Graduate Studies in
Pharmacy

Roger L. Davis
Dean, College of Pharmacy and Health Sciences
Lipscomb University College of Pharmacy is an extraordinary college steeped in the traditions of public service, focused on health care delivery to the public, and committed to the principles of Christian service. The College of Pharmacy at Lipscomb University embraces an environment that emphasizes a commitment to academic excellence and a life of Christian faith.

Lipscomb University College of Pharmacy has been granted full accreditation status by the Accreditation Council for Pharmacy Education. The college has demonstrated to the satisfaction of ACPE that the program complies with accreditation standards, including the appropriateness of the program's mission and goals, the adequacy of resources and organization to meet the mission and goals, outcomes which indicate that the mission and goals are being met, and the reasonable assurance of the continued compliance with standards.

Full accreditation status was granted by the ACPE through June 30, 2014. The ACPE site team conducted the scheduled continuation site visit in Feb. 2014. The ACPE Board of Directors will meet in June 2014 to consider continuation of full accreditation Status.

The official ACPE statement is as follows: “Lipscomb University College of Pharmacy & Health Sciences’ Doctor of Pharmacy program is accredited by the Accreditation Council for Pharmacy Education, 135 South LaSalle Street, Suite 4100, Chicago, IL 60503, 312/664-3575; FAX 312/664-4652. Web site www.acpe-accredit.org.”

The pharmacy profession is growing and is in the midst of a revolution in health care delivery and the improvement of quality of life for millions of individuals. At the center of this revolution is the discovery of and appropriate use of medications. Pharmacists in a variety of practice settings will bear accountability for achieving optimum outcomes for patients. Pharmacy is a service profession built on compassion and commitment to those who have health care needs. It is critical that pharmacists, as essential members of the health care team, apply Christian principles such as compassion, understanding and caring into their practices.

Health care informatics is a growing and emerging discipline which evaluates the application of biomedical informatics methods and techniques utilized in the provision of health care services. Also included is the vital
role HCI plays in enhancing the quality of care, reducing health care costs and addressing health issues. The newly offered dual degree in pharmacy and health care informatics is designed to develop health care leaders ready to meet the current and future challenges of the health care industry.

The College of Pharmacy and Health Sciences at Lipscomb University embraces an environment that emphasizes a commitment to a life of Christian mission and ideals. It is an exciting time to be in the health care industry, and Lipscomb University is an exciting place to begin that journey.

If you would like more information regarding the College of Pharmacy and Health Sciences, email us at pharmacy@lipscomb.edu or call 888.333.4358, ext. 7160. We also encourage you to personally visit our campus at any opportunity.

– Roger L. Davis, Pharm.D., dean and professor

Mission-College of Pharmacy
The mission for the Lipscomb University College of Pharmacy is to provide an educational environment characterized by academic excellence and Christian faith, where student pharmacists are prepared to optimize patient medication outcomes in an ethical and compassionate practice. The college will achieve its mission by improving patient care through:

- Excellence in education
- Excellence in scholarship
- Clinical and professional service
- Professional development
- Interdisciplinary collaboration

Admission Policies and Procedures

- Complete a minimum of 66 semester hours of preprofessional education at accredited college or university.
  - The pre-pharmacy education will require a minimum of 66 semester hours. Required pre-pharmacy courses should be completed by the end of the spring semester prior to desired enrollment; however, course work may be in progress or planned at the time of application without it negatively impacting the application. If an applicant has not completed all required pre-pharmacy course work prior to submitting the application, a proposed plan for completion is required as part of the application process. The required pre-pharmacy courses are listed in the section below titled Pharmacy Prerequisites.
  - Achievement of a grade of “C” or higher for each required pre-pharmacy course is mandatory.
- Attain a cumulative academic grade-point average of not less than 2.5 on a 4.0 scale for all courses.
- Complete the Pharmacy College Admission Test with a minimum composite score of 45th percentile.
  - Applicants must achieve the minimum PCAT scores to be considered for admission.
  - The national average composite score is 50th percentile and the national average composite score of accepted students is 80th percentile. The Lipscomb University College of Pharmacy Admissions Committee strongly advises applicants to take the PCAT in the summer or fall prior to the year of admission. This timeline provides an opportunity to take the test again if it is believed that a re-examination will significantly improve your score. If the Lipscomb University College of Pharmacy receives results from multiple test dates, the highest scores across all results will be accepted.
  - PCAT testing is administered through:
    Pearson
    19500 Bulverde Rd.
    San Antonio, TX 78259
    1.800.622.3231 or 210.339.8710
    website: www.pcatweb.info
- Submit online the Application for Admission and Supplemental Application.
  - Applications for the upcoming enrolling year will be submitted through the Pharmacy College Application Service. Application reviews begin in Sept. Detailed instructions for submitting the application, transcripts and letters of recommendation through PharmCAS may be found online at pharmacy.lipscomb.edu or at www.pharmcas.org in the school pages section. The deadline for application submission is March 1, each year.
A supplemental application is also required. This application is distributed directly from the College of Pharmacy after the primary application has been received from PharmCAS. A $50 nonrefundable fee must accompany your supplemental application.

Payment can be processed online at the time of supplemental application submission using a debit or credit card.

If online payment by debit or credit card is not an option, then a check or money order made to the Lipscomb University College of Pharmacy may be mailed to the address below. Please print and include a copy of the completed application if payment is made via mail.

Lipscomb University College of Pharmacy
Director of Admissions and Student Affairs
One University Park Drive
Nashville, TN 37204-3951

Applications are only considered complete when an application fee is received.

Applications will not be accepted via fax transmission.

**Prepare for an admissions interview.**

An on-site interview is required for admission to Lipscomb University College of Pharmacy. Interviews are conducted by invitation only. The Office of Student Affairs at the Lipscomb University College of Pharmacy will evaluate each application for competitiveness and request an interview with those determined to be qualified applicants. Lipscomb University College of Pharmacy utilizes a rolling admissions process and candidates are accepted on a continual basis Nov. through April until the class is filled. Applicants are strongly encouraged to apply early.

**College of Pharmacy International Student Admission Policies and Procedures**

- International students must follow the same admissions procedures and meet the same requirements as applicants who are U.S. citizens (see Admission Policies and Procedures) in addition to the following specific requirements. There will be no exceptions to this policy.

- Individuals are considered international if they:
  - Are not a United States citizen; or
  - Do not have permanent resident status.

- International applicants must have been enrolled at an accredited U.S. college or university for a minimum of two years prior to the planned enrollment date.

- International applicants should complete all the pre-pharmacy course requirements at a U.S. institution. Any prerequisite courses taken at institutions outside of the United States must be evaluated and approved.

- After all of the required documents are received, the Office of Student Affairs will evaluate whether the course work can be applied to the prerequisite requirements for admission. English courses taken outside of the United States will not be accepted toward meeting the English requirements unless English is the official language of the university attended and all instruction is conducted in English.

- International students are required to be proficient in written and oral English.

- Applicants whose native language is not English must present the results of the Test of English as a Foreign Language. The Minimum TOEFL scores are 213 for the computer exam and 550 for the paper exam. The equivalent TOEFL ibt score is 80. Lipscomb’s TOEFL code is 1161. These scores should be submitted through PharmCAS. [Test of English as a Foreign Language (TOEFL) www.toefl.org]
• Submit the PharmCAS application including all academic records from colleges and universities located both inside and outside the United States.
  ° Course-by-course reports from the transcript evaluation services World Education Services or Educational Credential Evaluators must accompany international transcripts. Evaluations from other services are not accepted.
  [World Education Services www.wes.org; Educational Credential Evaluators eval@ece.org]
  ° The outside assessments by WES and ECE are subject to review and approval by the Office of Student Affairs. This includes, but is not limited to, decisions regarding acceptable credit, prerequisite fulfillment, GPA calculations, degree equivalencies and minimum passing grade levels, among other things. The college is not obligated to accept the conclusion of any outside evaluation service.
  ° Official, final transcripts for both international and U.S. course work will be required prior to matriculation.

• Submit the Lipscomb University College of Pharmacy Supplemental Application online. Nonrefundable fee: $50.
  Lipscomb Supplemental Application, pharmacy.lipscomb.edu

• International applicants must provide copies of current status with the U.S. Immigration and Naturalization Service at the time of application; i.e., VISA, I-94 and I-20 documents.

• For Lipscomb to provide a student visa, international applicants must provide financial statements requested from their U.S. banking institution that shows adequate funds needed for all expenses for at least one year related to enrollment in the Lipscomb University College of Pharmacy.

Documentation
Students are required to provide satisfactory documentation of personal identification for off-site learning experiences required in many programs of graduate study at Lipscomb University. Failure to provide proper credentials will result in failure to complete the desired course of study. For complete policy, see section entitled Required Documentation for Off-Site Learning Experiences in the opening section of this catalog.

Financial Information
Tuition and Fees for 2014-15*

Tuition for 2014-15, per year ........................................ $36,850

Special Fees
Certification materials cost (first professional year) ...... $200
Certification materials cost (third professional year) ...... $40
E*Value student portfolio ........................................... $120/yr.
Graduation fee (fourth professional year only) ............ $195
Laboratory fee (first professional year only) .............. $240
Laboratory fee (third professional year only) ............. $100
NAPLEX review fee (fourth professional yr. only) ....... $325
PCOA exam fee (first three professional years) ........... $75/yr.
Professional liability insurance ................................. $20/yr.
Student activity and technology fees ....................... $2,100 /yr.
  (first three professional years, $995 fourth professional year)
Textbooks (electronic) ........................................... $200/yr.
Textbooks (print) estimated ................................. $800/yr.
  ($750 first professional year, $50 second professional year)

Additional Out-of-Pocket Expenses
Background check .............................................. $130 every two years
Drug screen ...................................................... $30/yr.
Required apparel .............................................. $40
minimum required expense for scrubs

Room and board charges per semester are available in the undergraduate catalog.

*Effective May 1, 2014

Student Pharmacist Voluntary Withdrawal Policy
Acceptance of a position in a class of the College of Pharmacy is viewed as a long-term commitment and different from registering for classes in an undergraduate program. The curriculum of the College of Pharmacy is offered in fulfillment of a professional degree where the focus of education is more narrow and the intensity of effort is more profound. Since classes are admitted only one time a year for a defined number of students, the opportunity to replace student pharmacists who choose to voluntarily withdraw is
extremely limited. It is the operational policy of the
Lipscomb University College of Pharmacy that no
potential student pharmacist will be asked to join any
class after the official fifth day of classes, unless there
is agreement between the dean and the provost that it
will be in the best interests of the student pharmacist
and the college to permit a later start.

Therefore, the college’s policy on voluntary withdrawal
and refund of tuition and fees for the College of
Pharmacy is as follows.

1. Upon acceptance by an applicant of a position in
a class of the College of Pharmacy, the student
pays an initial deposit to hold the position.
This deposit is nonrefundable. The full deposit
amount is lost if the student pharmacist then
chooses to forfeit his or her position in the class.

2. Fees, including textbooks, assessed as a part
of the registration process are nonrefundable
if a student pharmacist chooses to voluntarily
withdraw from the College of Pharmacy.

3. A student pharmacist is considered enrolled
in the College of Pharmacy when all steps
of their registration are complete including
final arrangements for payment for all student
pharmacist charges through one of the options
offered by the university and the date for
completion of registration as defined by the
college is passed. At this point, the student
pharmacist makes a commitment to pay all fees
and tuition associated with that respective year
of the college’s curriculum.

4. If a student pharmacist chooses to voluntarily
withdraw from the College of Pharmacy after
being officially registered, then an official
withdrawal process must take place. To withdraw
from the College of Pharmacy, a student
pharmacist should meet first with the director of
student affairs and the associate dean for academic
affairs. Following this meeting, all parties should
meet with the dean of the college and complete
the College of Pharmacy withdrawal form and pay
a withdrawal fee of $195.

5. Refund of the tuition shall be according to the
following schedule:
From official registration completion to
one week before the first official day of
orientation ................................................... 100%

From one week before the first official day of
orientation through the official fifth day
of class ....................................................... 50%

After the official fifth day of class .................... None
For the second or any subsequent semester of the
program ...................................................... None

6. By completing registration in the College of
Pharmacy, each student pharmacist has agreed
to meet all financial obligations to the Lipscomb
University College of Pharmacy. Failure to
meet these obligations may result in a variety of
activities being pursued toward collection of the
outstanding obligations.

<table>
<thead>
<tr>
<th>Pharmacy Prerequisites</th>
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<tbody>
<tr>
<td>Pharmacy prerequisites include a minimum 66 undergraduate hours including:</td>
</tr>
<tr>
<td><strong>Course</strong></td>
</tr>
<tr>
<td>General chemistry</td>
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<tr>
<td>with laboratories</td>
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<tr>
<td>Organic chemistry</td>
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<td>with laboratories</td>
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<tr>
<td>Physics with laboratories</td>
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<tr>
<td>Biology with laboratories</td>
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<tr>
<td>Calculus*</td>
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<td>Statistics</td>
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<tr>
<td>English Composition</td>
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<td>I and II</td>
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<td>Speech communication</td>
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<tr>
<td>Micro or macro economics</td>
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<tr>
<td>Electives–humanities</td>
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<tr>
<td>Electives–social science</td>
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<tr>
<td>Additional electives</td>
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<tr>
<td><strong>TOTAL hours (minimum)</strong></td>
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*Calculus for Business Majors is not accepted.*

<table>
<thead>
<tr>
<th>Doctor of Pharmacy Curriculum (155 hours)</th>
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<tbody>
<tr>
<td>The following courses of study are designed to prepare a student for the Doctor of Pharmacy degree at Lipscomb University College of Pharmacy.</td>
</tr>
<tr>
<td>PHAD – Health Sciences Administration</td>
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<tr>
<td>PHIE – Introductory Pharmacy Practice Experiences</td>
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<tr>
<td>PHPR – Pharmacy Practice</td>
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<tr>
<td>PHAE – Advanced Pharmacy Practice Experiences</td>
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<tr>
<td>PHSC – Pharmaceutical Sciences</td>
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### Pharmacy

#### Professional Year 1

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<tr>
<th>Fall Semester 1</th>
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<tr>
<td>PHAD 1000</td>
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<tr>
<td>PHAD 1111</td>
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<tr>
<td>PHIE 1512</td>
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<tr>
<td>PHPR 1002</td>
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<tr>
<td>PHPR 1622</td>
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<tr>
<td>PHSC 1113</td>
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<td>PHSC 1213</td>
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<td>PHSC 1313</td>
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<tr>
<td>PHSC 1413</td>
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<tr>
<td>PHSC 1512</td>
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</tbody>
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**Semester Credit Hours: 21**

#### Spring Semester 2

| PHIE 1522       | Introductory Pharmacy Practice Exp. II (2) |
| PHPR 1102       | Pharmacy Practice II (2) |
| PHPR 1613       | Dispensing Lab/ Compounding (3) |
| PHSC 1123       | Physiological Basis of Therapeutics II (3) |
| PHSC 1423       | Biopharmaceutics (3) |
| PHSC 1522       | Integrated Biomedical Sciences Lab II (2) |
| PHSC 1613       | Pharmacologic Basis of Therapeutics I (3) |

**Semester Credit Hours: 18**

#### Professional Year 2

<table>
<thead>
<tr>
<th>Fall Semester 3</th>
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<tbody>
<tr>
<td>PHAD 2102</td>
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<td>PHAD 2111</td>
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<tr>
<td>PHAD 2413</td>
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<tr>
<td>PHAD 2432</td>
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<tr>
<td>PHIE 2512</td>
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<td>PHPR 2202</td>
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<td>PHPR 2422</td>
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<tr>
<td>PHSC 2433</td>
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<tr>
<td>PHSC 2623</td>
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</tbody>
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**Semester Credit Hours: 20**

#### Spring Semester 4

| PHAD 2233       | Principles of Health Care Delivery (3) |
| PHAD 2443       | Pharmacy Law/Ethics (3) |
| PHIE 2522       | Introductory Pharmacy Practice Exp. IV (2) |
| PHPR 2703       | Non-prescription Medications and Devices (3) |
| PHPR 2813       | Pharmacotherapy I (3) |
| PHPR 2823       | Pharmacotherapy II (3) |
| PHPR 2633       | Pharmacologic Basis of Therapeutics III (3) |

**Semester Credit Hours: 20**

#### Professional Year 3

<table>
<thead>
<tr>
<th>Fall Semester 5</th>
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<tbody>
<tr>
<td>PHAD 3111</td>
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<tr>
<td>PHAD 3203</td>
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<td>PHIE 3510</td>
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<td>PHPR 3121</td>
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<td>PHPR 3232</td>
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<td>PHPR 3813</td>
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<td>PHPR 3823</td>
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<tr>
<td>PHPR 3nnV</td>
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**Semester Credit Hours: 19**

#### Spring Semester 6

| PHAD 3213       | PP VI-Institutional Management (3) |
| PHIE 3520       | Introductory Pharmacy Practice Experience VI (0) (P/F) |
| PHPR 3131       | Practice Seminar II (1) |
| PHPR 3512       | Applied Pharmacotherapy (2) |
| PHPR 3603       | Adv. Clinical Practice Skills (3) |
| PHPR 3833       | Pharmacotherapy V (3) |
| PHPR 3843       | Pharmacotherapy VI (3) |
| PHPR 3nnV       | Electives (2) |

**Semester Credit Hours: 17**
Professional Year 4

Summer / Fall Semester 7

PHAE 4nn4 Advanced Practice Experience I (4)
PHAE 4nn4 Advanced Practice Experience II (4)
PHAE 4nn4 Advanced Practice Experience III (4)
PHAE 4nn4 Advanced Practice Experience IV (4)
PHAE 4nn4 Advanced Practice Experience V (4)
PHAE 4nn4 Advanced Practice Experience VI (4)

Semester Credit Hours: 24

Professional Year 4

Spring Semester 8

PHAE 4nn4 Advanced Practice Experience VII (4)
PHAE 4nn4 Advanced Practice Experience VIII (4)
PHAE 4nn4 Advanced Practice Experience IX (4)
PHAE 4nn4 Advanced Practice Experience X (4)
PHPR 4900 Pharmacy Practice Review (0)

Semester Credit Hours: 16

Course Descriptions

Health Sciences Administration

PHAD 1000 Dean's Hour (0)
The content of this course will focus on what it means to be a pharmacist, historical view of the profession, professionalism, attitudes and values needed in the care of patients, leadership skills and guest speakers sharing experiences in their careers as a pharmacist.

PHAD 1111 Applied Christian Values I (1)
(Satisfactory/Unsatisfactory)
This course is a study in Christian ethics and the attitudes and values that pharmacists should exemplify in the care of patients. Topics to be explored include pain and suffering, caring and compassion and worldviews and values. It is required that each student attend the monthly lecture sessions and small group discussion meetings as well as other assignments to successfully complete the course.

PHAD 2111 Applied Christian Values II (1)
(Satisfactory/Unsatisfactory)
This course is a study in Christian ethics and the attitudes and values that pharmacists should exemplify in the care of patients. Topics to be explored include pain and suffering, caring and compassion and worldviews and values. It is required that each student attend the monthly lecture sessions and small group discussion meetings as well as other assignments to successfully complete the course.

PHAD 2233 Principles of Health Care Delivery (3)
Content of course to include introduction to U.S., state and local health care delivery systems and their interfaces; social, political and economic factors of the U.S. health care delivery system; principles that influence the distribution of pharmaceutical products and services; role of public and private insurers, pharmaceutical industry and managed care on health care delivery in the U.S.; Medicaid and Medicare, including Part D; indigent care programs; incidence of and problems associated with drug overuse, under use and misuse in the U.S. health care system; off-label drug use; issues relating to health care policy; the evolution of health care insurance; managed care; government’s role in health care; community and institutional reimbursement issues; collaborative practice agreements; and prescriptive authority.

PHAD 2102 Pharmacy Practice III – Biostatistics / Study Design (2)
The third IPPE course continues with student pharmacists rotating through hospital, community and specialty pharmacy settings for four hours a day, one day a week, for the entire semester (five weeks at each practice type). Student pharmacists will also be expected to reflect upon their experiences in small group discussion sessions with faculty. This experience will provide 75 IPPE contact hours (cumulative 225 IPPE contact hours). Concepts added this semester will be development of pharmaceutical care plans, advanced pharmaceutical calculations, advanced communication skills and development of presentation skills.
PHAD 2413  Practice Management (3)
Course content includes discussions of pharmacy practice management in both community and health system practice settings including general business, human, financial and operations management. The course will also focus on quality assurance/risk management issues.

PHAD 2432  Communication Skills for Health Care Professionals (2)
Content and exercises to include effective verbal and written interpersonal communication; health literacy; communicating with diverse patients, families, pharmacists and other health professionals in a variety of settings; patient interviewing techniques; active listening and empathy; assertiveness and problem-solving techniques; cultural influences on communication of health information; group presentation skills; strategies for handling difficult situations; documentation of pharmacist recommendations and consultations; and principles of behavior modification. Student pharmacists will also rotate through a Communications Patient Simulation Lab where the student pharmacist will join a medical student and nursing student at the (simulated) bedside of a patient. This lab will reinforce professional roles and focus on the necessary interdisciplinary communication needed to optimize patient care.

PHAD 2443  Pharmacy Law and Ethics (3)
Content to include legal basis of pharmacy practice, pharmacist’s responsibilities and limits under the law; pharmacist’s role in reducing liability by reducing drug-related misadventure; civil versus criminal liability; business contract law; principles of professional behavior; ethical issues related to the development, promotion, sales, prescriptions and use of drugs; dealing with ethical dilemmas; conflict of interest; ethical issues in delivery of patient centered care and clinical research; principles of end-of-life care; and ethical issues in teamwork.
Fee - $95

PHAD 3111  Applied Christian Values III (1)
(Satisfactory/Unsatisfactory)
This course is a study in Christian ethics and the attitudes and values that pharmacists should exemplify in the care of patients. Topics to be explored include pain and suffering, caring and compassion and worldviews and values. It is required that each student attend the monthly lecture sessions and small group discussion meetings as well as other assignments to successfully complete the course.

PHAD 3203  Pharmacy Practice V – Community Management (3)
Content of course is to include specific issues related to institutional (hospital, health-system) pharmacy practice such as management principles (planning, organizing, directing and controlling resources); management of staff within the practice setting, including pharmacists, technicians and other supportive personnel; management tools, including informatics needed to assess and address change, improve quality and optimize patient services; legal and ethical considerations in institutional practice; management of medication use safety systems; strategies to improve the continuity of patient care as patients move between health care settings; marketing principles; basic accounting principles; project management; managed care and other third party administration; home care and long-term care; development of patient medication profiles; identification and prevention of medication related errors; issues of distribution systems; role of automation in the practice setting; patient counseling and other communication issues; infection control; JCAHO; sterile product preparation and dispensing; safe handling of hazardous drugs; and unique aspects of hospitals from the small community hospital to the academic health system.
PHAD 3213  Pharmacy Practice VI – Institutional Management (3)
Content of this course is to include specific issues related to institutional (hospital, health system) pharmacy practice such as management principles (planning, organizing, directing and controlling resources); management of staff within the practice setting, including pharmacists, technicians and other supportive personnel; management tools, including informatics needed to assess and address change, improve quality and optimize patient services; legal and ethical considerations in institutional practice; management of medication use safety systems; strategies to improve the continuity of patient care as patients move between health care settings; marketing principles; basic accounting principles; project management; managed care and other third party administration; home care and long-term care; development of patient medication profiles; identification and prevention of medication related errors; issues of distribution systems; role of automation in the practice setting; patient counseling and other communication issues; disease state management; MTM; methods of outcome monitoring and assessment techniques; reimbursement related issues; infection control; JCAHO; sterile product preparation and dispensing; safe handling of hazardous drugs; and unique aspects of hospitals from the small community hospital to the academic health system.

Advanced Pharmacy Practice Experiences

PHAE 4nn4  Advanced Pharmacy Practice Experiences (40)
The advanced pharmacy practice experiences will encompass the entire fourth year of the curriculum (25 percent of total curriculum). Students will rotate through ten advanced practice experiences, each being a calendar month in duration. Students will have four required practice experiences (advanced community, advanced hospital, inpatient acute care and ambulatory care). Students will select two practice experiences in the areas of managed care, practice management, specialty pharmacy, or a medicine sub-specialty. Students will also choose four elective practice experiences from an approved listing representing a variety of practice settings. It is the expectation that these practice experiences will be interdisciplinary in nature where the pharmacy student will work as a member of the health care team. Fee - $20

Introductory Pharmacy Practice Experiences

PHIE 1512 Introductory Pharmacy Practice Experiences I (2)
Introductory Pharmacy Practice Experiences consist of shadowing a practitioner and upper level pharmacy student for four hours a day, one day a week, for the entire semester. Students will rotate within the semester between hospital, community and specialty pharmacy practices (five weeks at each practice type). This experience will provide 75 IPPE contact hours. Concepts that will be covered in IPPE I will be introduction to pharmacy law, introductory drug knowledge, interprofessional interactions and understanding the role of the pharmacist. Fee - $20

PHIE 1522 Introductory Pharmacy Practice Experiences II (2)
The second semester of IPPEs continues with student pharmacists rotating through hospital, community and specialty pharmacy settings for four hours a day, one day a week, for the entire semester (five weeks at each practice type). Student pharmacists will also be expected to reflect upon their experiences in small group discussion sessions with faculty. This experience will provide 75 IPPE contact hours (cumulative 150 IPPE contact hours). It is expected that student pharmacists will build upon the concepts learned
in IPPE I and add to it the concepts of communication skills, introductory pharmaceutical calculations and an introduction to pharmaceutical care.

**PHIE 2512 Introductory Pharmacy Practice Experiences III (2)**
IPPE III will allow for student pharmacists to rotate through hospital, community, and specialty pharmacy settings for four hours a day, one day a week, for the entire semester (five weeks per practice site). During this semester, the focus will be placed on enhancing communication and presentation skills, pharmacy calculations skills, knowledge of drugs and drug information resources, knowledge of disease states, and the ability to use patient information to begin developing a plan of care. Student pharmacists will also be expected to reflect upon their experiences in small group discussions with faculty. This experience will provide 75 IPPE contact hours (cumulative 225 IPPE contact hours). Fee - $20

**PHIE 2522 Introductory Pharmacy Practice Experiences IV (2)**
IPPE IV will allow for student pharmacists to rotate through hospital, community and specialty pharmacy settings for four hours a day, one day a week, for the entire semester (five weeks at each practice type). During this semester, more focus will be placed on administrative and clinical roles of pharmacists in these practice settings as the students continue to build upon the knowledge and skills learned in the previous IPPE experiences. Student pharmacists will also be expected to reflect upon their experiences in small group discussion sessions with faculty. This experience will provide 75 IPPE contact hours (cumulative 300 IPPE contact hours).

**PHIE 3510 Introductory Pharmacy Practice Experience V (0) (Pass/fail)**
A capstone course which will enable each student pharmacist to demonstrate academic enhancement, personal growth and civic engagement. Student pharmacists will render meaningful patient-care services in the community that will relate back to academic materials. Through guided reflection, student pharmacists individually and in small groups examine their experiences critically and articulate specific learning outcomes. Student pharmacists will receive credit for 44 contact hours for introductory pharmacy practices, four of which will be reflection time. Fee - $20

**PHIE 3520 Introductory Pharmacy Practice Experience VI (0) (Pass/Fail)**
A capstone course which will enable the student pharmacist to use the knowledge and skills gained to this point in the curriculum to provide patient centered care through different service-related projects. This course will allow for each student pharmacist to demonstrate academic enhancement, personal growth and civic engagement. Student pharmacists will render meaningful patient-care services in the community that will relate back to academic materials. Through guided reflection, student pharmacists individually and in small groups examine their experiences critically and articulate specific learning outcomes. Student pharmacists will receive credit for 44 contact hours for introductory pharmacy practices, four of which will be reflection time.

**Pharmacy Practice**

**PHPR 1002 Pharmacy Practice I (2)**
The didactic portion of this course includes an introduction to the practice of pharmacy within the major practice settings; the history of the pharmacy profession; discussion on the role of the pharmacist as a part of the health care team; the drug use process; utilization of technology and support personnel in pharmacy practice; and the provision of pharmaceutical care. The course also provides student pharmacists
with certification in Basic Cardiac Life Support and Pharmacy-Based Immunization Delivery. Additionally, a mandatory online certification course will be completed before the student’s hospital based IPPE. This certification course will be developed in cooperation with area hospitals and will meet their legal policies and procedures for admittance in the pharmacy and patient care areas. This course will also include small group discussion sessions where students can reflect on topics from the didactic portion and relate that discussion to what they have experienced in the IPPE course.

Fee - $200

**PHPR 1102 Pharmacy Practice II (2)**
This course is a continuation of the first semester Pharmacy Practice I course. The didactic portion of this course includes: a review of the drug discovery and approval process within the pharmaceutical industry; roles of pharmacists within industry; a review of the Top 200 drugs; an introduction to basic principles of pharmacoconomics and pharmacoepidemiology; legal, social, moral and ethical issues in pharmacy; communication skills; drug information skills; the role and importance of professional pharmacy organizations; and postgraduate educational and career opportunities in pharmacy practice.

**PHPR 1622 Pharmacy Calculations (2)**
The course is designed to enable student pharmacists to accurately perform pharmacy calculations required in pharmacy practice. Calculations taught range from dose calculations and adjustments to those necessary to compound, dispense, and administer medications. Student pharmacists will also be introduced to knowledge needed to interpret prescription and medication orders and an overview of pharmaceutical measurement. Examples of topics covered include conversion between various systems of measurement, dose calculations, calculations involving electrolytes, isotonicity calculations, intravenous flow and drip rate calculations and calculations for altering product strength. Course material is delivered through didactic lectures and interactive workshops. The workshops encourage group-learning activities.

**PHPR 1613 Dispensing Lab/Compounding (3)**
Course content and projects include U.S. Pharmacopeia guidance on compounding and FDA compliance; policy guidelines; techniques and principles used to prepare and dispense individual extemporaneous prescriptions, including dating of compounded dosage forms; liquid (parenteral, enteral), solid, semi-solid and topical preparations; dosage form preparation calculations; sterile admixture techniques (stability and sterility dating, clean room requirements, infusion devices and catheters and preparation and dispensing of prescriptions, including mock antineoplastic agents); interpretation of a prescription; and requirements and parts of a prescription label. Pharmaceutical calculations materials will also be a component of this course and will include the interpretation of a prescription; overview of pharmaceutical measurements; dosage calculations and adjustments in standard and special population patients; and medication administration techniques. Fee - $80

**PHPR 2202 Interpreting Laboratory Data (2)**
Content of course to include the fundamentals of laboratory medicine and its importance to screening, diagnosis and evaluation of patients; clinical data relevant to disease state management; interpretation of drug screens; knowledge of the basis for common clinical laboratory values and diagnostic tests and the influences of common disease states; and false positive and false negative results.

**PHPR 2422 Health Informatics (2)**
This course surveys the fundamental concepts and activities of information technology as applied to health care.
Topics include computer-based medical records, electronic health record, knowledge-based systems, decision theory and decision support, e-Health, ARRA/HITECH and Meaningful Use and the personal health record. Students will learn health care informatics history, informatics competencies, concepts, legal and ethical implications and applications within the health care industry. This course will introduce the student to the software development life cycle; human factors issues in health care informatics; critical issues affecting the development and implementation of information and communication systems and technologies, professional practice trends and explore some of the emerging information and communication technology in health care (CPOE, eMAR, barcode medication administration systems, e-Prescribing, etc.)

PHPR 2703 Non-prescription Medications and Devices (3)
Course content will include a study of various non-prescription pharmaceuticals, medical and surgical supplies and appliances commonly found in ambulatory pharmacy practice sites; their rational use and therapeutic efficacy; and decision making skills for ambulatory patient triage. The course will consist of didactic lectures, self-study and case based teaching.

PHPR 2813 Pharmacotherapy I (3)
Course content is to be presented in modules focusing on organ systems (i.e., CNS, gastrointestinal), disease states (i.e., epilepsy, depression, diarrhea, constipation), or patient populations (i.e., terminally ill, pediatrics, geriatrics). Modules will be sequenced so that organ systems and disease states are covered first and then followed by unique patient populations. Content of these modules are to include pathophysiology; clinical signs and symptoms; diagnostic testing; therapeutic drug classes and literature supporting their use; principles of clinical practice guidelines for various disease states and their interpretation in the clinical setting; drug monitoring, including applied pharmacokinetics; design of patient centered, culturally relevant treatment plans; special populations; and development of treatment protocols. The course will consist of didactic lectures, case based teaching and small group discussions.

PHPR 2823 Pharmacotherapy II (3)
Course content is to be presented in modules focusing on organ systems (i.e., hematological), disease states (i.e., infectious diseases), or patient populations (i.e., pediatrics, geriatrics). Modules will be sequenced so that organ systems and disease states are covered first and then followed by unique patient populations. Content of these modules are to include pathophysiology; clinical signs and symptoms; diagnostic testing; therapeutic drug classes and literature supporting their use; principles of clinical practice guidelines for various disease states and their interpretation in the clinical setting; drug monitoring, including applied pharmacokinetics; design of patient centered, culturally relevant treatment plans; special populations; and development of treatment protocols. The course will consist of didactic lectures, case based teaching and small group discussions.

PHPR 3121 Practice Seminar I (1)
Each student pharmacist will prepare and make one 20-minute presentation before their class and faculty during the semester. Emphasis will be placed on developing and exercising group presentation skills. Student pharmacists will be expected to research and develop the scientific content of the presentation and handle questions following the presentations.

PHPR 3131 Practice Seminar II (1)
Each student pharmacist will prepare and make one 20-minute presentation before their class and faculty during the
semester. Emphasis will be placed on developing and exercising group presentation skills. Student pharmacists will be expected to research and develop the scientific content of the presentation and handle questions following the presentations.

**PHPR 3232 Pharmacy Practice IV – Pharmacoeconomics / Health Outcomes (3)**
This course will include the economic principles that relate to pharmacoeconomic analysis; concepts of pharmacoeconomics in relation to patient care; applications of economic theories and health-related quality of life concepts to improve allocation of limited health care resources; application of principles of epidemiology to the study of drug use and outcomes in large populations; studies that provide an estimate of the probability of beneficial effects in populations or the probability of adverse effects in populations and other parameters relating to drug use benefit; evaluation of literature; concepts relating to formularies and their maintenance; and measuring health outcomes. The course will consist of didactic lectures, self-study, case-based teaching, projects and small group discussions.

**PHPR 3312 Natural Medicine (2)**
Content of course to include concepts of crude drugs; semi-purified and purified natural products; variability of occurrence of pharmacologically active substances in plants and impact on regulatory aspects of herbal products; overview of classes of pharmacologically active natural products; dietary supplements (vitamins, minerals and herbas); alternative medical treatments; evaluation of alternative and complementary medicine purity, bioavailability, safety and efficacy; herbal-drug interactions; and regulation of dietary supplements and herbal products.

**PHPR 3502 Medication Therapy Management (2)**
Content of this course surrounds the understanding of the core components of Medication Therapy Management and its implementation in the patient centered care setting. These core components include: Performing or obtaining necessary assessments of the patient’s health status; formulating a medication treatment plan; selecting, initiating, modifying, or administering medication therapy; monitoring and evaluating the patient’s response to therapy, including safety and effectiveness; performing a comprehensive medication review to identify, resolve and prevent medication-related problems, including adverse drug events; documenting the care delivered and communicating essential information to the patient’s other primary care providers; providing verbal education and training designed to enhance patient understanding and appropriate use of his or her medications; providing information, support services and resources designed to enhance patient adherence with his or her therapeutic regimens; coordinating and integrating medication therapy management services within the broader health care-management services being provided to the patient. Additionally, issues surrounding the cost for providing MTM services and accompanying appropriate pharmacist reimbursement will be discussed. The course will be taught with didactic lectures and special projects where student pharmacists are mock patients on which to develop MTM strategies.

**PHPR 3512 Applied Pharmacotherapy (2)**
Using the ASHP text of the same name as the guide, this course will provide extensive training on key components of setting up a clinical practice in both institutional and ambulatory settings. Topics will include understanding patient issues; pharmacy profession and pharmaceutical care; patient-pharmacist encounters; patient records; clinical reasoning; designing and implementing the patient care
plan; evaluating patient progress and outcome assessments; and utilization of drug information skills. The course will consist of didactic lectures, case-based teaching, group projects and small group discussions.

**PHPR 3603 Advanced Clinical Practice Skills (3)**

Content of the course to focus on developing skills in obtaining a comprehensive patient history; familiarity with basic physical assessment techniques such as assessing vital signs, HEENT assessment, integumentary assessment, thorax and lung assessment, cardiovascular assessment, abdominal assessment, musculoskeletal assessment, neurological assessment and the changes that occur in the presence of disease or drug therapy; principles of ECG and common abnormalities; and renewal of Basic Cardiac Life Support.

Fee - $40

**PHPR 3813 Pharmacotherapy III (3)**

Course content is to be presented in modules focusing on organ systems (e.g., respiratory, cardiovascular), disease states (e.g., asthma, hypertension, heart failure, angina), or patient populations (e.g., pediatrics, geriatrics, women's health). Modules will be sequenced so that organ systems and disease states are covered first and then followed by unique patient populations. Content of these modules are to include pathophysiology; clinical signs and symptoms; diagnostic testing; therapeutic drug classes and literature supporting their use; principles of clinical practice guidelines for various disease states and their interpretation in the clinical setting; drug monitoring, including applied pharmacokinetics; design of patient centered, culturally relevant treatment plans; special populations; and development of treatment protocols. The course will consist of didactic lectures, case based teaching and small group discussions.

**PHPR 3823 Pharmacotherapy IV (3)**

Course content is to be presented in modules focusing on organ systems (e.g., endocrinology, reproductive systems), disease states (e.g., diabetes, thyroid disorder, eclampsia), or patient populations (e.g., pediatrics, geriatrics, women's health). Modules will be sequenced so that organ systems and disease states are covered first and then followed by unique patient populations. Content of these modules are to include pathophysiology; clinical signs and symptoms; diagnostic testing; therapeutic drug classes and literature supporting their use; principles of clinical practice guidelines for various disease states and their interpretation in the clinical setting; drug monitoring, including applied pharmacokinetics; design of patient centered, culturally relevant treatment plans; special populations; and development of treatment protocols. The course will consist of didactic lectures, case based teaching and small group discussions.

**PHPR 3833 Pharmacotherapy V (3)**

Course content is to be presented in modules focusing on organ systems (e.g., oncology, hematology, rheumatology), disease states (e.g., breast cancer, lung cancer, leukemia, arthritis, gout), or patient populations (e.g., pediatrics, geriatrics). Modules will be sequenced so that organ systems and disease states are covered first and then followed by unique patient populations. Content of these modules are to include pathophysiology; clinical signs and symptoms; diagnostic testing; therapeutic drug classes and literature supporting their use; principles of clinical practice guidelines for various disease states and their interpretation in the clinical setting; drug monitoring, including applied pharmacokinetics; design of patient centered, culturally relevant treatment plans; special populations; and development of treatment protocols. The course will consist of didactic lectures, case based teaching and small group discussions.

**PHPR 3843 Pharmacotherapy VI (3)**

Course content is to be presented in modules focusing on organ systems (e.g., endocrinology, reproductive systems), disease states (e.g., diabetes,
thyroid disorder, eclampsia), or patient populations (e.g., pediatrics, geriatrics, women’s health). Modules will be sequenced so that organ systems and disease states are covered first and then followed by unique patient populations. Content of these modules are to include pathophysiology; clinical signs and symptoms; diagnostic testing; therapeutic drug classes and literature supporting their use; principles of clinical practice guidelines for various disease states and their interpretation in the clinical setting; drug monitoring, including applied pharmacokinetics; design of patient centered, culturally relevant treatment plans; special populations; and development of treatment protocols. The course will consist of didactic lectures, case-based teaching and small group discussions.

PHPR 3nnV Elective(s) (2-3)
Opportunities will be provided for students to take course work designed to develop areas of personal interest, to expand their understanding of professional opportunities and to achieve the outcomes of the curriculum.

**Pharmaceutical Sciences**

**PHSC 1113** Physiological Basis of Therapeutics I (3)
The first of a two-course sequence designed to emphasize integrated concepts of structure (anatomy) and function (physiology) of the integumentary, skeletal, muscular and nervous systems. Particular emphasis will be placed on cellular, homeostatic and control mechanisms that regulate the physiologic response of target tissues. Laboratory exercises for this course will be incorporated into the Integrated Biomedical Sciences laboratory course and consist of directed use of anatomical models of various structures, systems and physiology simulations in a modified gross anatomy and physiology laboratory. Methods of instruction include lectures, group discussions and independent study.

**PHSC 1123** Physiological Basis of Therapeutics II (3)
The second of a two course sequence designed to emphasize integrated concepts of structure (anatomy) and function (physiology) of the respiratory, cardiovascular, endocrine, digestive, urinary and reproductive systems. Particular emphasis will be placed on cellular, homeostatic and control mechanisms that regulate the physiologic response of target tissues. Laboratory exercises for this course will be incorporated into the Integrated Biomedical Sciences laboratory course and will consist of directed use of anatomical models of various structures, systems and physiology simulations in a modified gross anatomy and physiology laboratory. Methods of instruction include lectures, group discussions and independent study.

**PHSC 1213** Biomolecular Chemistry (3)
This course is designed to cover integrated concepts of human biochemistry as it relates to the synthesis, structure and function of key biomolecules (nucleic acids, amino acids, proteins, lipids and carbohydrates), membranes, cells, signal transduction processes and metabolic pathways in physiologic systems. Special emphasis will be placed on the comprehension of key biomolecules, cellular organelles or pathways that can be targeted or manipulated for the diagnosis, prevention, or treatment of human disease. Laboratory exercises for this course will be incorporated into the Integrated Biomedical Sciences laboratory course when necessary. Methods of instruction include lectures, group discussions and independent study.

**PHSC 1313** Microbiology/Immunology (3)
This course is designed to cover general principles of microbial concepts; principles of infectious disease, host-parasite relationships; viral structure and reproduction; pathogenic microorganisms of man; inflammatory responses to infectious
agents; and clinical aspects of infection. Immunology content will include discussions on human immunity and immune response; principles of antigen-antibody relationships; molecular biology of immune response; and the genetic basis for antibody synthesis, development, function and immunopathology. Laboratory exercises for this course will be incorporated into the Integrated Biomedical Sciences laboratory course when necessary. Methods of instruction include lectures, group discussions and independent study.

PHSC 1413  Pharmaceutical Medicinal Chemistry (3)
This course is designed for the student pharmacist to develop an understanding of the physical, chemical and pharmaceutical properties of medicinal products used in the delivery of pharmaceutical care. Course content includes general principles of thermodynamics; physical and chemical properties of molecules; particle size, shape and surface area; kinetic, equilibrium and interfacial phenomena; principles of drug dissolution, release and diffusion; rheologic properties of liquids, solutions and colloidal systems; polymers and biomaterials; and drug delivery systems. The course will also introduce fundamental aspects of medicinal chemistry used in the rational design of drug molecules; molecular changes in drug molecules that affect affinity and activity at drug receptors and influence the absorption, distribution, metabolism, excretion and stability of drugs; and the properties of drug molecules which are important in their formulation into drug products. Laboratory exercises for this course will be incorporated into the Integrated Biomedical Sciences laboratory course. Methods of instruction include lectures, group discussions and independent study.

PHSC 1423  Biopharmaceutics (3)
Content includes physicochemical principles of dosage forms; biological principles of dosage forms; principles of drug delivery via dosage forms (e.g., liquid, solid, semi-solid, controlled release, transdermal and implants); principles of dosage form stability and drug degradation in dosage forms; materials and methods used in preparation, testing and use of dosage forms; drug discovery and development; basic principles of in vivo drug kinetics (linear and nonlinear); and principles of bioavailability/bioequivalence. Methods of instruction include lectures, group discussions and independent study.

PHSC 1512  Integrated Biomedical Sciences Lab I (2)
The focus of this laboratory course will be to engage students in laboratory exercises, experiments and simulations that supplement and enhance didactic material in the biomedical and pharmaceutical sciences. Special emphasis will be placed on exercises, experiments and simulations that relate to the biochemical, physiological or pharmacological basis of drug discovery, formulation, disposition and response. Methods of instruction include independent and group laboratory exercises, computer simulations and independent study. Fee - $80

PHSC 1522  Integrated Biomedical Sciences Lab II (2)
The focus of this laboratory course will be to engage students in laboratory exercises, experiments and simulations that supplement and enhance didactic material in the biomedical and pharmaceutical sciences. Special emphasis will be placed on exercises, experiments and simulations that relate to the biochemical, physiological or pharmacological basis of drug discovery, formulation, disposition and response. Methods of instruction include independent and group laboratory exercises, computer simulations and independent study. Fee - $80
PHSC 1613  Pharmacologic Basis of Therapeutics I (3)
The first of a three course sequence designed to emphasize principles of drug action used to characterize, evaluate and compare drug molecules in the areas of neuropharmacology, inflammation and immune pharmacology and antimicrobial agents. Fundamental principles that will be covered in this sequence includes evaluating physical and chemical properties of drug molecules (medicinal chemistry) and drug targets (biochemistry) that regulate drug-receptor interactions, characterizing the type of drug molecules and drug targets that interact with specific cell signaling pathways (pharmacology) and understanding pharmacodynamic and pharmacokinetic principles that alter drug efficacy (therapeutics) or drug toxicity (toxicology). Methods of instruction include lectures, group discussions and independent study.

PHSC 2433  Advanced Biopharmaceutics and Pharmacokinetics (3)
This course is a continuation of the biopharmaceutics course that will focus on the theoretical and practical models that predict and describe drug absorption, distribution, metabolism, excretion and response; the use of mathematical equations to estimate doses and dosage regimens for patients; the effect of disease, drugs and dietary influences on drug formulation, pharmacokinetics and pharmacodynamic parameters. Methods of instruction include lectures, group discussions, computer simulations and independent study.

PHSC 2623  Pharmacological Basis of Therapeutics II (3)
The second of a three-course sequence designed to emphasize principles of drug action used to characterize, evaluate and compare drug molecules in the areas of chemotherapeutic agents, cardiovascular pharmacology and endocrinology. Fundamental principles that will be covered in this sequence includes evaluating physical and chemical properties of drug molecules (medicinal chemistry) and drug targets (biochemistry) that regulate drug-receptor interactions, characterizing the type of drug molecules and drug targets that interact with specific cell signaling pathways (pharmacology) and understanding pharmacodynamic and pharmacokinetic principles that alter drug efficacy (therapeutics) or drug toxicity (toxicology). Methods of instruction include lectures, group discussions and independent study.

PHSC 2633  Pharmacological Basis of Therapeutics III (3)
The third of a three-course sequence designed to emphasize principles of drug action used to characterize, evaluate and compare drug molecules in the areas of gastrointestinal pharmacology. This final sequence will also cover special areas such as protein and RNA-based therapies, pharmacogenomics and gene delivery, drug development and regulation and principles of toxicology and poison management. Methods of instruction include lectures, group discussions and independent study.

Academic Policies

Minimum Requirements for Graduation

- Completion of the Doctor of Pharmacy curriculum with a passing grade in each course, a passing score in the calculations capstone and with a 2.3 cumulative grade-point average in a maximum of six academic years, unless enrolled in a dual degree program.
- Forty-six months residence in an accredited school of pharmacy, the final 24 months of which must be completed at Lipscomb University College of Pharmacy.
- Recommendation by the faculty of the college, through the academic progression committee.
- Payment of all financial obligations to the college. Compulsory attendance at graduation exercises.
Early Identification of Academic Difficulty

- During the P1, P2 and P3 years, student pharmacists’ academic performance will be monitored by the academic progression committee each semester. As a step to identify early academic difficulty, the academic progression committee will monitor progress throughout the semester and then perform a formal review at the end of each semester to determine if progression is warranted. The first step of the monitoring process is that faculty advisors will be notified of academic progress of their advisees after the first exam block of the semester or earlier if a problem is noted by faculty. Advisors will provide academic counsel to those student pharmacists with early academic struggles. After the second exam block, this same review will take place and student pharmacists with continued struggles will be sent to the associate dean for academic affairs for additional academic counseling. Student pharmacist performance after the third exam block will again be reviewed by faculty advisors. Student pharmacists in academic trouble, as defined by having failing grades, after the third exam block will have their records reviewed by the academic progression committee and recommendations will be made by the committee on additional steps that have not been executed previously by the faculty advisor and/or associate dean for academic affairs. The academic progression committee will use a delegate, normally the associate dean for academic affairs, to convey their recommendations to the student pharmacist. At the conclusion of the semester, academic performance is once again reviewed by the faculty advisors and the academic progression committee.

- During the P4 year, student pharmacists’ academic performance will be monitored by the academic progression committee. Additionally, the associate dean for experiential education and the experiential education committee will also evaluate student pharmacist/preceptor performance and this evaluation will take place at the end of each practice experience cycle.

- Anyone identified as having less than “C” performance in any required course will receive written communication indicating the need for improvement and the need to meet with the associate dean for academic affairs.

Student pharmacists must maintain a cumulative and per semester GPA in all professional course work of at least 2.3. A student who fails to attain a 2.3 GPA in any academic semester will be placed on academic probation. Additionally, student pharmacists with a GPA of 3.0 or less during their advanced practice experiences may be subject to remedial work, based on recommendation from the academic progression committee and the experiential education committee. Students earning less than a 3.0 GPA during the fourth professional year must meet with the associate dean for experiential education, associate dean for academic affairs and at least one of their preceptors.

- **Academic Warning:** A P1 student pharmacist whose GPA for the first semester is below 2.3 will be placed on academic warning. This is a one-time warning available only to P1 student pharmacists finishing the first semester. Student pharmacists on academic warning who do not raise their GPA to 2.3 by the end of their next semester in school will be placed on academic probation. Student pharmacists on academic warning will be required to participate in Pharmacy Turning Point, a program designed to assist student pharmacists attempting to recover from difficult academic situations (Pharmacy Turning Point is an adaptation of a successful university counseling program).

- **Pharmacy Turning Point** is a program designed to assist student pharmacists who are attempting to recover from difficult academic situations. This program is coordinated by the associate deans in student affairs and academic affairs and will involve faculty, staff and outside educational resources. Participants will be expected to fulfill all program requirements, such as supervisory office visits with the coordinating staff (or faculty advisor), participation in tutoring labs and academic skills workshops and monitoring of class attendance and academic performance.

- **Academic Probation:** All student pharmacists must maintain a cumulative GPA of 2.3, including incomplete grades. Student pharmacists whose cumulative GPA falls below 2.3 will be placed on academic probation for the following semester. Student pharmacists on academic probation must contact the associate dean for academic affairs for a meeting before semester enrollment and complete a probation contract. The contract will be the result of an evaluation of the student pharmacist to determine the possible reasons for academic difficulty and development of a plan to address
the areas contributing to academic difficulty. The probation contract is a useful way to address the academic problems the student pharmacist has encountered. Failure to sign a contract, by student pharmacist choice, results in academic dismissal from the college.

- Student pharmacists on academic probation who earn a term GPA of 2.3 or higher but fail to raise their cumulative GPA to 2.3 or higher may be considered for a one-semester extension of their probation.

- Student pharmacists on academic probation because of incomplete work can be removed from probation at any time the work is made up and a satisfactory GPA is recorded on the permanent record.

- Student pharmacists on academic probation may not be appointed to any college committee or elected to any office in any college organization during the period of probation. Student pharmacists holding such appointed offices or elected positions must resign the position by the first class day of the semester in which they are placed on probation.

- Student pharmacists on academic probation are not eligible to serve as elected officers or committee chairs for any organizations on campus or part of the pharmacy profession. Student pharmacists may still serve as members in professional organizations. Activities developed by professional organizations or extracurricular activities (e.g., intramurals) should be avoided due to time requirements and the subsequent loss of time that could be used for academic studies. Should a student pharmacist desire to participate in an activity of a professional organization or an extracurricular activity of the university, he or she shall request written permission of the director of admissions and student affairs.

- **Failing Grades:**
  - A student pharmacist who receives a failing grade (“F” or “U”) in any professional course work must successfully complete an academic recovery contract developed with the associate dean for academic affairs and approved by the academic progression committee. The academic recovery contract is similar to the probation contract; however, it deals more specifically with the course work in which a failing grade was received. The academic recovery contract discusses remediation and the need for demonstration of proficiency in the course work in which a failing grade was received.

- Student pharmacists will be required to remediate any class in which a failing grade (“F” or “U”) was received. The process for remediation will range from retaking the class the next academic year to “after-hours” course work and assessment. After hours class work will be reviewing of video lectures, one-on-one discussion with faculty and an examination. Remediation plans will be developed collaboratively by the course coordinator, department chairs/vice chairs and the academic progression committee. The decision for this remediation will be made by the academic progression committee in consultation with the dean. Student pharmacists requiring course remediation must remediate any material for which they received a failing examination grade. Including additional remediation material is at the discretion of the faculty member coordinating remediation. If additional material that the student pharmacist previously earned a passing score is included, the score of the repeat attempt will be used to calculate the average remediation grade. Student pharmacists must attend all meetings scheduled in the remediation contract unless the faculty member coordinating the remediation excuses them. An unexcused absence will result in termination of the remediation contract and remediation failure. Successful remediation is defined as receiving a passing grade equal to or greater than 70 percent for the average of all assessments assigned under the remediation contract.

- Remediated course work performed in a successful manner will result in a grade change form being submitted to the registrar. The university’s academic record system will keep on file that the record contains a grade change due to remediation. The college also maintains records on all grades earned in the college and this record will be utilized for all honors, scholarships and faculty recommendation from the college. The highest replacement grade that may be achieved secondary to remediation is a “70 percent” for a course grade. The process for remediation of introductory and advanced pharmacy practice experiences will be coordinated through the Office of Experiential Education and the APC. Remediation Contract and Content: the remediation course coordinator and
any faculty members responsible for remediation content should agree on the plan set forth in the remediation contract presented to the student pharmacist and approved by the APC. This plan should include the time set aside for meetings between the faculty member and student that may include informal assessment, answering questions regarding content, or other discussion. Remediation should be comparable in academic rigor to the original course. The remediation contract should include the following at a minimum: Dates of assessments and expected completion date of the remediation; coordinator’s expectations for time allotted for individual study; course content to be remediated; expectations for the planned meetings between faculty and the student pharmacist; general remediation principles outlined above; statement of agreement of financial obligation for remediation fee; student pharmacist signature, course coordinator signature and associate dean for academic affairs signature prior to the initiation of remediation. A $1,500 fee will be paid by the student pharmacist for each remediation course. Remediation is both offered and designed to best prepare student pharmacists for professional practice and they are responsible for paying for this privilege. This fee will be paid to the College of Pharmacy for the support of academic and professional activities. Payment of this fee is required by the end of the semester following remediation or prior to graduation, whichever comes first. There will be no change in the grade on the transcript until this fee is paid in full. If a student pharmacist does not successfully complete remediation as noted in 6.3.4, the student pharmacist will be academically suspended. Remediation a second time for the same course is not an option. A failing grade during the P4 year will require re-taking the APPE experience. If possible, an attempt will be made to have the APPE during Dec. If approved by the preceptor, the associate dean for experiential education, the academic progression committee and the dean. If the failing grade takes place after Dec. of the P4 year, the student pharmacist’s graduation may be delayed pending successful remediation of the APPE experience.

- If a student pharmacist receives two or more failing grades (“F” or “U”) in any professional course work the student pharmacist will be dismissed from the program for scholastic deficiency. (Policy remains at three more failing grades for Class of 2015).

- Any student pharmacist, who receives a grade of “I” (incomplete) at the end of an academic semester, must develop an academic plan with the associate dean for academic affairs. The plan must be approved by the coordinator of the course in which the “I” was received. The plan must be in place at the start of the next semester with dates specified for the completion of the incomplete work which will be no later than the end of the next academic year. It is expected that incomplete course work will be completed in a manner and timeframe as stated in the academic plan.

- Failure to complete the academic plan will result in the course coordinator assigning a grade consistent with the academic work completed.

- Any student pharmacist with a grade of “I” may not proceed to the APPE portion of the curriculum until the grade is recorded or the course completed.

- A failing grade during the P4 year will require re-taking the APPE experience. If possible, an attempt will be made to have the APPE during Dec. if approved by the preceptor, the associate dean for experiential education, the academic progression committee and the dean. If the failing grade takes place after Dec. of the P4 year, the student pharmacist’s graduation may be delayed pending successful remediation of the APPE experience.

- If a student pharmacist receives two or more failing grades (“F” or “U”) in any professional course work the student pharmacist will be dismissed from the program for scholastic deficiency. (Policy remains at three more failing grades for Class of 2015).

- Any student pharmacist, who receives a grade of “I” (incomplete) at the end of an academic semester, must develop an academic plan with the associate dean for academic affairs. The plan must be approved by the coordinator of the course in which the “I” was received. The plan must be in place at the start of the next semester with dates specified for the completion of the incomplete work which will be no later than the end of the next academic year. It is expected that incomplete course work will be completed in a manner and timeframe as stated in the academic plan.

- Failure to complete the academic plan will result in the course coordinator assigning a grade consistent with the academic work completed.

- Any student pharmacist with a grade of “I” may not proceed to the APPE portion of the curriculum until the grade is recorded or the course completed.

- **Academic Suspension**: A student pharmacist on academic probation who fails to earn a GPA of at least 2.3 in any term that he or she is on academic probation will be suspended. Additionally, if the student pharmacist is on academic probation and professional/disciplinary probation at the same time, the student pharmacist will be suspended. Readmission to the college will be available the next professional year pending approval by the academic progression committee and the dean. Both the suspension and readmission will be recorded on the student pharmacist’s permanent academic record. No student pharmacist shall be academically suspended unless he or she has been placed on academic
probation for at least one semester, failed at least two courses, or was unsuccessful in remediation.

• A student pharmacist who returns from academic suspension will automatically be on academic probation. No academic course work earned elsewhere during the suspension will be used either in the calculation of the student pharmacist’s academic status, nor transferred as credit toward a degree.

• Academic Dismissal: If a student pharmacist is on probation as a result of having returned from an academic suspension and fails to meet the 2.3 GPA retention standards for any semester, then he or she will be academically dismissed from the program. No student pharmacist shall be academically dismissed unless he or she has first been academically suspended except in the case of the student pharmacists receiving two failing grades.

• Repeating Course work
  • Student pharmacists are not allowed to drop any classes within the college’s professional curriculum.
  • All failing grades (“F” or “U”) are subject to the remediation processes outlined in academic policy.
  • A course in which the student pharmacist receives a grade of “A”, “B” or “C” may not be repeated under any conditions.

• Grade Appeal: A student pharmacist has the right to file an appeal if there is disagreement with the final grade that has been awarded in a course. Concerns may relate, but are not limited to: failure to abide by stated requirements described in the course syllabus, a disputed test question, and discrimination based on age, sex, religion, race, marital status, national origin, or disability. The procedure for bringing an academic appeal is as follows: A formal appeal must be initiated within 30 calendar days following the date that grades are posted. The appeal should be completed within 60 calendar days following the initiation of the process. The student pharmacist must initiate the process by presenting the appeal in writing to the faculty member who serves as course coordinator of the course. The faculty member will render a decision in writing. If the appeal to the department chairperson is not resolved to the student pharmacist’s satisfaction, the student pharmacist may present the appeal in writing to the associate dean for academic affairs. This must be done within 10 days of the decision of the department chairperson. The appeal must specify the grounds, as well as supporting facts and arguments. The associate dean for academic affairs will consult with the dean of the College of Pharmacy and will review supporting documents as well as any new information that may not have been available to the department chairperson or course coordinator at the time of his/her determination. Discovery of any new information brought forward by the student pharmacist will be provided to the department chairperson and the involved faculty member for review and feedback. The associate dean for academic affairs will render a final decision in writing after consultation with the dean. This step ends the appeal process.

• Class Attendance: As part of demonstrating professionalism, student pharmacists are required to attend class. Course coordinators and instructors have the authority to routinely or randomly monitor and document class attendance by any verbal, written, or electronic method utilized at the beginning, during, or end of the scheduled class period. Student pharmacists can miss no more classes within an individual course than twice the number of course credits without penalty (i.e., four absences for a two semester credit hour course). There are no excused or unexcused absences, but rather the student pharmacist can utilize the previously mentioned bank of days (twice the number of semester credit hours) for any absence whether related to illness or any other reason. The college strongly discourages missing class haphazardly. If the student pharmacist reaches the limit of allowed absences and then, due to illness, needs to miss an additional day, the penalty described below will be enforced. Therefore, it is prudent for student pharmacists to utilize the bank of allowable absences wisely. Makeup of missed assignments will be allowed if the student pharmacist is within the allowed number of absences. Some graded assignments are not conducive to makeup (e.g., group projects, presentations) and in those cases the course coordinator will exercise judgment whether course content makeup can be performed. In some cases, a modified version of the missed assignment may be assigned for make up and this is at faculty
discretion. Course content make up of missed work should not disrupt the overall course schedule. It is understood that there may be instances where a student pharmacist is unable to attend class for an extended period (defined as being absent for classes the equivalent of one week) due to illness or other valid personal reasons. The student pharmacist should notify the course coordinator prior to the absence, if known, or promptly thereafter to inform the coordinator of the circumstances. Extended absences need to be validated and cleared through the Office of Academic Affairs. It is likely that the associate dean for academic affairs will require documentation of illness from your health care provider if illness is the reason for the extended absence. The course coordinator will help the student pharmacist develop a plan to make up any missed class work or assignments. In cases where the absence is more extensive, the academic progression committee will work collaboratively with the course coordinators to schedule the make up process.

The policy for managing attendance issues for individual student pharmacists is as follows:

• Student pharmacists who miss class more than two times the number of credit hours for an individual course will be required to meet with the director of admissions and student affairs and the associate dean for academic affairs before being readmitted to class and have their final letter grade for the course reduced by one letter grade and no makeup of missed graded assignments will be allowed. If course remediation is required, the plan will be developed by the course coordinator with input from the department chair/vice chair and the associate dean for academic affairs and approved by the academic progression committee.

• Student pharmacists who miss class more than four times the number of credit hours for an individual course will be required to meet with the director of admissions and student affairs and the associate dean for academic affairs before being readmitted to class and have their final letter grade for the course reduced by three letter grades. This will require remediation of the course content per the college’s academic policies. The plan for remediation will be developed by the course coordinator with input from the department chair/vice chair and the associate dean for academic affairs and approved by the academic progression committee.

The policy for managing attendance issues for the entire class is as follows:

The course coordinator has the authority to discontinue the electronic availability of lectures on the college’s audio/video lecture capture system for the remaining portion of the semester if attendance for the entire class drops below 80 percent more than two times the number of credit hours for an individual course.

• Examinations: Examinations and other assessments may be given via an electronic or paper format at the discretion of the course coordinator. The guiding principles regarding examinations and assessments are reasonableness and fairness. Student pharmacists must report for examinations as scheduled. Permission for a make-up exam due to illness or other emergency may be obtained from the course coordinator. If permission is granted, it is the responsibility of the student pharmacist to contact the course coordinator to schedule a make-up examination. It is the responsibility of the course coordinator to describe in the syllabus the course policy for making up exams that are canceled due to class disruption. Tests and examinations are to be prepared by faculty and staff members only. Student pharmacists are not allowed to assist in the preparation of tests and examinations. This means student workers cannot help in any aspect of the preparation, copying, handling, or distribution of assessments. Privacy laws, courtesy, and good judgment dictate that student pharmacists should not have access to the grades of their peers. All regular classes should have more than two graded tests or other exercises during a semester. As a general rule, it is recommended that a class should have at least one test or other major graded assignment during the semester for each hour of credit offered for the class.
• **Capstone Assessments:** The college will implement the Pharmacy Curriculum Outcomes Assessment as offered by the National Association of Boards of Pharmacy as a mechanism to analyze and evaluate performance in the curriculum and identify individual student pharmacists’ strengths, weaknesses, and progress from year to year. The college will also be able to evaluate overall curricular strength as compared to national benchmarks comprised of other participating colleges/schools of pharmacy. Benchmark data will be able to be broken down into four major content areas and thirty-five subtopic areas. The four major content areas are basic biomedical sciences; pharmaceutical sciences; social, behavioral and administrative pharmacy sciences; and clinical sciences. The PCOA will serve as a low-stakes assessment and will be administered annually in Jan. or Feb. of the spring semester. The associate dean for academic affairs will schedule this assessment and publish the date in the class calendars.

• **Calculations Capstone Assessment:** Prior to the completion of the first academic year, student pharmacists will be required to successfully pass a calculations capstone assessment. This assessment will be considered high stakes as student pharmacists will not be allowed to graduate from the college until successful completion occurs. Student pharmacists who fail to meet the 75 percent passing score will be required to remediate a calculations module during breaks between semesters and will continue this remediation until a successful score is achieved.

• **Degree Requirements:** Completion of the Doctor of Pharmacy curriculum with a passing grade in each course, a passing score in the calculations capstone, and with a 2.3 cumulative grade point average in a maximum of six academic years, unless enrolled in a dual degree program. Forty-six months residence in an accredited school of pharmacy, the final 24 months of which must be completed at Lipscomb University College of Pharmacy. Recommendation by the faculty of the college through the academic progression committee. Payment of all financial obligations to the college. Compulsory attendance at graduation exercises.

• **Graduation Exercises:** A commencement ceremony is held annually at the end of the spring semester. The college’s student pharmacists will be eligible to participate in the commencement ceremony when all degree requirements as outlined in Article 13 are met. The traditional cap and gown, with or without an academic hood, is considered formal academic attire for ceremonial events, and the addition of any ornamentation is quite limited by customary etiquette. At commencement, the college will provide cords and ribbons for graduates to wear acknowledging membership in nationally recognized academic honor societies and organizations. Any other addition to the formal academic regalia must be similarly appropriate, must represent only recognized organizations within the college, and must be approved in advance of commencement by the Office of the Dean. Honors are calculated at the end of the student pharmacist’s advanced pharmacy practice experiences at the end of April. Undergraduate work will not be counted in calculating honors. A purple and white cord shows membership in Rho Chi. A green and gold cord signifies membership in Phi Lambda Sigma. Traditional hoods of academic regalia are bestowed upon the graduates at commencement. The hood is lined with the Lipscomb University colors of purple and gold and is trimmed in olive green, denoting pharmacy. Graduates of the college are also required to attend a private convocation ceremony held in conjunction with the graduation ceremonies for Lipscomb University. All awards for graduates will be awarded at this ceremony.

• **Dean's List and Honor Roll:** To qualify for the Dean's List, a student pharmacist must achieve a GPA of 4.0 for the semester. To qualify for the Honor Roll, a student pharmacist must achieve a 3.5 or higher GPA for the semester.
• **Transfer Credits from other Colleges/Schools of Pharmacy:** Student pharmacists requesting a transfer to Lipscomb University College of Pharmacy from another Doctor of Pharmacy program must follow college guidelines.
  
  • Each case will be individually assessed on its merit and potential transfer students are to be informed that it is likely that an additional semester or more will be needed to fulfill all required course work.
  
  • Student pharmacists must have an official transcript of their work from each school they have attended mailed to the College of Pharmacy's director of admission and recruitment office.
  
  • A recommendation to accept courses will be made by the associate dean for academic affairs after consultation with the university registrar, department chairs and director of admissions and student affairs. Final decision to accept or deny will rest with the dean. Each course will be reviewed by the associate dean for academic affairs to establish whether or not the course work fulfills existing requirements within the college's curriculum. If components of a particular course that are deemed critical elements by the department chairs were not covered by the previous academic institution in their respective curriculum (for a similarly described course), then the transfer student pharmacist will be asked to repeat that particular course upon admission to the college. The associate dean for academic affairs will provide the transfer student pharmacist a full listing of his or her curricular requirements prior to enrollment thereby providing opportunity to accept the conditions for transfer. Transfer candidates will be evaluated for transfer eligibility based on previous academic performance, professional behavior, on-campus interview, and, when applicable, recommendations from faculty from the previous college/school of pharmacy.
  
  • A grade of “C” or better must have been earned for each course for transfer.
  
  • At least 50 percent of the credit hours required for the Doctor of Pharmacy degree must be earned in course work at Lipscomb University College of Pharmacy, therefore, only transfer candidates in the earliest semesters of their respective pharmacy programs are eligible to transfer.
  
  • Credit must have been received from Accreditation Council for Pharmacy Education recognized college of pharmacy before it will be awarded. Additionally, the prospective transfer student pharmacist must complete an onsite interview process arranged by the director of admissions and recruitment.
  
  • Transfer student pharmacists will also be asked to complete a field test consistent with the level of course work the student pharmacist should have completed prior to transfer. An assessment will be made on the score received to ascertain if the transfer should move forward and at what academic level within the college.
  
  • Additionally, all applicants to Lipscomb University College of Pharmacy must possess a cumulative grade point average of at least 2.5 on a 4.0 scale on all previous college work. Grades from all undergraduate course work attempted are included in the calculation of the overall undergraduate GPA, which is the primary GPA, used in the admissions process. All previous academic work will be evaluated.

• **College-Wide Assessment:** As a part of the ongoing assessment, evaluation, and review of the college’s curriculum, student pharmacist and faculty information are used for evaluation and feedback to improve the program and to document student pharmacist and faculty progress. The educational assessment committee oversees this function. This committee will use course evaluations, faculty evaluations, student progress assessment and feedback, faculty progress, surveys, videotaped encounters, and group work in this ongoing process. For student pharmacist assessment, data are primarily reported in the aggregate, and individual identification will be protected. There will be some instances when videotape review will be used to teach interviewing skills and group dynamics. All persons being videotaped will give their consent prior to any use of the videotaped material. When data are used for documenting and publishing about the curriculum and student pharmacist outcomes, appropriate institutional review will occur and aggregate data used. If the use of identifying information is needed appropriate student pharmacist consent will be obtained.
• **CLEP/AP Credit Acceptance:** Advanced placement and CLEP credit (credit by examination) may be used to satisfy prerequisite coursework provided that the credit is accepted by the applicant’s institution and is posted on the applicant’s official academic transcript. Acceptance of credit is at the discretion of Lipscomb University College of Pharmacy based upon course equivalency standards.

• **Non-traditional Doctor of Pharmacy Program:** There will be no program at Lipscomb University College of Pharmacy by which baccalaureate pharmacists may earn the Doctor of Pharmacy degree. At this time, the only professional degree offered by Lipscomb University College of Pharmacy will be the entry-level Doctor of Pharmacy degree.

• **Student Pharmacist Records:** The college follows University guidelines and regulations regarding access to student pharmacist records and is consistent with the Family Educational Rights and Privacy Act. Ordinarily, access to records is restricted to authorized personnel, such as deans, the Office of Student Affairs, and all university approved staff per the university policy (such as provost, registrar). Faculty must have legitimate academic interest to view student pharmacist records. That principally occurs when faculty serve as a student pharmacist’s academic advisor. Faculty also have implied consent to view a student pharmacist’s record if asked for a letter of recommendation, or if a student pharmacist asks a faculty member to act as an advisor on a research project. Student pharmacists wishing to deny faculty access to their records under either of the previously cited cases must notify the Office of Student Affairs of their wishes each time a request for faculty action is initiated. Faculty will have access to student pharmacist records in other circumstances only with permission from the college’s associate dean for academic affairs or the director of admissions and student affairs.

• **Textbooks:** Student pharmacists will be provided a listing of all required and recommended textbooks well in advance of the next academic semester. The student pharmacists will be provided ISBN-13 identification numbers and are responsible for acquiring the textbook prior to the start of the next semester's courses. Student pharmacists bear all responsibility regarding their purchases. The college will assure that the university bookstore stock a sufficient number of textbooks to accommodate all student pharmacists desiring to purchase their books on campus. Student pharmacists in the fall semester of the first professional year will have all required textbooks bundled and available for pickup prior to the start of the semester. The college may also utilize online textbooks (e-texts) as a part of course requirements. In such cases where an online textbook is used, the faculty must assure that sufficient access to the text can be achieved by any computer that meets the minimal requirements for personal notebook (laptop) as described by the college.

• **Computers and Computer Skills:** Computer literacy is an entry requirement for Lipscomb University College of Pharmacy. Student pharmacists will not be able to complete the course work in the Doctor of Pharmacy curriculum without a solid foundation in basic computer skills, which the college defines as competence in using:
  - Microsoft Word (or equivalent word processor)
  - Microsoft Excel (or equivalent spreadsheet program)
  - Microsoft PowerPoint
  - Adobe Reader
  - Email
  - Internet Web Browsers (i.e., Internet Explorer 6.0 or higher, Mozilla) Student pharmacists will be required to document that they possess these minimal skills during orientation of the first professional year. Student pharmacists requesting supplemental training will be accommodated. All student pharmacists will be required to have a personal notebook (laptop) computer with wireless networking capability and software that meets a minimum set of specifications. Computer specifications are located on the college’s website under the “Computer Requirements” tab.

• **Grievance Procedure:** Accreditation Council for Pharmacy Education Accreditation Standards: Any student pharmacist may bring a grievance or complaint in reference to the Accreditation Council for Pharmacy Education accreditation standards. Details regarding this process are outlined in the student pharmacy handbook.
Health Care Informatics

The Master of Science in health care informatics is a 42-hour interdisciplinary program which includes courses from health sciences, business, and information technology. Health care informatics is a growing and emerging discipline which evaluates the application of biomedical informatics methods and techniques utilized in the provision of health care services. Also included is the vital role HCI plays in enhancing the quality of care, reducing health care costs and addressing health issues. An important extension of this program is the Certificate in Health Care Informatics. This is a 15-hour program of advanced study in health care informatics and is comprised of the first five courses of the MHCI program.

- The ideal student has a passion for understanding how information and technology can be used to change and enhance health care delivery and outcomes.
- Faculty are not only leaders in their field but also work with individual students to offer personalized attention not often found at other institutions.
- The alternating weekend program is designed to meet the needs of working professionals.
- Multidisciplinary training provides the ability to communicate effectively with clinicians, administrators, business leaders and IT professionals and to understand the challenges of each role.
- Career options are unlimited for professionals with this expertise and include such areas as health system pharmacy, hospital corporations, academia, community, managed care, regulatory and government, vendor, legal, consulting, entrepreneurial, clinical research and the pharmaceutical industry to name a few.

Minimum Credits

The Master of Science in health care informatics requires completion of 42 semester hours. The certificate in health care informatics requires completion of 15 semester hours. This requirement does not include hours accumulated to satisfy academic deficiencies. Alternating weekend classes are offered Friday evenings and Saturdays, allowing the highest quality educational experience without disrupting one’s professional career.

Projects

Individual and group projects are a required component of most graduate classes. Most group projects are facilitated with a combination of online and in-person meetings, emails and phone calls. As part of the health care informatics core curriculum, the student will complete a capstone project which can be designed to support items such as an employer’s strategic initiative or an entrepreneurial opportunity. Each student will work with a faculty mentor to define the capstone project and advance through the process of completing the requirements to complete it.
Admission Policies and Procedures

Applicants to graduate programs must submit the following:

1. **Application Form.** Each applicant must complete an application form. The application form is available at lipscomb.edu/admissions/graduate, select “Apply by Program,” “Health Sciences,” “Health Care Informatics” to complete the online application.

2. **Application Fee.** Each application should be accompanied by a $50 nonrefundable application fee ($75 for international students).

3. **Standardized exam score.** Applicants with less than five years of related work experience must submit scores from the Graduate Record Examination. For more information on the GRE, visit www.ets.org and click on GRE. A minimum combined score of 295 is required. Applicants taking the GRE test should contact the program office for current requirements. Students who have already earned a master’s level degree may not need to complete the GRE standardized test.

4. **Eligibility.** Each applicant must submit documentation verifying course work or demonstrated competency in medical terminology, statistics and PC literacy and must satisfy one of the following:
   - Hold an advanced degree (master’s or doctorate) in a relevant area such as in health care.
   - Hold a bachelor’s degree in a relevant area of study, with five years of related work experience.
   - Hold a bachelor’s degree in a relevant area of study and submit GRE scores with application, if less than five years of related work experience.

5. **References.** Two letters of reference are required as follows: one from a college or university administrator or professor and one from a professional supervisor/employer, or personal reference.

6. **Official Transcript(s).** Each applicant must submit an official transcript, showing degree conferral when appropriate, from all schools attended.

7. **Health Form.** Each applicant must submit a completed health form signed by a health care provider. (To print a copy of the health form, visit www.lipscomb.edu/healthcenter/forms.) This form must be submitted directly to Lipscomb’s Health Center.

8. **FERPA.** The Family Educational Rights and Privacy Act affords students certain rights of access to educational records; even if you are independent of your parents, you must submit this form prior to enrollment.

9. **Resume.** A resume detailing the applicant’s work and academic experience is required.

10. **Personal Statement.** Each applicant must submit an expanded goals statement concerning the applicant’s interest in and application of the program’s curriculum to expected career progression is required.

11. **TOEFL.** The Test of English as a Foreign Language is required for international students. (See section titled International Students for more information.) All application items should be submitted to the College of Pharmacy and Health Sciences no later than 90 days before the beginning of the semester or term in which the student plans to enroll. Forms should be mailed to: College of Pharmacy and Health Sciences, Graduate Studies in Health Care Informatics, Lipscomb University, One University Park Drive, Nashville, TN 37204-3951.

Transfer and Waiver of Courses

Although all graduate credit hours may be transferred from another accredited institution, a maximum of six hours will be counted toward a master’s degree in the College of Pharmacy and Health Sciences. The program director or appropriate faculty member of the graduate program will evaluate the course(s) being proposed for transfer and make a determination of suitability. No course with a grade below a “B” will be considered for transfer.

Documentation

Students are required to provide satisfactory documentation of personal identification for off-site learning experiences required in many programs of graduate study at Lipscomb University. Failure to provide proper credentials will result in failure to complete the desired course of study. For complete policy, see section entitled Required Documentation for Off-Site Learning Experiences in the opening section of this catalog.
**Student Classifications**

Students are admitted to graduate courses in one of five categories:

1. **Graduate Student:** one who has satisfied all admissions requirements. (Average of 2.75 on undergraduate work, GRE acceptable scores.) A student with an incomplete admission file will be accepted to the program at the discretion of the program director but will be placed on an Academic Hold which will prevent registration for the following semester. Once the proper admissions documents have been received, the hold will be removed and the student will be allowed to register for the following semester.

2. **Conditionally Admitted Student:** one who has been admitted conditionally, at the discretion of the program director, without satisfying all admission requirements. Students admitted with the following criteria may be required to complete a minimum of nine hours of graduate work with a grade of “B” or above.
   a. From an unaccredited school or with a substandard GPA or GRE/MAT score.
   b. A transfer student with a graduate GPA between 2.50 and 2.99. The transfer student must be in good standing at the previous institution attended.
   c. As a student who has not completed a bachelor’s degree program. The transfer student must be in good standing at the previous institution attended.

3. **Non-Degree Student:** one who has been admitted to graduate studies and has met all admission requirements except GPA or GRE. The student may take up to nine semester hours or graduate credit. Those hours may be applied toward a master’s degree if the student makes a grade of “B” or better in the courses taken for credit and if all admission requirements (GPA and entrance test score) are met and the student is formally admitted to a graduate program as a degree-seeking student.

4. **Visiting Student:** one who is currently enrolled as a student in good standing at the post bachelor’s level at another graduate school, wishes to take courses at Lipscomb and desires to have transcript evidence of course work done at Lipscomb provided for the school of primary enrollment.

5. **Probationary Student:** one who has been readmitted to a graduate program following academic suspension from the program. Admission to a program does not imply admission to candidacy for the master’s degree. Only those students who meet the requirements for “graduate student” described above are eligible for candidacy.

**Academic Policies**

**Course Load**

A student enrolled for nine hours is considered a full-time student. A student enrolled for six hours is considered a half-time student. A student enrolled for less than six hours is considered a part-time student. No student will be permitted to enroll for more than 12 hours per semester without special approval from the director of the graduate program.

**Academic Standing**

1. **Good Academic Standing:** To remain in good academic standing, the MHCI or Certificate in HCI student must maintain a cumulative 3.00 GPA and a 3.00 GPA on the most recent 12 semester hours of MHCI or Certificate in HCI work.

2. **Probation:** Should the student’s cumulative graduate GPA fall below 3.00, he or she will be placed on academic probation. A student on academic probation will not be allowed to enroll for more than six hours during any term the probation applies. The probationary student is required to achieve a 3.00 cumulative GPA by the time the student has completed the next nine hours of course work. A course(s) may be repeated to achieve the requisite GPA. If the requisite GPA is attained, the academic probation status will be removed.

3. **Suspension:** If the requisite GPA is not attained, the student will be suspended from graduate studies at Lipscomb for the following semester, after which the student may apply for readmission. The student may be required to appear before the graduate committee. Failing grades will provide no credit toward the degree but will be included in figuring scholarship level, unless replaced with a higher grade by repeating the course(s). A 3.00 GPA must be maintained to be eligible for financial assistance.

4. **Appeals:** Appeals to suspension decisions should be made in writing to the associate provost for academic development and graduate studies. Appeals must be received no later than 4:30 p.m. on the Monday of the week before classes begin for the term during which the student wishes to be readmitted.
M. S. in Health Care Informatics

Degree Completion

Requirements

Residency
No period of formal residency is required for a degree in a master’s program.

Statute of Limitations
All requirements for a degree in the College of Pharmacy and Health Sciences must be completed within a five-year period from the time of initial matriculation.

Candidacy
Admission to a program does not imply admission to candidacy for the master’s degree. During the course of pursuing a degree, the student must be admitted to “candidacy.” For admission to candidacy the student must satisfy the following:

1. Complete all required undergraduate deficiencies if admitted on condition.
2. Complete at least twelve hours of graduate work.
3. Maintain a 3.00 GPA on all MHCI course work taken toward the requirements for the degree with no incomplete grades.
4. File a degree plan/application for candidacy in the graduate program office which meets all requirements and is approved by the administrator of the graduate program and the dean of the college. The degree plan must be completed during the second semester of graduate work in the program.

After admission to candidacy and approval of the degree plan, any changes in the degree plan must be approved by the administrator of the graduate program and the dean of the college. The application or candidacy must be completed before the beginning of the student’s last semester in the program. No student will be allowed to graduate in the same semester in which the application for candidacy is completed.

Minimum GPA
The minimum cumulative grade-point average or all graduate education programs is 3.00 for all graduate courses taken for graduate credit while pursuing the degree. No grade below a “C” is acceptable. Such grades will not apply toward degree completion.

Graduation
Students must register for GN 999X the semester in which all course work will be completed for graduation. Students who do not file their intent to graduate form in the registrar’s office by the end of the first week of their last semester may be delayed in graduating. Graduate students receiving degrees are hooded during the May and Dec. commencement exercises.

Appeals
Any exceptions to the above stated requirements would require approval via the appeal process established by the graduate academic leadership team.

Financial Information

Tuition and Fees for 2014-15

Basic charges* per semester:

Tuition per semester hour ........................................ $1,225 (includes all textbooks)
Tuition to audit without credit ...... 50% of regular tuition

Special Fees

Application fee .......... $50 ($75 for international students)
Graduation fee .......................................................... $195
Returned check fee .................................................... $30
Withdrawal fee .......................................................... $195

*Effective May 1, 2014

Master of Science in Health Care Informatics

Required Courses (42 hours)

HCI 5003 Decision Support Systems (3)
HCI 5013 Information Systems Management (3)
HCI 5033 Project Management (3)
HCI 5103 Introduction to Health Care Informatics (3)
HCI 5123 Ethical and Legal Issues in Health Care Informatics (3)
HCI 5133 Health Care IT Vendor Management (3)
HCI 5153 Consumer Health Informatics (3)
HCI 5203 Leadership and Organizational Behavior (3)
HCI 5213  Operations in Health Care Organizations (3)
HCI 5253  Contemporary Issues in Health Care (3)
HCI 5903  Capstone Project (3)
ISEC 5113  Introduction to Information Security (3)
MITM 5023  Data and Knowledge Management (3)
MITM 5213  Predictive Analytics and Data Mining (3)

NOTE: MITM 5213 has prerequisites which include a course in Statistics and also MITM 5023 – Data and Knowledge Management.

Certificate of Graduate Studies in Health Care Informatics

Required Courses (15 hours)

HCI 5003  Decision Support Systems (3)
HCI 5013  Information Systems Management (3)
MITM 5023  Data and Knowledge Management (3)
HCI 5103  Introduction to Health Care Informatics (3)
ISEC 5113  Introduction to Information Security (3)

Course Descriptions

HCI 5103  Introduction to Health Care Informatics (3)
This course surveys the fundamental concepts and activities of information technology as applied to health care. Topics include computer-based medical records, electronic health record, knowledge-based systems, decision theory and decision support, e-Health, ARRA/HITECH and Meaningful Use and the personal health record. Students will learn informatics competencies, concepts, legal and ethical implications and applications within the health care industry. This course will introduce the student to the software development life cycle, human factors issues in health care informatics, critical issues affecting the development and implementation of information and communication systems and technologies; practice trends; and emerging information and communication technology in health care (CPOE, eMAR, barcode medication administration systems, e-Prescribing, etc.)

HCI 5013  Information Systems Management (3)
This course covers the role of information systems within the organization and how they can be used to make operations more efficient while saving time and energy. The use of critical thinking skills to explore methods of using information systems to increase productivity and as the competitive advantage will be a large component of this course.

MITM 5023  Data and Knowledge Management (3)
The focus of this course is data management: modeling, using, securing and sharing organizational data resources. Business intelligence: applications and technologies for gathering, storing, analyzing and providing access to help enterprise users make better business decisions. Knowledge management: effective deployment of technology, organizational practices and processes to increase an organization's return on its knowledge capital.

HCI 5003  Decision Support Systems (3)
The course explores the history, evolution and current applications of decision support. Emphasis is on the unique challenges of data representation and information retrieval techniques that are foundational to decision support systems.

ISEC 5113  Introduction to Information Security (3)
This course communicates the fundamental concepts of risk-based information security planning and introduces the importance of securing all aspects of the organization, including the physical plant, human resources, databases, networks and all communications that concern the transmission of data and information.

HCI 5203  Leadership and Organizational Behavior (3)
Students will examine the challenges associated with leading and managing organizational behavior within complex situations in a health care setting. Leadership and Organizational Behavior focuses on developing skills for identifying behavioral and organizational
problems, creating alternative solutions, making and communicating decisions and winning commitment for your position. It also focuses on understanding the general theme of how health care organizations behave, gaining an understanding of how individual values, preferences and behaviors integrate with organizational policies and dynamics.

HCI 5253  Contemporary Issues in Health Care (3)
This is an issues-oriented course that provides a broad background of information on current issues emerging and impacting the health care industry. Topics will include key trends and regulatory conditions confronting health care today from a policy, management, technology and regulatory perspective.

HCI 5033  Project Management (3)
Students will be taught how to design, develop and implement an information systems project so that it meets all aspects of stakeholder needs and will discuss how to initiate, analyze, develop, implement and maintain system projects. Concepts taught will apply to any type of organization.

MITM 5213  Predictive Analytics and Data Mining (3)
This course is an investigation of predictive modeling using valuable prospective intelligence hidden within large volumes of data. It will involve an in-depth study of data-mining techniques at a tactical level, and an understanding of how various methods and tools apply to different kinds of data intensive problems.

HCI 5153  Consumer Health Informatics (3)
This course covers from a patient/consumer perspective the use of electronic information to improve health outcomes and decision-making. It focuses on aspects of the consumer health information process as well as resources which are utilized in fulfilling the information needs. Areas of emphasis include health literacy, electronic and mobile products from the health care sector, delivery of online consumer health information, and issues in security of protected health information.

HCI 5213  Operations in Health Care Organizations (3)
This course involves designing, operating and improving the processes whereby any firm (such as a hospital) transforms raw materials (like sick patients) into finished goods (like cured patients). A key role is to manage the flow of work through these process steps, with the goal of closely matching supply with demand, while enhancing quality and minimizing cost.

HCI 5123  Ethical and Legal Issues in Health Care Informatics (3)
This course covers the ethical and legal issues in informatics, those currently in place and on the horizon in health care organizations; utilizes the evaluation of case studies, group and class discussions, and problem-based learning of the effective utilization of information technology applications; and features guest lecturers with relevant experience in health care informatics.

HCI 5133  Health Care IT Vendor Management (3)
Students focus on evaluating the environment and activities necessary to plan, select, contract, implement and maintain systems from vendors in the health care IT sector. The course evaluates all aspects of vendor/client relationships, noting the benefits and challenges inherent within.

HCI 5903  Capstone Project (3)
The capstone project will be decided by the student and includes a health care component. Students will submit a formal proposal for approval before the project begins. An example of such a project is students serving as consultants for an area business and developing solutions to current problems and issues. Students will gain invaluable, hands-on experience while working on actual business projects, interact with area business professionals and be advised by a faculty member. A formal written report and presentation will be delivered at the conclusion of the project.
Dual Degree: Doctor of Pharmacy and Master of Science in Health Care Informatics

Health care informatics is a growing and emerging discipline which evaluates the application of biomedical informatics methods and techniques utilized in the provision of health care services. Also included is the vital role HCI plays in enhancing the quality of care, reducing health care costs and addressing health issues.

Professionals who understand the relationship between people, health, information technology the health care system are in great demand.

For this reason, Lipscomb University is offering two innovative and exciting programs in HCI. We offer the dual degree program Doctor of Pharmacy and Master of Science in health care informatics. Also offered is the Doctor of Pharmacy and certificate in health care informatics.

Career options are unlimited for pharmacists with this expertise and include such areas as health system pharmacy, hospital corporations, academia, community, managed care, regulatory and government, vendor, legal, consulting, entrepreneurial, clinical research, and the pharmaceutical industry to name a few.

Interested students will earn both the Doctor of Pharmacy and the Master of Science in health care informatics degrees at the completion of required course work. The two programs will run concurrently.

Note: College of Pharmacy students participating in a dual degree program must adhere to the admissions and academic policies of each graduate program that are consistent with policies for dual degree programs. For additional information see the Dual Degree Programs sections in this catalog.

Courses from the College of Pharmacy Curriculum (155 hours):
See courses listed under the Doctor of Pharmacy curriculum.
Six hours of electives in the Doctor of Pharmacy curriculum are required courses, which apply toward the dual degree.

Courses from the Master of Science in health care informatics (27 hours):

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>HCI 5003</td>
<td>Decision Support Systems (3)</td>
</tr>
<tr>
<td>HCI 5013</td>
<td>Information Systems Management (3)</td>
</tr>
<tr>
<td>HCI 5123</td>
<td>Ethical and Legal Issues in Health Care Informatics (3)</td>
</tr>
<tr>
<td>HCI 5133</td>
<td>Health Care IT Vendor Management (3)</td>
</tr>
<tr>
<td>HCI 5253</td>
<td>Contemporary Issues in Health Care (3)</td>
</tr>
<tr>
<td>HCI 5903</td>
<td>Capstone Project (3)</td>
</tr>
<tr>
<td>ISEC 5113</td>
<td>Introduction to Information Security (3)</td>
</tr>
<tr>
<td>MITM 5023</td>
<td>Data and Knowledge Management (3)</td>
</tr>
<tr>
<td>MITM 5213</td>
<td>Predictive Analytics and Data Mining (3)</td>
</tr>
</tbody>
</table>

Note: MITM 5213 has prerequisites, which include a course in Statistics and also MITM 5023 – Data and Knowledge Management.

Degree-Certificate: Doctor of Pharmacy and Certificate in Health Care Informatics

Interested students will earn both the Doctor of Pharmacy and the certificate in health care informatics at the completion of required course work. The two programs will run concurrently.

Courses from the College of Pharmacy curriculum (155 hours):
See courses listed under the Doctor of Pharmacy curriculum.

Courses from the Master of Science in health care informatics (12 hours):

<table>
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</tbody>
</table>
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Please visit pharmacy.lipscomb.edu for the most up to date information regarding the College of Pharmacy. You may also contact the College of Pharmacy by email at pharmacy@lipscomb.edu or by phone at 615.966.7160 or 800.333.4358 ext. 7160.