404 – Pharmaceutics I**

Credit: 3 hours

This course is designed to provide the student with a basic understanding of medicinal products' physical and chemical properties of and how these properties influence the design of dosage forms.

#### **PHAR 405 – Nonprescription Drug Therapy**

Credit: 3 hours

This course is a study of various nonprescription (OTC) products commonly found in community pharmacy practice. Emphasis is placed on the problem solving process involved in patient assessment, therapeutic intervention, product recommendation(s), triage of serious health care problems to other health care settings, and patient education regarding health promotion and disease management with nonprescription medications.

#### **PHAR 406 – Pharmaceutics II with Lab**

Credit: 4 hours

This course enables the student to become proficient in general compounding techniques and a basic knowledge of dosage formulation. A weekly laboratory is designed to enhance the technical capability of students in this area of prognosis.

#### **PHAR 408 – Biology of Disease**

Credit: 5 hours

This course is designed to acquaint the student with major diseases, their etiology, pathology, clinical manifestations, diagnosis and prognosis.

#### **PHAR 409 – Introduction to Pharmacy Practice III**

Credit: 0.5 hours per class

This series of courses are intended to expose the student pharmacist to a variety of career pathways within the pharmacy profession and to help prepare the student for the experiential component of the doctor of pharmacy curriculum. The student pharmacist will be engaged in discussions related to professionalism and pharmacy practice career paths. In addition the student will gain

experience in introspection through reflection and will spend time creating an electronic professional portfolio. Student pharmacists will be asked to meet various pre-experiential requirements as a component of this course (egs., immunizations, portfolio development, HIPAA training and other requirements).

#### **PHAR 410 – Pharmacokinetics**

Credit: 2 hours

This course provides the student with an understanding of basic clinically applicable pharmacokinetic formulas and the assumptions that are involved with their use in therapeutic drug monitoring.

#### **PHAR 412 – Principles of Pharmacology & Medicinal Chemistry**

Credit: 3 hours

First in a series of Pharmacology/ Medicinal Chemistry courses, this course introduces the student to the basic principles of structure activity relationships, pharmacogenetics, and biochemical pharmacology with special emphasis placed on physicochemical properties of functional groups, acid-base chemistry, metabolism, receptor theory, and signal transduction.

#### **PHAR 417 – Pharmacology & Medicinal Chemistry II**

Credit: 4 hours

This course is designed to provide the pharmacy student with a firm foundation in the various pharmacological agents available to effectively manage various autonomic, cardiovascular and renal diseases and conditions. Particular emphasis will be placed on the cellular and physiological systems that are regulated by these agents to bring about the desired therapeutic outcome. For each class of agents the prototypical drug will be emphasized with regard to mechanism of action, chemical characteristics, pharmacokinetic considerations, adverse effects and drug interactions. For the newer agents in each class significant differences from the prototypical agents will be highlighted.

#### **PHAR 419 – Introduction to Pharmacy Practice IV**

Credit: 0.5 hours per class

This series of courses are intended to expose the student pharmacist to a variety of career pathways within the pharmacy profession and to help prepare the student for the experiential component of the doctor of pharmacy curriculum. The student pharmacist will be engaged in discussions related to professionalism and pharmacy practice career paths. In addition the student will gain

experience in introspection through reflection and will spend time creating an electronic professional portfolio. Student pharmacists will be asked to meet various pre-experiential requirements as a component of this course (egs., immunizations, portfolio development, HIPAA training and other requirements).

#### **PHAR 421 – Pharmacology & Medicinal Chemistry III**

Credit: 4 hours

This course is designed to provide the pharmacy student with a firm foundation in the various therapeutic agents available to effectively manage various paracrine/ inflammatory, gastric erosion, endocrine, and central nervous system conditions. Particular emphasis will be placed on the cellular and physiological systems that are regulated by these agents to bring about the desired therapeutic outcome. For each class of agents the prototypical drug will be emphasized with regard to mechanism of action, chemical characteristics, pharmacokinetic considerations, adverse effects and drug interactions. For the newer agents in each class significant differences from the prototypical agents will be highlighted.

#### **PHAR 423 – Pharmacology & Medicinal Chemistry IV**

Credit: 3 hours

The use of chemotherapeutic agents for the treatment of infections, cancer and immunosuppression has revolutionized modern medicine and led to significant improvements in the quality of life and lifespan in western populations. This course will address the major therapeutics agents in use today and will cover the mechanisms of action and chemical characteristics that impact clinical usage and the types of infectious agents or cancer cells affected. The focus of the course will be on mechanisms of action and usage of each drug. Consideration will also be given to appropriate drug usage in the light of anti- infective or cancer cell resistance, and the use of multi-drug therapies to counter such resistances.

#### **PHAR 435 – Community Service II**

Credits: 0 hours

CPHS requires a commitment to community service. Each student pharmacist is required to provide 80 hours of community service over the four year of enrollment at CPHS.

A minimum of 10 hours must be provided in each year. In addition to the benefits to the community, this requirement provides the student an opportunity to learn the needs of the community and to develop as a professional.

#### **PHAR 444/454 – EMT Training I/II**

Credit: 3 hours per class

These courses recognize proficiency achieved in training by a certified instructor for emergency medical technician service. Both courses are required to prepare for EMT certification.

#### **PHAR 501/503 – Therapeutics I/II**

Credit: 3 hours per class

These courses are designed to illustrate the appropriate clinical application of pharmacodynamics, pathophysiology, and pharmacokinetics to a variety of common acute and chronic disease states. Emphasis is placed on data collection and decision making required for optimal drug therapy.

#### **PHAR 504 – Special Research in Pharmaceutical Sciences**

Credit: Variable (maximum 3 hours)

The purpose of this elective course is to introduce the student pharmacist to methods of basic science and/or clinical research.

#### **PHAR 505/507 – Introductory Pharmacy Practice Experiences (IPPE)**

Credit: 1 hour per class

These two, month-long practice experiences are designed to expose the student pharmacist to the practice of pharmaceutical care in the community and hospital settings. These practice experiences introduce the student pharmacist to the operational, clinical and administrative roles of the pharmacist; however, there is a greater emphasis on the drug distribution functions of the pharmacist in these settings. These experiences are usually scheduled during the summers following the first and second professional years.

#### **PHAR 508 – Top 300 Drug Review**

Credit: 1 hour

This examination is designed to evaluate the students' mastery of basic facts concerning the Top 300 most commonly prescribed drug products.

Prerequisites: PHAR 505 and 507.

#### **PHAR 509 – Therapeutic Drug Monitoring**

Credit: 4 hours

This course provides the knowledge and skills necessary to apply pharmacokinetic principles in the clinical arena. Emphasis is placed on therapeutic monitoring and individualization of drug therapy.

Prerequisites: PHAR 301, 314 and 410.

#### **PHAR 510 – Cardiology**

Credit: 1 hour

This elective is designed for students with an interest in cardiology. The purpose of the course is to enhance students understanding of cardiovascular pathophysiology and pharmacotherapy. Advanced concepts related to cardiovascular pharmacotherapy therapy will be emphasized.

#### **PHAR 510P – Pharmaceutical Care for Patients with Diabetes**

Credit: 1 hour (P/F)

This course includes a 15 hour on-line self-study (maximum time allotted) and 8 hour live training which will be offered over the last 5 weeks of the semester. The self-study modules are a review of the medical management (pharmacologic and non-pharmacologic) for diabetes and include case studies and activities that must be completed prior to attending the live training. The live training portion is designed to be application of the self-study modules. Participants will be assessed on ability to take blood pressure measurements, perform monofilament foot exams, provide insulin injection, and perform a fingerstick blood glucose using a blood glucose monitor. Case-based learning is also utilized throughout the live portion to apply knowledge of guidelines and therapeutic management (pharmacologic and non-pharmacologic). Participants must also complete an on-line final exam in order to receive a certificate of completion. Students wishing to pursue opportunities in the community or ambulatory care setting would be well-positioned with a certificate in diabetes on the CV; however, issues addressed in this program are not as intense as the information provided in the Diabetes Elective offered through Campbell. *This course requires an additional fee.*

#### **PHAR 511 – Jurisprudence**

Credit: 3 hours

Discussions and analysis of federal and state law, regulations, standards of practice, case law and ethics related to pharmacy practice and drug development and distribution.

Focus is upon analyzing, understanding and applying these issues through case studies and hypotheticals. Considerable emphasis on professionalism and the historical events that have shaped today's professional pharmacy practice, as well as the drug development and distribution system.

#### **PHAR 512P – Multicultural Health Practices/ Health Disparities**

Credit: 1 hour

This course will provide the student with a further understanding of racial and ethnic

disparities in the quality of care received by minority Americans. Topics that will be covered include cultural competence, health literacy and health disparities.

#### **PHAR 514 – Advanced Topics in Cardiovascular Pharmacology**

Credit: 1 hour

The mechanisms by which pharmacological agents modify the contractility of cardiac and smooth muscle will be discussed in this elective course. A special emphasis will be placed on how alteration of calcium ion concentration affects contraction.

#### **PHAR 515P – Introduction to Pharmacy Practice V**

Credit: 0.5 hours per class

This series of courses are intended to expose the student pharmacist to a variety of career pathways within the pharmacy profession and to help prepare the student for the experiential component of the Doctor of Pharmacy curriculum. The student pharmacist will be engaged in discussions related to professionalism and pharmacy practice career paths. In addition the student will gain experience in introspection through reflection and will spend time creating an electronic professional portfolio. Student pharmacists will be asked to meet various pre-experiential requirements as a component of this course (egs., immunizations, portfolio development, HIPAA training and other requirements).

#### **PHAR 516P – Introduction to Pharmacy Practice VI**

Credit: 0.5 hours per class

This series of courses are intended to expose the student pharmacist to a variety of career pathways within the pharmacy profession and to help prepare the student for the experiential component of the Doctor of Pharmacy curriculum. The student pharmacist will be engaged in discussions related to professionalism and pharmacy practice career paths. In addition the student will gain experience in introspection through reflection and will spend time creating an electronic professional portfolio. Student pharmacists will be asked to meet various pre-experiential requirements as a component of this course (egs., immunizations, portfolio development, HIPAA training and other requirements).

#### **PHAR 518 – General Toxicology**

Credit: 3 hours

This course is designed to give the student a broad appreciation of the field of Toxicology. The student is guided through the mechanisms by which toxicants enter the body and the biotransformation processes that result in the disease-producing entities. The various cellular mechanisms of toxicity and the major target organs affected by toxins will be treated in some detail. Didactic material may be augmented with both in vivo and in vitro experimental laboratories for assessing toxicity. Aspects of environmental, forensic, clinical toxicology, and risk assessment will also be addressed in this course.

#### **PHAR 519 – Physical Assessment**

Credit: 2 hours

This course introduces the student pharmacist to the basic principles and techniques of history taking and physical examination. Students in this course will have an opportunity to develop the skills necessary to adequately follow the patient using physical assessment parameters and to monitor drug therapy when appropriate. The student will also have an opportunity to use and demonstrate the skills learned in this class during his or her Advanced Pharmacy Practice Experience rotations.

#### **PHAR 521 – Substance Abuse Education**

Credit: 1 hour

This course will focus on the acute and maintenance treatment options for patients suffering from substance abuse and dependence. Students will develop the skills necessary to recommend pharmacotherapeutic treatment plans based on their review of guidelines and literature in this area. Classroom sessions will be utilized to discuss assigned readings as well as to work on cases.

#### **PHAR 522 – Non-Sterile Practical Compounding**

Credit: 1 hour

This elective course will expose and demonstrate various aspects of the art and science of compounding. Students will apply and practice their calculation/prescription-preparation skills to formulations used by current practitioners.

*This course requires an additional fee.*

#### **PHAR 522P – Practical Compounding Techniques: Sterile Products**

Credit: 1 hour

This course offers instruction on additional compounding and processing techniques and exercises that include practical applications and thought processes for preparing a sterile dosage form.

*This course requires an additional fee.*

#### **PHAR 523 – Special Research Projects in Pharmacy Practice**

Credit: Variable (1–3 hours) (P/F)

Independent research projects performed under the direction of individual faculty mentor from the Department of Pharmacy Practice. This course will enable the student pharmacist to apply the scientific inquiry process and to utilize critical thinking, problem-solving, verbal, as well as written communication skills while conducting a practice-based research project. Alternatively, this course may be used for other research-related scholarly pursuits such as the production of a manuscript following primary literature investigation and review of a specific area of scientific inquiry that is timely, rigorous and contributes to the medical, pharmacy practice and/or pharmacy social & administrative scientific literature. The student pharmacist will gain experience in: Literature search/evaluation; Protocol design and IRB requirements; Data acquisition and management; Data analysis; Project management and report requirements; and/or scientific writing.

#### **PHAR 524 – Toxicology Problems**

Credit: 1 or 2 Hours

Students will be challenged to analyze and discuss case studies of problems typically encountered in evaluating drug toxicity. The development of critical thinking skills, problem-solving capabilities, and decision-making approaches will be emphasized over specific memorization of facts.

#### **PHAR 525 – Ethics in Pharmacy Practice**

Credit: 2 hours

As health care professionals, pharmacists encounter a variety of problems, which may compromise quality care and patient rights. This course is designed to enable pharmacy students to approach moral dilemmas objectively with a thorough understanding of professional moral responsibility. Students will learn skills in moral reasoning necessary to promote the dignity of clients they serve.

#### **PHAR 526 – Scientific Basis of Drug Selection**

Credit: 2 hours

This course develops skills needed to critically evaluate current research literature to assess the therapeutic potential of a new and improved modification of an existing drug. The course focuses on calcium channel blockers and beta adrenergic antagonists and agonists as examples of drug classes requiring such assessment.



**PHAR 528 – Experimental Design & Biostatistics**

Credit: 4 hours

This course involves the application of statistical methods in health sciences. The course is intended to provide the student with basic knowledge of descriptive statistics, probability theory, hypothesis testing, and other selected statistical methods useful in the design and evaluation of clinical research investigation.

**PHAR 529 – Hematology & Oncology**

Credit: 1 hour

This course will allow students to develop a better understanding of the treatment of hematology and oncology patients. The course will start with a general review and then focus on many of the disease states that will not be covered in the therapeutics course such as leukemia, lymphoma, myeloma, blood and marrow transplant. Students will learn how to take a diagnosis and develop a treatment plan including chemotherapy regimens and their supportive care issues that go along with the treatment.

**PHAR 530 – Biotechnology in Pharmacy**

Credit: 3 hours

This course is intended to expose students to the basic principles and practical applications of molecular biological techniques to pharmaceutical product development. Experimental, analytical, and production technologies will be discussed along with ethical implications, if appropriate.

**PHAR 531 – Strategic Management in Healthcare**

Credit: 1 hour

This course will introduce the concepts of strategic planning in business and provide examples in the different pharmacy and health care settings. Strategic management is a process of evaluation followed by decision making to increase the value of the organization. This requires an approach to strategic decision making which considers the environment in which the organization finds itself, the organization's own internal capabilities, setting specific performance objectives to achieve the strategy and executing appropriate action plans. The course emphasizes that strategy involves innovation and creativity, both creating and adapting to change. At the end of this course, the student should be able to understand the key influences on the development of an organization's strategy, analyze those influences, propose appropriate strategic behavior for an organization and demonstrate an understanding of how strategic change can occur within an organization.

**PHAR 533 – Introduction to Pharmacy Consulting**

Credit: 1 hour

This elective course is designed to introduce students to the practice of consultant pharmacy. Pharmacists are required by the Federal government to monitor the drug therapy of every patient in nursing homes. This drug regimen review must be performed on a monthly basis and is an effective method for monitoring the drug therapy received by patients. Studies indicate that clinical pharmacists can improve the quality of patient care in nursing homes. Students will be exposed to the elements of this specialized practice.

Prerequisite: PHAR 503.

**PHAR 534 – Herbal & Alternative Medicine**

Credit: 1 hour

This course discusses herbal remedies recently being used as alternative solutions to treat and prevent different diseases.

**PHAR 535 – HIV/AIDS**

Credit: 1 hour

This course will discuss the potential future effects of the AIDS epidemic on pharmacy practitioners. The nature of the disease and secondary infections, available treatment modalities, and preventative measures that involve pharmacists will be described and discussed.

**PHAR 536 – Hypertension I**

Credit: 2 hours

This course is an in-depth discussion and literature evaluation of agents used to treat hypertension.

**PHAR 537 – Practical Applications in Infectious Diseases Pharmacotherapy**

Credit: 2 hours

This course is designed to allow the student with a strong interest in infectious diseases to further develop skills necessary to make rational choices with regard to antimicrobial pharmacotherapy. These skills will be developed primarily through analysis of patient cases. Students will be presented with case problems and assigned readings for each topic at least one week prior to discussion of patient cases. Advanced concepts related to antimicrobial therapy will be emphasized. Prerequisite: PHAR 501 & 503.

**PHAR 538 – Hypertension II**

Credit: 1 hour

This course is a further discussion of agents used to treat hypertension.

Prerequisite: PHAR 536.

**PHAR 539 – Care of the Diabetic Patient**

Credit: 2 hours

This series of classes will deal with specific issues which complicate the day-to-day and long-term management of diabetes. Topics covered will include diabetes survival skills, diabetes in special population groups, diseases which complicate diabetes treatment, and complications of diabetes.

**PHAR 542 – Molecular Modeling**

Credit: 2 hours

This informal course trains students in the use of high performance computing systems to solve problems in biological modeling. Lecture topics include a review of high performance computing in molecular modeling, electron density calculations and 3D protein representation docking of molecules. Material is presented both in lectures and supervised lab sessions, during which students do interactive programming. The course is designed for students who are interested in viewing and taking a virtual walk through a complex molecule.

**PHAR 543 – Anticoagulation Management**

Credit: 1 hour

This course offers a more detailed (depth and breadth) analysis of venous embolic disease (deep-vein thrombosis and pulmonary embolism) focusing upon the scope of the problem within the health care system—appropriate identification of patients at risk, and appropriate efforts to prevent and treat these diseases when necessary. Additionally, there will be a focus upon nationally recognized efforts (The Joint Commission National Patient Safety Goals, The Joint Commission Core Measures for Venous Thromboembolic Disease) to provide efficacy and safety to patients we serve. This course should ready pharmacy students/future pharmacists to position themselves appropriately into the therapeutic management of anticoagulants/antithrombotics in both the hospital and community pharmacy settings.

**PHAR 544 – Introduction to Clinical Research Design & Literature Evaluation**

Credit: 2 hours

This course builds upon the basic drug information and statistics skills learned previously. Evaluating the drug and medical literature to determine appropriateness of study design, quality of the data, statistical test selection and application, study limitations, and implications of the study results are some of the areas that will be discussed.

**PHAR 545/547 – Therapeutics III/IV**

Credit: 3 hours per class

These courses are designed to illustrate the appropriate clinical application of pharmacodynamics, pathophysiology, and pharmacokinetics to a variety of common acute and chronic disease states. Emphasis will be placed on data collection, analysis, and decision-making required to optimize drug therapy.

Prerequisites: PHAR 501/503 strongly suggested.

**PHAR 546 - Anticoagulation Management II**

Credit: 1 hour

There is today an overwhelming amount of new information regarding the comparative efficacies of newly developed anticoagulants and antithrombotic drug therapies and their optimal use in life-threatening thromboembolic disease states, specifically those in Acute Coronary Syndrome patients. This consumes over 100 billion health care dollars annually. This course will focus on these emerging uses, evidence, and issues. Focused, succinct review of the critical studies defining the role of these new drug therapies will be the focus of this class and ready the P4 student to be knowledgeable of these important landmark trials defining appropriate drug therapy selection in the setting of cardiology. This elective will benefit those who intend to do cardiology rotations in their P4 year or have cardiology focused practices or post-graduate experiences with cardiology as a focus.

**PHAR 548 - Advanced Nonprescription Drug Therapy**

Credit: 3 hours

This is a self-study course which integrates and strengthens the basic knowledge of non-prescription drug therapy learned in PHAR 405 by application in on-line self-study modules, development of a strategic business plan, and a one day live program. Emphasis is placed on the problem solving process involved in patient assessment, therapeutic intervention, product recommendation(s), triage of serious health care problems to health care settings, and patient education regarding health promotion and disease management with nonprescription medications.

**PHAR 550 - Herbal & Alternative Medicine**

Credits: 3 hours

The most commonly available herbs and natural products will be covered concerning their therapeutic effect and the dosage forms. In addition overview of the Eastern therapies will be presented.

**PHAR 551 – Legal Topics**

Credit: 1 hour

This course is designed to provide an overview of contemporary topics in pharmacy and health care law in seminar format. Class discussion will include the application of ethics and values to factual situations involving the use of drugs in health care.

**PHAR 552 – Medication Therapy Management (MTM)**

Credit: 3 hours

This course is designed to provide the student-pharmacist with an understanding of the various platforms and prescription drug plans that provide payment to pharmacists for medication therapy management (MTM) services. Early in the course students will learn the core elements of MTM, patient interview skills and how to navigate and document MTM services via software systems including Mirixa and Outcomes Pharmaceutical Care. Students will conduct patient interviews, MTM assessments and documentation using the SOAP (subjective/objective findings, assessment, recommendations) format. Patient cases will be discussed during class to address appropriateness of therapy and emphasize treatment guidelines, practice standards and various pharmacotherapy principles. Participants in this course will develop a working knowledge of current MTM opportunities for pharmacists and learn the process by which to provide MTM services. This course is ideal for students interested in expanded services in community pharmacy practice. However the knowledge and skills gained from this course can be applied to any patient care setting.

**PHAR 552P – Medication Therapy Management (MTM) II**

Credit: 2 hours

This course is designed to provide the student pharmacist with an in depth knowledge of medication therapy management (MTM) services. This course is designed to foster professionalism through inter-professional teamwork. Through patient interaction, student pharmacists will increase their working pharmacotherapy knowledge and will apply core principles and guidelines to direct patient care. Student pharmacists will provide MTM services to patients in a clinic or community pharmacy setting.

**PHAR 553 – Introduction to Veterinary Pharmacy**

Credit: 1 hour

This course is designed to introduce students to the major differences between veterinary and human diseases, therapeutics, and

pharmacy practice. Students participating in this class will be better prepared for veterinary prescription processing, customer questions, and OTC recommendations and precautions in the retail setting.

**PHAR 554 – Geriatric Pharmacotherapy**

Credit: 1 hour

This course is designed to allow the student to gain familiarity with select instruments used to assess a variety of conditions which commonly occur in the geriatric population. The course will utilize a combination of didactic lectures, case problems, and actual field use of the techniques and instruments reviewed in class. Most class meetings will have an application component to enable the student to further develop the multi-dimensional knowledge and skill-set necessary to comprehensively evaluate and monitor treatment in the older adult.

**PHAR 554P – Geriatric Pharmacotherapy II**

Credit: 1 hour

This course is designed to introduce student pharmacists to the concepts of geriatric care and build upon knowledge from pharmacotherapy lectures with a focus on older adult patients. The course will review physiologic changes and altered presentation of the elderly patient, geriatric syndromes and pharmacotherapy in the older adult. The course will utilize didactic lectures, case-based discussion and will conclude with an application-based exercise including actual patients. Topics covered include psychiatric diseases, neurologic issues, consultant pharmacy, palliative care and SOAP documentation in the medical record.

**PHAR 556 – Pain Management Issues**

Credit: 1 hour

This course will provide information on pain management. Topics that will be covered include the pathophysiology of pain, pain assessment, pain management guidelines and their application to patient care, therapeutics of pain management using systemic agents, use of alternative and intervention pain management techniques, methods of analgesic administration, and pain management in special populations. Practice-specific application of pain management principals will be discussed.

**PHAR 557 – Issues in Critical Care**

Credit: 2 hours

This course is designed to introduce critical care principles. This course will illustrate the appropriate clinical application of pathophysiology, pharmacokinetics and pharmacodynamics in the critical care population.

**PHAR 558 – Essentials of Toxicology**

Credit: 2 hours

This course is designed to give the student a broad appreciation of the field of Toxicology. The student is guided through the mechanisms by which toxicants enter the body and the biotransformation processes that result in the disease producing entities. The various cellular mechanisms of toxicity and the major target organs affected by toxins will be treated in some detail. Didactic material may be augmented with both in vivo and in vitro experimental laboratories for assessing toxicity. Aspects of environmental, forensic, clinical toxicology, and risk assessment will also be addressed in this course.

**PHAR 559 - Obstetrics, Gynecology & Women's Health (OB-GYN & WH)**

Credit: 2 hours

The student-driven obstetrics, gynecology, and women's health elective will help prepare student pharmacists enrolled in the College of Pharmacy & Health Sciences to practice evidence-based care involving a variety of women's health issues including, but not limited to, preconception care, contraception, drugs in pregnancy and lactation, menopause pharmacotherapy, osteoporosis, and labor and delivery. As a team, students will be assigned a specific topic and will lead a class discussion based on the assigned readings/topic(s). Areas to be covered in the discussion include incidence of disease state (if applicable), pathophysiology, evidence-based guidelines, pharmacotherapy, and any recent or emerging evidence involving the assigned topic. In addition, the students shall identify any community or patient resources of value regarding the assigned topic.

**PHAR 560 – Practical Applications in Pediatric Pharmacotherapy**

Credit: 1 hour

This course will enhance the pharmacy student's skills in pediatric pharmacotherapy by promoting the student's understanding of the unique characteristics of the pediatric population and pediatric disease states. This course promotes the mission of Campbell University by equipping students with superior skills in Pediatrics which will allow them to practice pharmacy with the highest integrity and service to their patients. The goals are to promote the pharmacy students understanding of the pediatric population with an emphasis on pediatric disease states. This course will focus on medications, fluids, electrolytes and nutrition to manage neonates and pediatric patients.

**PHAR 561 – Pharmacoeconomics**

Credit: 3 hours

This course will provide basic information about the principles of pharmacoeconomics, which has been defined as the description and analysis of costs of drug therapy to society.

**PHAR 562 - Community Pharmacy Management**

Credits: 1 hour

This course provides specific instruction in policies and procedures required to own and manage a community retail pharmacy.

**PHAR 563 – Managed Care**

Credit: 2 hours

This elective course presents an in-depth discussion of integrated health care systems with analysis of methods to provide high-quality/low-cost health care to large patient populations.

**PHAR 564 – Community Service III**

Credits: 0 hours

CPHS requires a commitment to community service. Each student pharmacist is required to provide 80 hours of community service over the four years of enrollment at CPHS. A minimum of 10 hours must be provided in each year. In addition to the benefits to the community, this requirement provides the student an opportunity to learn the needs of the community and to develop as a professional.

**PHAR 565 – Epidemiology**

Credit: 2 hours

This elective course will provide an introduction to the principles of epidemiology. The course will emphasize basic analytic techniques to investigate and prevent infectious disease outbreaks and hospital infections.  
Prerequisites: PHAR 310 and 312.

**PHAR 566 – Introduction to Nuclear Pharmacy**

Credit: 1 hour

This course provides basic instruction in principles and techniques applicable to the preparation and dispensing of radioactive pharmaceuticals.

**PHAR 567 – Reimbursement for Pharmaceutical Care Services**

Credit: 1 Hour

Different strategies utilized in the provisions of pharmaceutical care will be discussed. Students will learn how to document patient encounters and how to complete the proper forms necessary for billing and submitting claims. Students will have the opportunity

to hear success stories from practicing pharmacists who have implemented pharmaceutical care services and have received reimbursement for their efforts.

**PHAR 569 – Healthy Choices**

Credit: 1 Hour

This course will discuss and encourage aspects of establishing a healthy lifestyle for participants.

**PHAR 570/571 – Asthma Management I/ II**

Credit: 1 hour per class

The purpose of this course is to develop the knowledge and skills of student pharmacists so they can provide a high level of comprehensive pharmaceutical care to patients with asthma. This course is a two part series offering one credit hour per class. Part one is during the first five week phase for third year students and part two is offered during the second five week phase in the spring of the third year.

**PHAR 575 – Essential Spanish for Pharmacists**

Credit: 1.5 hours

This course introduces students to basic and practical information that they can use when providing pharmacy services to Spanish speaking patients. The course covers common situations, such as greeting, patient data collection, prescription dispensing information and administration instructions. Students are not required to be fluent in Spanish.

**PHAR 576 – Pharmacy Christian Missions**

Credit: 1 hour

The course explores the various issues related to pharmacy/medical missions including how the provision of medical and pharmaceutical care can serve as opportunities for the presentation of the Christian Gospel. The activities concerning the planning, preparation, and execution of short term mission trips will be discussed.

**PHAR 577/578 – Lipid Management I/II**

Credit: 1 hour per class

The Lipid Management Elective and Certificate Program will prepare pharmacy students to diagnosis, treat, and monitor the therapy of patients with lipid disorders.

**PHAR 581 – Medication Errors: Causes, Prevention, Current Issues**

Credit: 1 hour

This course is intended to provide the student with an introduction to the problem of medication errors in health care. Activities will include discussions of significant medication error research, factors which can contribute to errors, drug categories and abbreviations associated with error risks, error detecting

methods, case analysis of errors, and error prevention methods, including the roles of both the patient and technology. Students will also use the Internet to become familiar with various organizations and list services related to patient safety and to identify and discuss pertinent issues and current events related to this area.

#### **PHAR 582 – Botanical Medical Seminar**

Credit: 1 hour

This course is an investigation of the use of herbal preparations in the rational application in pharmacy. The course is intended to provide the student with a basic knowledge of botanical and herbal preparations. This information will be given in a seminar style where students will be required to read and prepare to discuss articles on these agents.

#### **PHAR 583 – Advanced Pharmacy Marketing & Management**

Credit: 3 hours

Designed for students interested in pursuing or enrolled in the dual PharmD/MBA degree program. Topics covered will expand upon the basic principles taught in PHAR 307 and offers a recitation and an individual project. Emphasis is placed on the decision-making from a financial management perspective. This course may replace PHAR 307.

#### **PHAR 585 – Drug-Induced Diseases**

Credit: 2 hours

The Drug Induced Disease Class is designed to study the adverse effects of certain drugs on each of the body systems. This two-hour elective will explore a different drug-induced disease each week including cardiac, pulmonary, endocrine, etc.

#### **PHAR 587 – Advanced Financial Management and Pharmacoeconomics for Pharmacists**

Credit: 3 hours

Health care is dramatically changed and an understanding of financial management is critical in the decision making process. This course expands on the basic principles taught in PHAR 403 and offers a recitation and an individual project. Emphasis is placed on the decision-making from a financial management perspective.

This course may replace PHAR 403.

#### **PHAR 589 – Advanced Patient Counseling**

Credit: 1 hour

This course will provide the students with additional knowledge and skills to be effective patient educators, which will improve the quality of therapeutic interventions provided to patients. A secondary goal for this course

will be to increase student interest in the Annual APHA- ASP National Patient Counseling Competition and to enhance Campbell University's performance at the national competition.

#### **PHAR 590 – Smoking Cessation**

Credit: 1 hour

This course will prepare participants to facilitate the process of smoking cessation. Topics that will be covered include: consequences of tobacco abuse, pharmacotherapy of nicotine replacement, assessing readiness for smoking cessation, guiding patients through the quit process, and ways to incorporate smoking cessation counseling into pharmacy practice.

#### **PHAR 591 – Cosmeceuticals**

Credit: 1 hour

Cosmeceutical is a pharmaceutical product that provides cosmetic benefits. Like cosmetics, cosmeceuticals are topically applied, but they contain ingredients that influence biological function of the skin. Cosmeceuticals improve appearance by delivering nutrients necessary for healthy skin. This course will provide an overview of the benefits and toxicology of the active ingredients used in cosmeceuticals.

#### **PHAR 593 – Leadership Development**

Credit: 2 hours

The purpose of this course is to identify and strengthen leadership skills. It uses a development approach focusing on how individuals become effective leaders by addressing the human element of enterprise within significant business situations. Students will strengthen their individual capabilities to advance their organizations strategically by rethinking their approaches to management, leadership, and leadership development. This course enables students to understand how to build and foster relationships as well as emphasizes the importance of those relationships in their professional and personal lives.

#### **PHAR 594 – Pharmacogenetics**

Credit: 2 hour

The basic principles of pharmacogenetics/ pharmacogenomics and their relationship to current drug development are discussed. The course is divided into two sections based on the development of this field; Classical pharmacogenetics and clinical pharmacogenetics. The overall goal of this course is integrate a general understanding of the field of pharmacogenetics with current research focused on novel drug discovery. This course is cross listed as PHSC 564 and

CLNR 528.

#### **PHAR 595 – Bioterrorism & Mass Public Health Threats**

Credit: 3 hours

This course provides an overview of current issues related to bioterrorism and the mass threats to public health. Details of specific risks of threat entities and their treatment will be taught. An emphasis is placed on response planning and preparation.

#### **PHAR 599 – Neurology**

Credit: 1 hour

This course will provide the student with a further understanding of neurological disease states and how to manage them including neurological pathophysiology and understanding of neurological exam. Topics that will be covered include neurotransmitters and the drugs that affect them, neuromuscular disorders, neuro oncology, infections of the brain and nervous system, neuropsychiatry, drug abuse and addiction, sleep disorders, genetic neurological disorders, and pediatric and obstetric neurology. Disease state specific medication therapies will be discussed with a focus on guidelines and evidence based medicine.

#### **PHAR 6XX – Advanced Pharmacy Practice Experiences**

Credit: 4 hours per rotation

These rotations are designed to provide the students with an environment where they can integrate the academic knowledge gained during pre-clinical years with professional experience to develop clinical expertise in the promotion of rationale and efficacious drug therapy. Each individually numbered rotation of four week's (160 hours) duration is weighted as four semester hours. The selection, sequence and scheduling of these senior rotations will vary according to an individual student's needs, interests and site availability. Campbell University has affiliation agreements for a diverse offering of electives ranging from additional experiences in general community and hospital practices to sub-specialties in hospital (administration, intensive care, cardiology, and emergency medicine), to clinics and long- term care (ambulatory care, skilled and assisted living communities) to community practice (compounding, medication therapy management services, and community management).



**PHAR 604 – Advanced Community: Advanced Pharmacy Practice Experience**

Credit: 4 hours

The purpose of this experience is to provide future pharmacists with an understanding of how the practice of pharmacy is conducted in the community setting and to further develop their professional attitudes, judgment, and skills needed to function in this practice setting. The setting for this type of APPE is select community pharmacy environments (chain and independent) in which pharmaceutical care services are provided in addition to traditional dispensing and counseling services.

**PHAR 605 – Ambulatory Care: Advanced Pharmacy Practice Experience**

Credit: 4 hours

The purpose of this experience is to introduce the student to clinical pharmacy practice in a patient-care setting through the management of common disease states. The setting for this type of APPE provides the opportunity for patient-care activities in medical practice sites such as physician offices and community health centers.

**PHAR 606 – Geriatrics: Advanced Pharmacy Practice Experience**

Credit: 4 hours

The purpose of this experience is to introduce the student to the philosophies and practice of geriatric medicine through clinically-oriented activities. The setting for this type of APPE provides the opportunity for patient-care with geriatric patients in assisted living, skilled nursing facility or other practice setting that has a large percentage of patients age 65 or older or patients physiologically similar to geriatric individuals.

**PHAR 607 – Internal Medicine I: Advanced Pharmacy Practice Experience**

Credit: 4 hours

The purpose of this experience is to expose the student to clinical pharmacy practice in the inpatient setting through clinically-oriented services and patient-specific activities. The setting for this type of APPE allows the student to work with an interdisciplinary team in the hospital setting handling patient care from an acute care perspective.

**PHAR 608– Internal Medicine II: Advanced Pharmacy Practice Experience**

Credit: 4 hours

The purpose of this experience is to build on the exposure students obtain during PH607 for pharmacy practice in the inpatient setting through clinically-oriented services and

patient-specific activities. The setting for this type of APPE allows the student to work with an interdisciplinary team in the hospital setting handling patient care from an acute care perspective.

**PHAR 610 – Advanced Hospital: Advanced Pharmacy Practice Experience**

Credit: 4 hours

The purpose of this experience is to expand upon the knowledge and skill-set obtained during the Introductory to Hospital Pharmacy Practice Experience (PH507) and to facilitate the student-pharmacist's exposure to current hospital pharmacy practice. The setting for this type of APPE allows the student-pharmacist to enhance operational/ distributive skills as a component of integrated, interdisciplinary patient care within the wider hospital/health system setting.

**Requirements for Pharmacy Internship**

Regulations regarding licensure internships require that the experience is obtained after acceptance to the College of Pharmacy & Health Sciences (CPHS). Information pertinent to internship licensing among the various states is available from CPHS. It should be noted that the CPHS experiential clerkship program will suffice for the internship requirement in North Carolina.

## Experiential Training

**Introductory Pharmacy Practice Experiences**

Student pharmacists complete introductory pharmacy practice experiences (IPPE) each summer between their academic semesters. Between the P-1 and P-2 years, students complete a one month community rotation and between the P-2 and P-3 years, they complete a one month hospital rotation. Students select their clinical rotation sites via a class lottery system or they may opt to work with the Office of Pharmacy Experiential Education (OPEE) to contract new rotation sites.

**Advanced Pharmacy Practice Experiences**

In the final year of the curriculum, P-4 students are divided into five geographic areas to complete nine required advanced pharmacy practice experiences (APPE). These regions include:

- Buies Creek/Fayetteville/Lumberton
- Greenville/Wilson/Rocky Mount
- Raleigh/Durham
- Wilmington
- Winston-Salem/Greensboro

After geographical areas are established, students may enter preferences for clinical rotation sites and/or preceptors for each of the six required rotations. Once these preferences are entered, the OPEE uses an equitable placement process to assign students their APPE sites. Within the nine rotations, six rotations are required and three are electives. A lottery is held to assist students in selecting their three elective practice experiences.

During experiential training, students are responsible for travel expenses and housing arrangements. In addition, incidental expenses such as parking at hospitals may be incurred. Information regarding expenses associated with each training site may be obtained from the OPEE.

A fair and equitable lottery system is used when assigning both IPPE and APPE training sites; therefore, student pharmacists must be prepared to fulfill training requirements wherever they are assigned.

**Registration of Rotations and Billing**

**Introductory Pharmacy Practice Experiences and Advanced Pharmacy Practice Experiences**

Student pharmacists that successfully complete all required prerequisite work in the first and second years will complete a one month (160 hour) introduction to community and introduction to hospital rotation, respectively. Students will earn either a grade of pass (P) or fail (F) in an IPPE. These rotations will be completed in either December (of the fall term) or in the summer term (May, June, or July). Student pharmacists will register for the IPPE in the term the rotation is completed and the earned grade will be recorded during the corresponding term. Students completing their IPPE during the summer term will not be charged any additional tuition beyond the fall and spring term for that year.

Due to the Office of the Registrar's closing date for submission of fall grades (early to mid-December), students completing an IPPE in December will receive an incomplete (IC) recorded as their initial course grade. Once all rotation requirements are satisfied and the final grade is recorded in RxPreceptor, the OPEE will submit a Grade Change Form to the registrar's office. Student pharmacists completing their IPPE in the summer term will receive a grade during the same term. In the event that a student pharmacist cannot or elects not to complete the IPPE in either the summer term or in December following the first year, he/she must complete both IPPEs during the summer term following the second

year or in December.

If a student pharmacist receives a grade of Fail (F) on an IPPE, the grade will be submitted to the registrar's office and recorded on the student's transcript. The student will not be allowed to reschedule the failed rotation in the same term; therefore, the grade will remain on the transcript. If a student pharmacist is unsuccessful at either of the IPPEs, then he/she will be rescheduled for another introductory rotation of the same type either the following fall term (December), or the next summer term where applicable. The OPEE will communicate the IPPE schedule of all student pharmacists with the Office of Academic Affairs prior to the beginning of each term. The OPEE will submit grades for all IPPEs and APPEs.

Student pharmacists successfully completing all required coursework in the preceding three years, including both IPPEs are classified as P4s and can register for their P4 rotations (APPEs). A minimum of nine rotations (1440 hours) in advanced community, ambulatory care, geriatrics, internal medicine I, internal medicine II, advanced hospital, and three electives is required. Grades for APPEs are recorded as A, B, C, or F (fail). Students usually complete their APPEs in May through April of the following year of expected graduation. All students will register according to his/her actual rotation schedule. Students will only be charged one program fee for the fourth year; one-half of the fee will be incurred in the fall term and the other half during the spring term. In the schedule below, the student below will be registered in the summer, fall, and spring terms; however, one-half of the program fee will be assessed in the fall and the other half in the spring. No program fee will be incurred in the summer.

May	Advanced community
June	Ambulatory care
July	Geriatrics
August	Off
September	Elective 1
October	Advanced hospital
November	Elective 2
December	Off
January	Internal medicine 1
February	Internal medicine 2
March	Off
April	Elective 3

Students registering for less than two APPEs in either the fall or spring term will be classified as a half-time student. The OPEE will communicate with the Office of Academic Affairs all student pharmacist APPE schedules prior to the beginning of each term and if/when rescheduling becomes necessary.

If a student pharmacist receives a grade of F in an APPE, the grade will be recorded on his/her transcript; moreover, the student will not be rescheduled for the rotation again within the same term preventing grade replacement. APPEs are not completed in succession.

If an APPE must be rescheduled for any reason (including but not limited to a rotation cancellation, rotation failure, course failure, not documenting all necessary requirements for site clearance, medical illness, etc.), the OPEE will make every effort to reschedule the rotation for the next semester or term; however, the OPEE implies no guarantee of on-time graduation if placement for a rotation is not available.

If a student pharmacist's rotation cycle exceeds more than one calendar year (12 months) for any reason beyond OPEE's inability to find suitable placement, he/she will be responsible for the per credit hour cost of each rotation. If a student pharmacist's rotation cycle exceeds more than one calendar year (12 months) due to the OPEE's inability to find suitable placement, there will be no additional cost for the rotation.

Once a student pharmacist begins his/her P4 rotations, all rotations must be completed within a two-year (24 month) time frame. If a student pharmacist is granted a leave of absence during the APPE cycle that exceeds two years (24 months), then all rotations from prior to the leave must be repeated. If a student pharmacist is granted a leave of absence during the APPE cycle that exceeds one year (12 months) he/she will automatically be referred to the Academic Performance and Standards Committee for recommendations regarding successful re-entry into the program.

### Clinical Rotation Sites

Within the five geographic regions there are numerous affiliated training sites ranging from large tertiary care hospitals, such as Duke University Medical Center and Wake Forest University Baptist Medical Center, to smaller community hospitals, chain and independent community pharmacies, and long-term care facilities.

Clinical rotation sites are established in the following areas of practice (please note, this may not be an all-inclusive list as sites are subject to change):

- Advanced Community Pharmacy\*
- Advanced Hospital\*
- Ambulatory Care\*
- Cardiology
- Community Management
- Drug Information
- Emergency Medicine
- Geriatrics\*
- Hospital Management
- Infectious Disease
- Intensive Care
- Internal Medicine I & II\*
- Medical Missions
- Neonatology
- Nuclear Pharmacy
- Oncology
- Pediatrics
- Pharmacy Administration
- Psychiatry
- Public Health
- Surgery
- Veterinary

\*Required rotation

## Drug Information Center

Established in 1987 with a grant from GlaxoSmithKline, the Drug Information Center (DIC) is an invaluable asset to the College of Pharmacy & Health Sciences (CPHS) providing experiential training for student pharmacists and a service to health care professionals. The center receives approximately 150 calls per month, with an estimated 60% of inquiries from pharmacists.

The DIC is an optional rotation site for students to complete an elective APPE in drug information. During the rotation, student pharmacists become competent in data retrieval, literature evaluation, and written and oral communication skills. They respond to inquiries from health care professionals regarding contemporary therapeutic regimens in humans and animals.

### Purpose

- To serve the health professions community by answering drug-related questions;
- To provide a learning center for student pharmacists, residents, and other student health care professionals in which drug information skills can be developed;
- To function as a resource center for faculty, students, and other health care professionals;
- To aid in the promotion of CPHS by offering drug information services throughout the state.

### Services

Most of the drug information services offered by the DIC are provided free of charge. These services include:

- Provision of drug information and supporting documentation to questions posed by health care practitioners
- Provision of consultative services in various areas
- Participation in pharmacy-related research

### Hours of Operation

8:30 a.m.–5 p.m., Monday through Friday  
(Closed Holidays)

### Contact

Phone: (800) 327-5467 (NC)  
(800) 760-9697 Ext. 2701 (US)  
(910) 893-1476 Ext. 2701  
Fax: (910) 893-1476  
Mobile App (iOS only): “Campbell DIC”  
Online requests: <http://bit.ly/DrugInfoCenter>

## Residency Programs

The College of Pharmacy & Health Sciences (CPHS) offers a variety of pharmacy residency programs. Residents at CPHS are afforded the opportunity to enhance their clinical, research, teaching and critical thinking skills to meet the demands and changes occurring in the profession of pharmacy.

### PGY2 Residencies

#### Ambulatory Care

##### Cary Healthcare Associates and Glenaire Retirement Community

The PGY2 residency offered in conjunction with CPHS at Cary Health care Associates and Glenaire Retirement Community provides the resident with advanced skills in patient management, therapy modification for special patient groups, acute care triage and chronic disease management. The development of these advanced skills occurs in primary care clinics and pharmacy- managed anticoagulation, lipid, and pharmacotherapy clinics.

The resident will also have involvement in the didactic and clinical training of other health care professionals and students, and gain experience in contributing original research to the professional literature.

The program emphasizes providing patient care in Anticoagulation, Asthma, Diabetes Care, Lipid, and Pharmacotherapy clinics associated with medical residency teaching programs and in private practice environments.

The residency consists of a 12-month training program designed to comply with the ASHP requirements for a PGY2 ambulatory care residency. The resident will identify goals for the residency during the first two weeks of the residency. The remaining eleven months will be planned and devoted to meeting these goals. The amount of time spent in each area will depend on the goals of the resident. The resident will participate in a longitudinal geriatrics rotation at Glenaire.

#### Ambulatory Care

##### Wilson Community Health Center

The Campbell University College of Pharmacy & Health Sciences PGY2 residency at Wilson Community Health Center is designed to develop the knowledge, attitudes, and skills needed to provide exemplary patient-centered care in the ambulatory care setting and higher level education in the classroom and clinical setting. The residency focuses on the management of chronic disease states in an underserved population through the use of collaborative practice agreements. Diabetes

is a primary focus within the residency, but residents also gain in-depth experience in a variety of other chronic disease states including hypertension, HIV, heart failure, anticoagulation, asthma, chronic obstructive pulmonary disease, and tobacco abuse. Additionally, residents participate in drug information services, health and wellness screenings, and patient transition from hospital to home. Aside from patient care opportunities, residents will develop teaching abilities through didactic and experiential opportunities in the College, the Health Center, and the community and complete a mentored, longitudinal research project focused on advancing ambulatory practice or academia. Upon completion of the residency, the resident should be able to practice competently in an interdisciplinary ambulatory care practice and obtain employment within a School of Pharmacy.

### Internal Medicine, Infectious Diseases & Academics

#### Duke University Hospital

The PGY2 pharmacy residency in adult internal medicine, infectious diseases, and academics at CPHS and Duke University Hospital is designed to prepare role-model practitioners and educators for entry into academic clinical pharmacy practice positions. A major focus of the program prepares the resident to function effectively as a clinical faculty member by emphasizing patient care, service, teaching, scholarly activity and research.

The service component consists of patient care rounds with one of the general adult medicine teams for a minimum of four months. The resident is responsible for providing comprehensive patient-centered care to the patients and medical team, and serve as the primary preceptor for CPHS student pharmacists. Additional time is spent with the Infectious Disease (ID) consult service, ID clinic (HIV) and elective rotations.

Teaching activities consist of clinical precepting for the internal medicine and ID consult services. Didactic teaching experience is obtained through participation in the therapeutics series, ID elective, therapeutic drug monitoring, drug induced diseases, and drug literature evaluation courses at CPHS. The resident participates on various committees, attends faculty and department meetings and retreats, and assists preceptors with course coordination at CPHS.

The resident will undertake at least one major research project and completes a minimum of two manuscripts. The resident has the opportunity of presenting his or her

research at the Research in Education and Practice Symposium and/or other national meetings. Additional opportunities are available for scholarly activities as well as courses on research design, methodology and biostatistics. Many opportunities are available to the resident to prepare and deliver seminars to local, state and national organizations.

### **Internal Medicine/Academics Duke Regional Hospital**

The PGY2 pharmacy residency in Internal Medicine/Academics at CPHS and Duke Regional Hospital (DRH) is designed to prepare a motivated, ambitious pharmacist to practice and teach on an internal medicine service while contributing to organizational and departmental leadership in both hospital and academic settings. The focus of this program is to further the Duke Regional Hospital mission of caring for our patients and the health of our community while providing the resident with opportunities for clinical and didactic teaching, research, and scholarship at Campbell University College of Pharmacy & Health Sciences (CPHS). Upon completion of this residency, the graduate will be well equipped to develop and foster a clinical practice site with a strong medicine teaching service for pharmacy students, residents, and inter-professional learners. In addition, the resident will develop the necessary research, scholarship and teaching skills to assume a clinical faculty position within a school of pharmacy.

The service component consists of patient care rounds with a multi-disciplinary clinical team on the Internal Medicine teaching services at DRH for at least six months. The resident is responsible for providing comprehensive patient-centered care. The remaining time will be spent in elective rotations between DRH and CPHS. The resident will also participate on various committees at both DRH and CPHS, attend faculty and department meetings and retreats and assist preceptors with course coordination at CPHS.

Teaching activities include participation in inter-professional education within the clinical setting, as well as within the academic setting at Campbell University. The resident will serve as primary preceptor for student pharmacists. Academic experience will involve development and presentation of educational activities for multi-disciplinary practitioners at DRH and Campbell University, as well as opportunities for teaching in small group and large lecture settings.

The resident will undertake at least two research projects, one with an economic focus that will be initiated and completed during the

year, with results being presented both locally and nationally. Written manuscripts with an internal medicine-related focus and intent of submission to a peer-reviewed medical journal will include at least one of the research project results and at least one other work identified by resident and residency program directors and/or preceptors. There will be opportunities available to the resident to prepare and deliver seminars to local, state and national organizations.

## **PGY1 Residencies**

### **PGY1 Community Pharmacy Walgreens**

CPHS offers two community pharmacy residencies. The residencies are offered in conjunction with Walgreens, located in Dunn, NC and Walgreens Specialty in Durham, NC.

Residents develop leading-edge community pharmacy practice skills and gain valuable experience in immunizations, medication therapy management and disease state management.

In addition to direct patient care responsibilities, the resident is involved in the didactic and clinical training of student pharmacists and other health care professionals. The resident will complete an original research project and present the assignment at the Research in Education and Practice Symposium.

### **East Carolina University, Department of Family Medicine**

CPHS offers a PGY1 residency with East Carolina University Department of Family Medicine to develop advanced knowledge, attitudes and skills to provide pharmacotherapy for adult patients with multiple chronic diseases. Care of the elderly is emphasized throughout the residency.

Required clinical rotations are completed in a teaching nursing home, geriatric clinic and inpatient service working with multi-disciplinary faculty at East Carolina University Department of Family Medicine. Residents also practice in an outpatient pharmacy and drug information center. Electives are available at Vidant Health and with CPHS faculty in other practice settings. Educational sessions are integrated with family medicine residents and geriatric fellows at the practice site as well as pharmacy residents at CPHS.

In addition to clinical responsibilities, the resident will gain skills in research and teaching. The resident will design and implement a research project and present the results. Residents participate in a teaching

certificate program at CPHS. Teaching experience includes clinical instruction of advanced pharmacy practice experience students, pharmacy student lectures, in-service presentations, and continuing education seminars.

### **Harnett Health System**

CPHS and Harnett Health System offer a PGY1 residency that is designed to develop the knowledge and skills necessary to provide exemplary pharmaceutical care to inpatients. Upon completion of the residency program, residents should be able to practice as clinical pharmacists responsible for the medication related care of patients with a wide range of conditions, eligible for board certification, and eligible for postgraduate year two (PGY2) pharmacy residency training.

The program will offer 2 PGY1 positions. The required clinical rotations include two months in internal medicine, cardiology, pharmacy administration, drug information, and infectious disease. Elective rotations include pediatrics, emergency medicine, ambulatory care, information systems, and critical care. Harnett Health System is comprised of two hospitals, six physician offices, and seven outpatient centers.

In addition to direct patient care responsibilities, the resident will gain experience in research and teaching. The resident will complete an original research project as well as a medication use evaluation (MUE). The resident will also participate in a teaching certificate program at CPHS. Teaching experiences include clinical instruction of advanced pharmacy practice experience students, pharmacy student lectures, facilitation of cases, inservice presentations, and continuing education seminars.



## Post-Baccalaureate Program

The post-baccalaureate program at the College of Pharmacy & Health Sciences allows pharmacists, who are licensed in the United States and hold a bachelor's degree in pharmacy to earn a PharmD degree.

The curriculum includes the last two years of studies of the entry-level PharmD program. This includes one year of didactic training followed by an additional nine months of clinical rotations. Depending on the individual's background, variations in the curriculum may be necessary.

Effective August 2015, applications will no longer be accepted for the post-baccalaureate program and no new students will be admitted. Currently admitted and enrolled students will complete the program as scheduled.

### Second Year Nine Month Rotations\*\*

Courses	Credit Hours
PHAR 6XX - Advanced Pharmacy Practice Experiences (nine one-month)	36
PHAR 699 - Prof. Presentation Seminar	1
<b>Total</b>	<b>37</b>

*\*Electives must be substituted for this course if previously completed.*

*\*\*Request for exemption from up to three rotations based on prior experience may be submitted to the chair of pharmacy practice. A minimum of six Advanced Pharmacy Practice Experiences must be completed (24 credit hours).*

## Curriculum

### First Year

#### Semester 1

Courses	Credit Hours
PHAR 501/503 - Therapeutics I & II	6
PHAR 528 - Experimental Design & Biostatistics	4
PHAR 515P - Intro to Pharmacy Practice V	0.5
PHAR 5XX - Electives	3
<b>Total</b>	<b>13.5</b>

#### Semester 2

Courses	Credit Hours
PHAR 310 - Immunology*	3
PHAR 545-547 - Therapeutics III & IV	6
PHAR 509 - Therapeutic Drug Monitoring	4
PHAR 544 - Intro to Clinical Research Design & Lit. Evaluation	2
PHAR 519 - Physical Assessment	2
PHAR 516P - Intro to Pharmacy Practice VI	0.5
<b>Total</b>	<b>17.5</b>