

**GATTON COLLEGE OF PHARMACY**

**CATALOG**

**2010 - 2011**



**EAST TENNESSEE STATE UNIVERSITY**

## TABLE OF CONTENTS

ACADEMIC CALENDAR .....	4
GENERAL INFORMATION .....	5
Family Educational Rights and Privacy Act	6
Directory Information	7
Campus Security Report	7
Falsification of Credentials	7
Student Conduct, Rights and Responsibilities	8
Student's Bill of Rights	8
EAST TENNESSEE STATE UNIVERSITY.....	10
Accreditation	10
Memberships	10
ETSU Vision Statement	10
ETSU Mission Statement	10
ETSU Values	11
GATTON COLLEGE OF PHARMACY .....	12
History	12
Accreditation	12
Membership	13
Diversity	13
Vision	13
Mission	13
Values	13
Guiding Principles and Goals to Achieve the Mission	14
Reconsideration of Admissions Committee Decision	20
Requirements for Enterign Students	22
<i>Basic Life Support Certification</i>	24
Insurance Requirements Accreditation	24
Registration for Classes	24
EXPENSES AND FINANCIAL AID .....	25
Cost of Attendance	25
Financial Aid	25
Satisfactory Academic Progress	26
Grants, Scholarships and Awards	27
Veterans Education Benefits	27
Tuition and Payment	27
Tuition Refund Policy	28
DOCTOR OF PHARMACY DEGREE PROGRAM.....	30
Degree Offered and Requirements	30
Doctor of Pharmacy	30
Student Learning Outcome Expectations	31
Curriculum Outline	32
Elective Courses	34
Pharmacy Practice Experience	34
Course Descriptions	35
PROGRAM INFORMATION AND POLICIES.....	54
Office of Academic Affairs	54
Academic Performance	54
Grading System	54
Grade Appeal Process	55
Grade Reports	55

Academic Honors	56
Academic Progression Committee	56
Course Credit and Student Compensation Policy	56
<i>Immunization Certification</i>	57
<i>Occupational Safety and Hazard Certification</i>	57
<i>Sexual Harassment Training</i>	57
<b>STUDENT SERVICES AND RESOURCES</b> .....	<b>58</b>
Office of Student Affairs	58
Faculty Advisors	58
Tutors	58
Library Resources	58
ID Card and College of Pharmacy Name Badge	59
Student Engagement and Leadership	60
Alumni Association	60
Athletic Events	61
Banking	61
Bookstore	61
Buctainment	61
Campus Recreation	61
Center for Community Engagement, Learning and Leadership	62
Counseling Center	62
Computing Resources	62
Computer Resources Codes of Ethics	63
Computer Network and Internet Access Privileges & Responsibilities	63
Disability Services	66
Early Childhood Learning and Development	67
Housing and Residence Life	67
International Programs and Services	68
Public Safety	68
Student Government Association	68
Student Health Services	68
University Center, D.P. Culp	69
<b>ADMINISTRATIVE LISTING</b> .....	<b>70</b>
Tennessee Board of Regents	70
ETSU Administration	71
College of Pharmacy Administration	71
<b>FACULTY LISTING</b> .....	<b>72</b>
Department of Pharmacy Practice	72
Department of Pharmaceutical Sciences	73
Faculty Affiliates	74
Adjunct Faculty	75

**ACADEMIC CALENDAR**  
**Fall 2010 through Spring 2011**  
*(Subject to Change)*

**P1, P2 and P3 Classes**

**Fall 2010**

Orientation – Class of 2012	August 4 - 6, 2010
White Coat Ceremony	August 7, 2010
Classes begin	August 9, 2010
Labor Day Holiday	September 6, 2010
Fall Break	October 18 - 19, 2010
Thanksgiving Holiday	November 25 - 26, 2010
Last day of classes	December 3, 2010
Final Exams	December 6 - 10, 2010

**Spring 2011**

Classes begin	January 5, 2011
Martin Luther King Day Holiday	January 17, 2011
Spring Break	March 7 -11, 2011
Good Friday Holiday	April 22 2011
Last day of classes	April 28, 2011
Final exams	April 29 – May 5, 2011

**Summer 2011 (P2 Class Only)**

IPPE-P2 – Community (two consecutive weeks)	To be scheduled
IPPE-P2 – Institutional (two consecutive weeks)	To be scheduled

**P4 Class**

**Advanced Pharmacy Practice Experience Schedule**

Session One	May 10 - June 18, 2010
Session Two	June 21 - July 30, 2010
Session Three	August 2 - September 10, 2010
Session Four	September 13 - October 22, 2010
Session Five	October 25 - December 3, 2010
Session Six	January 3 - February 11, 2011
Session Seven	February 14 - March 25, 2011
Session Eight	March 28 - May 4, 2011
Hooding Ceremony	May 6, 2011
Commencement	May 7, 2011

## GENERAL INFORMATION

East Tennessee State University is a Tennessee Board of Regents institution. The Tennessee Board of Regents is the nation's sixth largest higher education system, governing 45 post-secondary educational institutions. The TBR system includes six universities, 13 two-year colleges, and 26 technology centers. Public higher education in Tennessee is coordinated by the Tennessee Higher Education Commission and consists of two systems – the University of Tennessee campuses, governed by the University Of Tennessee Board Of Trustees, and the state universities, community colleges, and technology centers governed by the Tennessee Board of Regents. The General Assembly created the Commission in 1967 to achieve coordination and unity among the programs of Tennessee's public post-secondary institutions and to serve as a primary source of information concerning higher education in Tennessee.

Degree requirements for the programs of study initiated under provisions of this bulletin shall remain in effect for six years. Students not completing requirements within the six-year period may be required to meet subsequent criteria; it is further provided, however, that the time limitation may be extended for interruption by military service where enrollment is resumed immediately upon release from service.

The course offerings and requirements of ETSU are continually under examination and revision. This bulletin presents the offerings and requirements in effect at the time of publication, but is no guarantee that they will not be changed or revoked. However, adequate and reasonable notice will be given to students affected by any changes. This bulletin is not intended to state contractual terms and does not constitute a contract between the student and ETSU.

East Tennessee State University reserves the right to make changes as required in course offerings, curricula, academic policies, and other rules and regulations affecting students to be effective whenever determined by the institution. These changes will govern current and formerly enrolled students. Enrollment of all students is subject to these conditions.

East Tennessee State University complies fully with the Family Educational Rights and Privacy Act of 1974, as amended. East Tennessee State University is fully in accord with the belief that educational and employment opportunities should be available to all eligible persons without regard to age, gender, color, race, religion, national origin, disability, veteran status, or sexual orientation.

East Tennessee State University provides the opportunity for students to increase their knowledge by offering programs of instruction in the various disciplines and programs through faculty who, in the opinion of ETSU, are qualified for teaching at the college level. The acquisition and retention of knowledge by any student are, however, contingent upon the student's desire and ability to learn while applying appropriate study techniques to any course or program. Thus, ETSU must necessarily limit representation of student preparedness in any field of study to that competency demonstrated at that specific point in time at which appropriate academic measurements were taken to certify course or program completion.

## **Family Educational Rights and Privacy Act**

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. They are:

*The right to inspect and review the student's education records within 45 days of the day the university receives a request for access.*

Students should submit to the registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The university official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the university official to whom the request was submitted does not maintain the records, that official shall advise the student of the correct official to whom the request should be addressed.

*The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.*

Students may ask the university to amend a record that they believe is inaccurate or misleading. They should write the university official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

If the university decides not to amend the record as requested by the student, the university will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

*The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.*

One exception, which permits disclosure without consent, is disclosure to school officials with legitimate educational interests. A school official is a person employed by the university in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the university has contracted (such as an attorney, auditor, or collection agent); or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her task. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

Upon request, the university discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

*4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by East Tennessee State University to comply with the requirements of FERPA.*

The name and address of the office that administers FERPA is:

Family Policy Compliance Office

U.S. Department of Education

400 Maryland Avenue, SW  
Washington, DC 20202-4605

### **Directory Information**

East Tennessee State University contracts the publication of a directory, which shows student names, addresses (e-mail, mailing, and campus box), major, and phone number. In addition, ETSU may release other directory information. Other directory information is defined as: enrollment status, dates of attendance, classification, previous institution(s) attended, awards, honors, photographs, degrees conferred (including dates), hometown and residency placement information, and sports participation information.

If students prefer not to have these items released, they must submit a written request to prevent disclosure of this data. A non-disclosure form is provided during orientation and is available through the College of Pharmacy Office of Student Affairs. The form must be submitted prior to the start of classes for the term in which the student desires the restriction to go into effect. A new form for nondisclosure must be completed each academic year. A form submitted the last term of enrollment will remain in effect until the student re-enrolls.

### **Student Photos (Permission for Photos of Students)**

The College and University provides information to news organizations about pharmacy students' accomplishments and activities during their enrollment and at the time of graduation, which may include the provision of photographs and other visual images of students. As a regular practice, photographs of students, faculty, staff, and visitors to campus are used in publications produced by the College and University for recruitment and general information. Any student who does not wish to appear in any photos used for these purposes must notify the College of Pharmacy Office of Student Affairs prior to the start of classes for the term in which the student desires the restriction to go into effect. Please note that the restriction does not apply to the use of photographs taken of general scenes, events, or classes in session where groups of students may appear.

### **Campus Security Report**

East Tennessee State University makes available to prospective students and employees the ETSU Security Information Report. This annual report includes campus crime statistics for the three most recent calendar years and various campus policies concerning law enforcement, the reporting of criminal activity, and crime prevention programs. The ETSU Security Information Report is available upon request from East Tennessee State University, Department of Public Safety, Box 70646, Johnson City, TN 37614-1702. The report can be accessed on the Internet at: [http://www.etsu.edu/dps/security\\_report.asp](http://www.etsu.edu/dps/security_report.asp).

### **Falsification of Credentials**

According to T.C.A. Sec. 49-7-133, it is a Class A misdemeanor to misrepresent academic credentials. A person commits the offense of misrepresentation of academic credentials who, knowing that the statement is false and with the intent to secure employment at or admission to an institution of higher education in Tennessee, represents, orally or in writing that such person:

- (1) Has successfully completed the required coursework for and has been awarded one (1) or more degrees or diplomas from an accredited institution of higher education;

- (2) Has successfully completed the required coursework for and has been awarded one (1) or more degrees for diplomas from a particular institution of higher education; or
- (3) Has successfully completed the required coursework for and has been awarded one (1) or more degrees or diplomas in a particular field or specialty from an accredited institution of higher education.

Eligibility for admission shall be determined without regard to age, sex, color, race, religion, national origin, disability, or sexual orientation.

### **Student Conduct, Rights, and Responsibilities**

University students are citizens of the state, local, and national governments and of the academic community, and are, therefore, expected to conduct themselves as law-abiding members of each community at all times. Admission to an institution of higher education carries with it special privileges and imposes special responsibilities apart from those rights and duties enjoyed by non-students. In recognition of the special relationship that exists between the institution and the academic community which it seeks to serve, the Tennessee Board of Regents has authorized the president of the university to take such action as may be necessary to maintain campus conditions and preserve the integrity of the institution and its educational environment.

Pursuant to this authorization, the Tennessee Board of Regents has developed regulations that are intended to govern student conduct on the campus. In addition, students are subject to all national, state, and local laws and ordinances. If a student's violation of such laws or ordinances also adversely affects the institution's pursuit of its educational objectives, the institution may enforce its own regulations regardless of any proceedings instituted by other authorities. Conversely, violation of any section of the Tennessee Board of Regents regulations or university rules may subject a student to disciplinary measures by the institution whether or not such conduct is simultaneously in violation of state, local, or national laws.

A complete statement on institutional student disciplinary rules and procedures can be found in the university student handbook that is published annually and distributed to students as part of the campus telephone directory.

### **Students' Bill of Rights**

Students, along with faculty, staff, and administrators, are all members of the East Tennessee State University community. Inherent with such membership is the responsibility to conduct oneself reasonably to maintain a civil community that respects the rights of all individuals. The student has certain rights guaranteed by the Federal and State Constitutions or statutorily created legislation including:

- Freedom of inquiry, freedom of speech, and freedom of expression that is respectful or sensitive to the rights of individuals.
- The right to peaceably assemble, in accordance with federal, state, local, and ETSU regulations.
- Religious freedom and a clear division of church and state.
- Freedom from unreasonable search and/or seizure of person, or personal property.

- Freedom from discrimination or harassment on the basis of gender, age, race, color, religion, national origin, or other protected status.
- The right to privacy, including the maintenance of confidential records in accordance with provisions of the Family Educational Rights and Privacy Act of 1974 and 1975, qualified by the Tennessee Open Records Law.
- The right to due process.

The Tennessee Board of Regents grants additional rights including:

- The right to due process in disciplinary procedures of the university, including written notification of charges, an explanation of procedures, and a hearing before an appropriate administrator or committee.
- The right to expeditious review of disciplinary sanctions upon appeal.
- The right to participate in the decision-making process of the university through the Student Government Association, other student governance organizations, and membership on university standing and advisory committees.
- The right to affiliate with officially registered student organizations if the membership requirements of those organizations have been met, and the right to seek to establish, through official procedures, additional student organizations of one's choosing.

East Tennessee State University acknowledges that students have a legitimate expectation that:

- Classes meet as scheduled, and begin and adjourn on time.
- Course requirements are clearly specified.
- The instructor is prepared for class and possesses both oral and written communications skills.
- Paper project grades and test results are received in a timely manner.
- Information about progress in coursework is provided.
- The instructor is qualified to teach the subject matter.

Additionally, students have the right to expect:

- Accurate information concerning institutional services, regulations, policies, and procedures, in published form.
- Representation in the university governance system.
- Sound and accurate academic advice, information regarding courses required for graduation, and their schedule sequence.
- Reasonable notice of any changes in academic requirements or programs and assurance that such changes will not be made in a way that unduly impedes the academic progress of the student already enrolled.
- Flexibility in course scheduling (by dropping and adding) or withdrawing within university guidelines.
- Information about the various types of financial assistance available.
- Freedom to evaluate courses, programs and services, and provide input to appropriate segments of the campus administration.

# **EAST TENNESSEE STATE UNIVERSITY**

## **Accreditation**

East Tennessee State University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia, telephone number 404-679-4501) to offer the baccalaureate, master's, specialist, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500, with any questions regarding the accreditation of East Tennessee State University.

## **Memberships**

- The American Council on Education
- The American Association of State Colleges and Universities
- The Tennessee College Association
- The Council for Advancement and Support of Education
- The Council of Graduate Schools in the United States
- The Council of Southern Graduate Schools
- The Council on Undergraduate Research
- The Tennessee Conference of Graduate Schools
- Association of Academic Health Centers
- Oak Ridge Associated Universities
- Institute of International Education
- National Collegiate Athletic Association
- Atlantic Sun Conference

## **ETSU Vision Statement**

To become the best regional university in the country

## **ETSU Mission and Purpose Statement**

East Tennessee State University prepares students to become productive, enlightened citizens who actively serve their communities and our world. Education is the university's foremost goal. ETSU provides outstanding programs of study, enhanced access to education, and distinctive educational and research opportunities to attract students from around the region and the world. ETSU affirms that a diverse population is necessary for the intellectual, social, economic, and professional development of our campus and regional communities.

Innovation and integration of educational programs, opportunities and scholarly activities enable ETSU to enrich the cultural and intellectual environment, advance economic development, and increase the level of educational attainment of our community and region. Innovation is advanced through entrepreneurial initiatives, interdisciplinary collaboration, and community and international partnerships. The research mission of ETSU advances scholarly and creative activity that enhances the teaching and learning environment and benefits the regional, national, and global communities we serve.

ETSU awards degrees in over one hundred baccalaureate, masters and doctoral programs, including distinctive interdisciplinary programs. The university provides strong,

comprehensive educational, research, and service programs in the health sciences that advance the health and wellness of people throughout Tennessee and Southern Appalachia and of rural populations around the world. ETSU affirms the value of a liberal education and life-long learning by providing broadly enriching experiences through opportunities such as honors education, student research and creative activities, international study, community service, internships, and professional development. ETSU also affirms the importance of a total college experience by offering a rich campus life of cultural and artistic programs, diverse student activities, a variety of residential opportunities, and outstanding recreational and intercollegiate athletic programs. (TBR Approved January 8, 2010).

### **ETSU Values**

East Tennessee State University pursues its mission through a student-centered community of learning reflecting high standards and promoting a balance of liberal arts and professional preparation, continuous improvement, and based on core values where:

- PEOPLE come first, are treated with dignity and respect, and are encouraged to achieve their potential;
- RELATIONSHIPS are built on honesty, integrity, and trust;
- DIVERSITY of people and thought is respected;
- EXCELLENCE is achieved through teamwork, leadership, creativity, and a strong work ethic;
- EFFICIENCY is achieved through wise use of human and financial resources; and
- COMMITMENT to intellectual achievement is embraced.

## **GATTON COLLEGE OF PHARMACY**

The Gatton College of Pharmacy is an integral component of the ETSU Division of Health Affairs which also includes J.H. Quillen College of Medicine, the College of Public Health, the College of Clinical and Rehabilitative Health Sciences and the College of Nursing. The College of Pharmacy is physically located on the grounds of the J.H. Quillen Veterans Affairs Medical Center (Mountain Home) in Johnson City. The College of Pharmacy's professional program, leading to a Doctor of Pharmacy Degree (PharmD), is designed to prepare pharmacists to work in rural community and institutional based practices.

### **History**

The university along with community leaders had been investigating the feasibility of initiating a college of pharmacy for over a decade. Given the state's only college of pharmacy was almost 500 miles away, most students from this region chose to attend out-of-state public and private institutions for their pharmacy education. As a result, few returned to this area to practice. That fact, plus the lack of state funds for a second state-funded college of pharmacy, fueled the demand for pharmacists in this Southern Appalachian region.

In January 2004, a tuition-funded, rural-focused model was developed as a possible solution to this dilemma. Realizing that considerable private support would be necessary for the model to work, a steering committee led by the Vice President for Health Affairs and comprised of ETSU faculty and staff, pharmacy community leaders, and community leaders at-large began to develop and implement such a plan.

After extensive effort, approval was obtained from the Tennessee Board of Regents and the Tennessee Higher Education Commission in the summer of 2005. Governor Phil Bredesen lent his support to this effort with the challenge to raise \$5 million in 90 days and an additional \$2.5 million before the first class of students entered the program. The \$5 million was raised in 58 days, and the College of Pharmacy passed the \$7.5 million mark on April 3, 2006, with Governor Bredesen personally making the announcement at ETSU. Recognizing the value of a College of Pharmacy at ETSU, over 900 individuals and organizations contributed financially to this effort. With the support and energy from the people of this region, the College of Pharmacy became a reality as the inaugural class of students began studies January 2007.

On May 22 2008, the College of Pharmacy was named the Bill Gatton College of Pharmacy at East Tennessee State University in honor of Bill Gatton, a local philanthropist, whose generosity made the establishment of the ETSU pharmacy school possible.

May 8, 2010 marked the achievement of a major milestone for the College as the first graduates (66 students) were hooded and received their diplomas. Full accreditation was received June 2010.

### **Accreditation**

East Tennessee State University Bill Gatton College of Pharmacy's Doctor of Pharmacy program is fully accredited by the Accreditation Council for Pharmacy Education (ACPE),

20 North Clark Street, Suite 2500, Chicago, IL 60602-5109, 312/664-3575, fax 312/664-4652, website [www.acpe-accredit.org](http://www.acpe-accredit.org). The ACPE accredits Doctor of Pharmacy programs offered by Colleges and Schools of Pharmacy in the United States and selected non-US sites.

### **Membership**

American Association of Colleges of Pharmacy

### **Diversity**

The Gatton College of Pharmacy and East Tennessee State University strive to develop an environment where the value of diversity among students, faculty and staff is accepted, encouraged and embraced. Diversity encompasses differences in race, creed, color, sex, religion, age, national origin, disabilities, veteran status or sexual orientation. The individual characteristics, talents and contributions of all people are valued and recognized for the unique contribution they make to the college.

### **Vision**

The vision of the Gatton College of Pharmacy is to achieve excellence in innovative pharmacy education, scholarly research, service to society and the profession, and thus improve the healthcare of the rural Appalachian community.

### **Mission**

The mission of Gatton College of Pharmacy is to provide a comprehensive and progressive education that promotes pharmacists to assume an active role in providing skilled, ethical, and compassionate patient care that improves the health and quality of life of residents in Northeast Tennessee and rural Appalachia. The College achieves its mission by maintaining a community of active and creative scholars devoted to the discovery, integration and dissemination of knowledge in the clinical and pharmaceutical sciences.

### **Values**

The Gatton College of Pharmacy embraces the educational philosophy and values of East Tennessee State University and is committed to the following core values:

#### Academic Excellence

We strive to achieve excellence in teaching, scholarship, and service to the university, local, and professional communities.

#### Professionalism, Integrity, and Character

We aim to create an environment that instills professionalism, integrity, empathy, a high standard of ethical behavior, and the highest professional commitment to the patient, the community, and the employer.

#### A Caring Community

We endeavor to create a caring community characterized by mutual respect, patience, kindness, and generosity; and one that respects, values, and promotes the dignity and diversity of faculty and students.

### A Culture of Service

We strive to create a culture that values and promotes service to our patients, school, community, and profession.

### Life-long Learning

We pursue a passion for life-long learning and a commitment to personal and professional growth as we serve our patients, community, and profession.

## **Guiding Principles and Goals to Achieve the Mission**

### Improving Care Through Excellence in Scholarship

- Provide students with the knowledge, skills, judgment, professional attitudes, and values to deliver contemporary patient care in a changing healthcare environment;
- Promote the development of teaching excellence, innovation, continuous quality improvement, and creativity in the context of interdisciplinary patient-centered care;
- Develop and enhance students' skills in problem solving, critical thinking, and individual and group communication;
- Facilitate and encourage the development of mature, independent, and life-long learners in a diverse student body with different learning styles.

### Improving Care Through Excellence in Scholarship

- Recognize, value, and promote scholarly inquiry and outcomes assessment, clear reasoning, and the application of evidence-based practices as a means of improving the health outcomes of patients, especially the care of a rural underserved population;
- Contribute to the advancement of the clinical and basic medical and pharmaceutical sciences through independent and collaborative research, presentation and publication;
- Embrace the scholarship of teaching to optimize educational effectiveness.

### Improving Care Through Excellence in Clinical and Professional Service

- Provide and teach pharmacist-delivered patient care, including medication therapy management services, to further advance an evolving profession that benefits society today and in the future;
- Foster a culture of service to the community and profession;
- Advance healthier lifestyles through health promotion, preventive healthcare, and education of the public;
- Promote active student involvement in the profession, community service projects, and volunteer activities;
- Collaborate with the professional community to serve as an agent of positive change, advancing the level of pharmaceutical care practiced within the community, thereby improving healthcare and enriching the lives of patients in the region.

### Improving Care Through Professional Development

- Support and mentor faculty in their pursuit of scholarly activity and service recognizing that these activities are essential for continued professional growth;
- Encourage a commitment to and passion for lifelong learning and develop and equip students for postgraduate training;

- Encourage students, faculty, and preceptors to grow as professionals and to optimize their skills and capabilities in providing excellent patient-centered care;
- Support continuing professional development of alumni thereby fostering a positive and continuing relationship with graduates.

#### Improving Care Through Interdisciplinary Collaboration

- Cultivate an educational environment of inter-professional teamwork and collaboration among students, faculty, staff and administration within the Division of Health Sciences;
- Partner with local practitioners, health-care facilities, organizations, and patients to maximize the professional and educational experiences of our students;
- Create an interdisciplinary and collaborative learning experience as a fundamental model that prepares students for collaborative practice and shared responsibility.

## ADMISSIONS

Admission to the Bill Gatton College of Pharmacy at East Tennessee State University is based on a competitive selection process involving applicants who meet the minimum requirements for admission. The Admissions Committee endeavors to select for admission those applicants who are the best qualified, with an emphasis on those who demonstrate a desire and propensity for rural pharmacy practice and an interest in rural health. The Gatton College of Pharmacy uses a rolling admission process which allows for interviews and final action on applications throughout the admission cycle. The College is committed to increasing the number of qualified pharmacists from currently underrepresented minority groups and from disadvantaged backgrounds. The school actively promotes and encourages applicants from these groups.

### **Pre-Pharmacy Studies**

Pre-professional preparation should be in an area chosen strictly according to the interest of the individual student. A specific major or minor course of undergraduate study for entering students is not advocated. A well-rounded undergraduate education is highly desirable, and students are encouraged to pursue the undergraduate program of their choosing. In addition to acquiring specific knowledge, the pre-pharmacy student should acquire certain basic skills and aptitudes such as the ability to read with speed, comprehension, and retention; the ability to understand concepts and draw logical conclusions; the ability to adapt quickly to new and different circumstances; and the ability to communicate effectively in all circumstances. Evidence of these abilities is sought throughout the admission process. These skills and abilities are essential in becoming a practicing pharmacist and a self-directed, lifelong learner.

### **Early Decision Program**

The College participates in the early decision admission program through the Pharmacy College Application Service (PharmCAS). This program allows applicants who are committed to attending the Gatton College of Pharmacy the opportunity to secure an admissions acceptance early during the admissions cycle. Applicants choosing this program cannot apply to any other pharmacy school prior to the receiving a decision and agree to attend the Gatton College of Pharmacy, if accepted.

The deadline to apply as an Early Decision applicant is September 3. Early Decision applicants are assured of receiving an admission decision no later than October 22. Please note that early decision applicants are not given preference over regular decision applicants by the Admissions Committee.

## Admission Requirements

The minimum admission requirements set forth the criteria that must be met before the applicant can be considered for admission.

### *Citizenship*

In order to be admitted, an applicant must be a U.S. citizen, possess a U.S. Permanent Resident Visa, or have been granted asylum status. Proof of eligibility is required for non-U.S. citizens.

### *Pre-Pharmacy Course Prerequisites*

Admission to the Doctor of Pharmacy degree program requires that applicants complete at least 60 semester hours of specified undergraduate courses at a college or university that is accredited by a regional accrediting agency recognized by the United States Department of Education. The prerequisites provide the minimum academic background essential to pharmacy education. Applicants who exceed the minimum stated requirements are more competitive.

<b>Courses</b>	<b>Semester Hours</b>
General Chemistry and Lab (applicable toward science degree)	8
Organic Chemistry and Lab (applicable toward science degree)	8
General Physics and Lab (applicable toward science degree)	4
General Biology and Lab (applicable toward science degree)	4
Microbiology (must include an accompanying lab)	3
Other Biology (combined A&P course will satisfy this requirement only if both semesters are taken)	3
Calculus	3
Statistics	3
Economics	3
Composition	3
Oral Communication	3
Additional Writing or Oral Communication	3
Social Science, Behavioral Science, or Humanities Electives	9
General Elective (science course recommended)	3

Applicants who are in the process of completing the required courses at the time of application should note these on their PharmCAS application as current courses. Courses for which the applicant earned a grade less than C- will NOT be utilized to satisfy prerequisites. All prerequisite coursework must be completed prior to enrollment.

### *Use of Advanced Placement or CLEP Credit*

Advanced placement credit, CLEP credit, or other nontraditional credit in required non-science courses awarded by a regionally accredited college or university may be utilized to satisfy academic prerequisites. Such credit may also be utilized to satisfy prerequisite science courses provided that applicants have taken additional course work in the same discipline. Prospective students should be aware that portions of the professional curriculum require solid skills in algebra and introductory integral calculus, and those skills, if not used, quickly diminish. As such, we strongly recommend that incoming students take appropriate steps to insure a high level of mathematical aptitude.

### *Pharmacy College Admission Test (PCAT)*

All applicants are required to report scores from the Pharmacy College Admission Test (PCAT) by the close of the current application period. Applicants must officially report scores via PharmCAS (code 104). The PCAT must be taken within 3 years of the application deadline.

Applicants are advised to prepare adequately and thoroughly for this examination and to structure a curriculum that adequately prepares them prior to this important examination. Information regarding the Pharmacy College Admission Test may be obtained from the applicant's pre-professional advisor or at [www.PCATweb.info](http://www.PCATweb.info).

### *Letters of Reference*

Two letters of reference are required and must be submitted through PharmCAS (refer to PharmCAS for instructions). One letter must be from a science or math faculty member who has taught the student or from a pre-professional committee at the applicant's academic institution. The second letter may be from a source of the applicant's choosing; however, letters from the following evaluators will not be counted toward the two letters of reference: friend, co-worker, teaching assistant, clergy, and politician. Under no circumstances will letters from family members be accepted. Applicants are encouraged to choose evaluators capable of attesting to the applicant's potential as a future health care professional.

### *Interview*

An in-person interview with members of the Admissions Committee is required. Only selected applicants will be invited to interview (all related expenses are the sole responsibility of the applicant). An invitation to interview does not guarantee admission or imply any specific action on the part of the Admissions Committee.

Interview dates are scheduled directly with the applicant by the Admissions Office. When the interview date is confirmed, information will be sent to the applicant regarding local overnight housing options. All travel and accommodation arrangements are the responsibility of the applicant.

## Application Process

### *PharmCAS Application*

Application is made using the Pharmacy College Application Service (PharmCAS) via their website, [www.PharmCAS.org](http://www.PharmCAS.org). Repeat applicants are required to resend all test scores, letters of reference, and official transcripts to PharmCAS.

### *Application Deadlines*

	<b>Regular Applicants</b>	<b>Early Decision Applicants</b>
Submission of PharmCAS Application Receipt (by PharmCas) of all required Letters of Reference	February 1, 2010	September 3, 2010
Receipt (by GCOP) of PCAT scores	February 1, 2010	September 3, 2010
	March 4, 2010	October 1, 2010

**Important:** Applications are not considered by the Admissions Committee until all application materials have been received (i.e., PharmCAS application, PCAT scores, and required letters of reference).

### *Supplemental Application*

Applicants selected for interview are required to complete a supplemental application. Information on accessing the application will be provided at the time such an applicant is invited to interview. No fee is associated with the Supplemental Application.

## Selection Criteria

The Admissions Committee evaluates applicants on the basis of demonstrated academic achievement PCAT scores, letters of reference, pertinent extracurricular activities, evidence of non-scholastic accomplishments, evidence of strong knowledge and understanding of the profession, and demonstrated motivation for the study and practice of pharmacy consistent with the mission of the Gatton College of Pharmacy. Criteria for admission are integrity, willingness and ability to assume responsibility, high scholastic achievement, maturity, intellectual curiosity, and sound motivation.

### *Academic Considerations*

In evaluating the applicant's coursework, the Admissions Committee will examine the time frame and difficulty of the pre-pharmacy course schedule, the correlation of the academic record with the PCAT scores, and extracurricular activities (particularly activities such as concurrent employment, collegiate athletics, and philanthropic/service activities) as an indication of the potential to succeed in the academically rigorous pharmacy curriculum.

Applicants are expected to possess a solid academic foundation, particularly in the sciences and mathematics. Applicants who have taken prerequisite coursework more than 10 years prior to the application deadline should demonstrate contemporary content knowledge. This can be accomplished by acceptable performance on the PCAT and/or work experience. Such applicants are encouraged to address this issue in the PharmCAS personal statement or the College's supplemental application.

All prerequisite coursework must be completed prior to enrollment; however, students who will have completed the prerequisites by the end of the spring semester prior to desired enrollment will be more competitive for admission. Similarly, applicants completing the typically more demanding science courses such as Organic I, Physics I, or Microbiology by the end of the fall semester are more competitive. Applicants are strongly encouraged from leaving a significant number of prerequisites for completion during the summer preceding anticipated enrollment in pharmacy school.

### *Experience*

Each application is examined for evidence of an applicant's firsthand exposure to health care as an indication of the applicant's motivation and that the applicant is familiar with the realities of pharmacy as a career. It is expected that applicants have a clear understanding of the pharmacy profession. Applicants without pharmacy work experience should consider volunteering, shadowing a pharmacist, or extensively researching the profession prior to applying for admission. The Admissions Committee seeks evidence that the applicant has made a serious and reasoned commitment to understand the profession of pharmacy.

### *Residency*

The Gatton College of Pharmacy gives preference to applicants who are residents of Tennessee and residents of our contiguous Appalachian service area who are interested in our emphasis on the practice of rural institutional or community pharmacy. Because the Gatton College of Pharmacy is a tuition-funded program, tuition is the same for all students regardless of residency.

### **Reconsideration of Admissions Committee Decision**

Admission decisions, once made, shall not be reviewed or reconsidered unless significant new information which was not available at the time of the original decision is discovered. The College reserves the sole right to determine the significance of any new information presented. Requests for reconsideration are rarely granted.

### **Technical Standards for Admission**

Pharmacy education requires that the accumulation of scientific knowledge be accompanied by the simultaneous acquisition of skills and professional attitudes and behavior. PharmD graduates must have the knowledge and skills to function in a broad variety of clinical situations and to render a wide spectrum of patient care. While acknowledging Section 504 of the 1973 Vocational Rehabilitation Act and the Americans with Disabilities Act of 1990, the Admissions Committee asserts the following minimum technical standards must be present in prospective candidates.

A candidate for the PharmD degree must have aptitude, abilities, and skills in five areas:

- Observation
- Communication
- Motor
- Conceptual, integrative and quantitative
- Behavioral and social

Technological compensation can be made for some disabilities in certain areas but a candidate should be able to perform in an independent manner.

Candidates for the PharmD degree must have somatic sensation and the functional use of the senses of vision and hearing. Candidates' diagnostic skills will also be lessened without the functional use of the senses of equilibrium, smell, and taste. Additionally, they must have sufficient exteroceptive sense (touch, pain, and temperature), sufficient proprioceptive sense (position, pressure, movement, stereognosis, vibratory), and sufficient motor function to permit them to carry out the activities described in the section above. They must be able to consistently, quickly, and accurately integrate all information received by whatever senses employed, and they must have the intellectual ability to learn, integrate, analyze, and synthesize data. The Admissions Committee considers any applicant demonstrating the ability to perform or learn to perform the skills listed. These skills and abilities are assessed during the interview and throughout the PharmD program. Students are judged not only on their scholastic accomplishments, but also on their physical and emotional capacities to meet the full requirements of the school's curriculum, and graduate as skilled and effective pharmacy practitioners.

### **Class Reservation Deposit**

Upon notification of acceptance to the Gatton College of Pharmacy, the applicant will be required to pay a non-refundable class reservation deposit of \$500 in order to secure a position in the class. The offer of acceptance will be rescinded should an applicant fail to pay the deposit as requested.

### **Deferred Matriculation**

Accepted applicants who have paid the class deposit may request deferred entrance into the Gatton College of Pharmacy until the following for previously unforeseen circumstances. In order to request deferred matriculation, the applicant must submit a written request explaining why a later matriculation is desired. The applicant, if approved for deferment, will be required to sign a contract agreeing to comply with specific conditions.

### **Transfer Applicants**

Students desiring to transfer into the professional program from another ACPE accredited college of pharmacy will be evaluated on an individual basis; however, transfer admission is contingent upon space availability. Transfer applicants must meet the same citizenship and academic requirements as individuals applying for initial admission into the professional program. Additionally, transfer applicants must be in good standing with or eligible to return to the pharmacy school previously attended and should have a competitive grade point average.

Transfer applicants apply directly to the Gatton College of Pharmacy by completing the transfer application (found on the web at [www.etsu.edu/pharmacy](http://www.etsu.edu/pharmacy)). Transfer applicants are required to submit a transcript from all post-secondary institutions attended, PCAT scores and letters of reference as specified on the application. Qualified applicants will also be required to submit copies of syllabi from all pharmacy school courses completed in order to determine course equivalencies and expected classification level within the Gatton College of

Pharmacy. If the transfer applicant is determined to be qualified for admission, a personal interview will be required. Interested applicants are encouraged to contact the Office of Student Affairs prior to applying.

## **Matriculation Requirements for Entering Students**

### *Criminal Background Checks*

The Gatton College of Pharmacy is committed to providing the public with well-trained pharmacists who possess the traits of high moral character and standards. Within Tennessee and nationally, due to state legislative and accreditation requirements, many healthcare entities require all people working in their settings to submit to a Background Check (BC). These institutions may require individuals training to become healthcare practitioners to undergo a BC before participating in any educational/patient care activities at their sites. Additionally, many states require a BC for all individuals seeking a license to practice healthcare within the state.

In light of the foregoing, the College has concluded that it is in the best interest of the College, our partner institutions, patients, and students for the College to determine at the outset if students seeking to complete the PharmD pose a potential risk, and whether such students meet eligibility requirements to participate in patient care activities at affiliated health care institutions by requiring all accepted applicants to undergo a BC as a condition of initial enrollment. This check shall be completed in a usual manner utilizing the services of recognized background screening company selected by the College. Enrollment is contingent upon satisfactory evaluation of the results of the BC. Results of the BC may also be released to affiliated institutions that require this information for student participation in patient care activities.

A letter from the College indicating a conditional acceptance will include notice of the BC requirement. Conditionally accepted applicants are required to cooperate completely with the College, or other authorized/approved investigative agency in granting permission/authorization for the BC to be completed in a timely manner. All costs associated with the BC are the responsibility of the student and shall be paid directly to the vendor.

If an issue that may preclude a student's enrollment or participation in academic activities is identified, the case will be considered by an administrative subcommittee of the College, which shall evaluate the information relative to the finding and make a recommendation regarding the individual's suitability for enrollment. The recommendation will be forwarded to the Dean of the College of Pharmacy for a final decision.

### *Health and Immunization*

As a prerequisite for enrollment, Gatton College of Pharmacy students are required to demonstrate receipt of appropriate immunizations and/or testing for protection against exposure to certain infectious diseases as detailed below. Acceptable documentation must be submitted to the Office of Student Affairs by the specified deadline prior to initial matriculation. Failure to comply may result in the student not being allowed to enroll or permitted to participate in practice experiences.

Measles, Mumps, Rubella (MMR): Proof of immunity to measles (rubeola), mumps and rubella is required of all students through the documentation of receipt of two MMR vaccines. The first dose must have been given on or after the first birthday. MMR vaccinations must be given at least 30 days apart. Alternately, the student may prove immunity through documentation of blood serum titer indicating immunity.

Hepatitis B: Proof of immunity against hepatitis B is required of all students. Students are required to complete the vaccination series which consists of three injections given at recommended intervals. Additionally, students are required to obtain a blood serum titer test that demonstrates the student has developed an adequate level of antibody protection to indicate immunity. The titer should be received 1-2 months after completing the series of three injections.

If the hepatitis B titer is negative following completion of the initial series of three injections, the student will be required to repeat the series and have a repeat titer drawn. If the titer remains negative, the student will be required to receive appropriate clinical consultation.

Tetanus-Diphtheria: A current tetanus-diphtheria booster is required for all students. Students must provide documentation of receipt of a booster vaccine within 10 years of their expected graduation date. Effective October 2005, the CDC recommends administration of the TDAP in place of Td to promote protection against pertussis.

Varicella (chickenpox): Students must demonstrate immunity to varicella through documentation of receipt of the varicella vaccination series or documentation of a blood serum titer indicating immunity.

Tuberculin (TB) Screening: Annual TB screenings are required while the student remains enrolled. The first screening should occur no earlier than June 1 of the year prior to initial enrollment in the College. If a student receives a positive test or has a history of testing positive, he or she will be required to provide documentation of a chest x-ray and the results thereof, including the recommendation and outcome regarding any therapy.

Acceptable Documentation: All documentation submitted in response to the above requirements must include the date of each immunization and/or titer as well as the results of the titer. Acceptable documentation may include a statement or progress notes from a healthcare provider; copy of immunization record; or copy of laboratory reports, as appropriate.

Acknowledgment of Information about Infectious Diseases: In accordance with legislation of the General Assembly, all students, upon initial enrollment in a postsecondary education institution, shall be informed of the risk factors and dangers of certain infectious diseases. Students are required to complete and sign a form that includes detailed information about hepatitis B (HBV) and meningococcal meningitis.

### *Transcripts*

Entering students are required to have an official transcript from each college or university attended submitted to the Admissions and Records Office directly from the institution. Transcripts marked issued to student will not be accepted. Transcripts for courses in which the student is enrolled during the summer prior to matriculation should be sent after the summer grade and/or degree is posted.

### *Basic Life Support Certification*

The Gatton College of Pharmacy requires that all student pharmacists be certified as having completed an approved basic life support (BLS) training program. Students are required to maintain certification throughout their entire pharmacy education program. All trainings are at the expense of the individual student. Documentation must be submitted to the Office of Student Affairs by the specified deadline prior to initial matriculation.

### **Insurance Requirements**

#### *Professional Liability Insurance*

All PharmD students are required to carry professional liability insurance. Low cost coverage specifically designed for pharmacy students is available through Pharmacists Mutual Insurance Company. The premium is charged to the student's account upon registration.

#### *Medical Insurance*

Medical insurance is required of all PharmD students. Students will automatically be enrolled in the Tennessee Board of Regents student insurance program unless proof of medical insurance is provided by the student to the Office of Student Affairs. The cost of this insurance will appear on the student's fee bill for the semester.

### **Registration for Classes**

Students enrolled in the Gatton College of Pharmacy are registered for a pre-determined set of courses each semester during the didactic years (P1-P3) of the curriculum by the Admissions and Records Office. Courses during the didactic portion of the curriculum are offered once a year, and latitude within the curriculum is not allowable (i.e., reduced class schedule, or withdrawing from a semester) except in cases of extenuating circumstances. Poor academic performance is not considered an extenuating circumstance. Students have the opportunity to request specific practice experiences during the Advanced Pharmacy Practice Experience year (P4) according to location and scheduling preferences.

## EXPENSES AND FINANCIAL AID

### Cost of Attendance

(First-year based on 9 months; budgets for all years can be found on the web at <http://www.etsu.edu/pharmacy/finaid/importantdatesinfo.asp>)

<b>Tuition and Fees<sup>1</sup></b>	<b>\$29,665</b>
Tuition <sup>2</sup>	27,538
Student Fees	929
Liability Insurance	16
Health Insurance*	1,282
<i>(*premium for students 40 and over is \$1378; premium can be waived with proof of medical insurance)</i>	
<b>Indirect Costs</b>	<b>\$7587</b>
Books and Supplies (P1 year; subsequent years less)	2,050
Transportation	3,519
Miscellaneous	2,018
<b>Room and Board</b>	<b>\$8,820</b>
Housing	4,680
Living Expenses	4,140
<b>Estimated Federal Loan Fees</b>	<b>\$820</b>
<b>Total Base Budget (P1 year)</b>	<b>\$46,892</b>

<sup>1</sup>Tuition and fees are set annually by Tennessee Board of Regents

<sup>2</sup>Tuition is the same regardless of residency

### Financial Aid

Pharmacy students are served by the College's Financial Aid Office. The office makes every effort to assist pharmacy students in securing the financial resources to attend the College. Financial aid is awarded on the basis of demonstrated need, which is the annual cost of attendance less the expected family contribution as calculated by the federal government from information provided on the Free Application for Federal Student Aid (FAFSA).

Financial aid available to student pharmacists consists of federally sponsored programs and limited scholarships. Students may only borrow up to the cost of attendance (tuition, fees, living expenses, transportation, and personal and miscellaneous expenses). Student budgets are based on the expected educational expenses of the student; as such, it is increased only under extenuating circumstances.

In order to apply for any of the federal aid programs, a student must submit a FAFSA and indicate the Gatton College of Pharmacy as the college he or she plans to attend (Federal School Code E01254). Students eligible for the Tennessee Educational Lottery Scholarships should submit the FAFSA no later than April 1 of each year in order to ensure consideration for receipt of the lottery scholarship. The FAFSA may be completed online at <http://www.fafsa.ed.gov/>.

When completing the FAFSA, first-year student pharmacists will answer questions about their student status differently depending upon how many semester credit hours they will

have earned prior to beginning the PharmD program (see table below). Student pharmacists who have earned less than 72 undergraduate semester credit hours will be considered undergraduates for the entire academic year for financial aid purposes. All other students will be considered professional students. Students who are considered professional students are no longer eligible for federal and state grants (e.g., Pell grant); however, students categorized as such are eligible for higher annual and aggregate loan amounts under the federal student loan program. Additionally, the professional classification allows students to be considered “independent” from their parents for most federal aid programs thus eliminating the requirement to report parental income on the FAFSA.

	<b>Less than 72 hours completed</b>	<b>72 hours or more completed</b>
What degree or certificate will you be working on during the 2010 -2011 year?	1 <sup>st</sup> Bachelor’s degree	Graduate or professional degree
What will be your grade level when you begin the 2010 – 2011 year?	3 <sup>rd</sup> year/Junior	1 <sup>st</sup> year graduate/professional
Will you have your first bachelor’s degree before July 1, 2011?	No	Answer accordingly

The federal government has the authority of selecting students for verification of information on the FAFSA. If selected, a student must submit a signed copy of the base year income tax form, W-2 form and the verification worksheet to the Office of Financial Aid.

Questions regarding financial aid for student pharmacists should be directed to College of Pharmacy Office of Financial Aid which may be reached by email ([copfa@etsu.edu](mailto:copfa@etsu.edu)), phone (423-439-6238) or in person (VA Building 7, Room 214).

### **Satisfactory Academic Progress**

Students are required to maintain satisfactory progress toward their degree in order to be eligible for federal financial aid programs. The Gatton College of Pharmacy’s Policy of Satisfactory Academic Progress requires students to meet both a qualitative and a quantitative standard. All students must complete the curriculum of each year and receive a grade of “C” or better in all required courses before advancing to the next professional year of study or graduating. Students must complete all didactic requirements within five academic years. This time limit may be extended for interruption by military service where enrollment is resumed immediately upon release from service.

The Academic Progression Committee (APC) makes the determination for Satisfactory Academic Progress. The committee is responsible for reviewing the progress of students at the end of each semester. Continued enrollment, remedial work and/or repeat of one or more courses, must be approved by the APC; which approval implies the student is making satisfactory academic progress. Therefore, the continued enrollment as a student serves as indication the student is maintaining satisfactory academic progress. Financial Aid is notified of significant actions of the APC for monitoring purposes to ensure compliance with Title IV regulations.

## **Grants, Scholarships, and Awards**

The Gatton College of Pharmacy continues to explore the creation of grants, scholarships and awards. The most current information is maintained by the Office of Financial Aid and is available on the web at [www.etsu.edu/pharmacy/finaid/default.asp](http://www.etsu.edu/pharmacy/finaid/default.asp).

## **Veterans Education Benefits**

The College of Pharmacy is approved for the training of veterans and other eligible persons under education benefit programs of the U.S. Department of Veterans Affairs (USDVA). The University Veterans' Affairs Office, which coordinates the delivery of military-related educational benefits of the USDVA to eligible service members, veterans, and certain disabled veterans dependents, can provide information and application assistance to student pharmacists who might be eligible for receipt of such assistance. Veterans Affairs is located in 101A Burgin E. Dossett Hall (administration building) on the main campus and can be contacted at 423.439.6819 or [va@etsu.edu](mailto:va@etsu.edu).

Primary entitlement programs administered by the Veterans Affairs office are:

- Montgomery GI Bill – Active Duty (MGIB-AD) Educational Assistance Program [Authority: Chapter 30, Title 38 *United States Code (USC)*];
- Vocational Rehabilitation & Employment (VR&E) Program [Authority: Chapter 31, Title 38 *USC*];
- Reserve Educational Assistance Program (REAP) [Authority: Chapter 1607, Title 10 *USC*];
- Montgomery GI Bill – Selected Reserve (MGIB-SR) Educational Assistance Program [Authority: Chapter 1606, Title 10 *USC*];
- Survivors' & Dependents' Educational Assistance (DEA) Program [Authority: Chapter 35, Title 38 *USC*];
- Veterans' Work-Study Allowance Program [Authority: Chapters 30, 31, 35 of Title 38 & Chapters 1606 & 1607 of Title 10 *USC*];
- Veterans' Tuition & Fee Deferment Program [Authority: § 49-7-104 *Tennessee Code Annotated (TCA)*]

Information on the above federal programs, except VR&E and state programs, may be found at [www.gibill.va.gov](http://www.gibill.va.gov). VR&E information can be found at [www.vba.va.gov/bln/vre/](http://www.vba.va.gov/bln/vre/).

## **Tuition and Payment**

Students are required to make arrangements for payment of all university fees when registering at the beginning of each semester. A student's registration is not completed until the university receives payment for the current amount due the university. Students who have loans, grants, scholarships, state or federal vocational rehabilitation, or any other type of financial aid covering all fees will have these funds applied to their student fees; all others should make payment through the Bursar's Office by cash, check or credit card. If payment is made with a check that is not honored (acknowledged bank errors notwithstanding), a late fee will be charged when the student redeems the unpaid check. If the unpaid check is not redeemed within 10 days of return, the student may be unenrolled.

Students in the Doctor of Pharmacy program at the Gatton College of Pharmacy attend on a full-time degree-seeking status and as such pay the prevailing tuition and fees as established

by the College for the current academic year. In rare situations in which a student may be enrolled as a part-time student (less than 12 credit hours) due to failure to meet normal academic progression standards or some unforeseen circumstance, tuition will be charged at pro-rated amount.

The Bursar's Office does not send bills to students for their tuition and fees. The university has taken this step in order to increase operating efficiencies by making full use of available technology. The best way for students to know their current financial obligation for the term is by viewing their account through GoldLink. Students who need a printed copy of their account statement may print a statement from GoldLink.

Students may not re-enroll, graduate, or receive a transcript of their records until all indebtedness to the university is settled.

### **Tuition Refund Policy**

Refunds for maintenance fees, tuition, and debt service fees are determined as follows.

#### *Change of a student's status which may permit a refund*

- Change in schedule which results in reclassification from full-time to part-time status;
- Change in a part-time student's schedule which results in a class load of fewer hours.

#### *Situations which may permit a refund*

- Dropping a course or courses;
- Withdrawing from the institution;
- Cancellation of a class by the institution;
- Death of the student.

#### *Refund Procedures*

The refund amount for students not receiving Title IV aid and for those students who are not first-time students receiving Title IV aid is based upon the stated policy listed below.

- Refunds are defined as the portion of maintenance and/or tuition and university housing charges due as a rebate when a student withdraws or is expelled from the university. The amount of the refund is determined according to the schedule below.
- For first-, second-, and third-year students, 75 percent of maintenance and other required fees will be refunded for drops or withdrawals within 14 calendar days beginning with and including the first official day of classes or within a proportioned period for short-term courses. Twenty-five percent of maintenance and other required fees will be refunded following the 14th calendar day through the expiration of one-fourth (25 percent) of the time covered by the term. No refund will be made thereafter. These refund procedures are also applicable to dormitory rent. For fourth-year students, refunds will be based on the portion of pharmacy practice experiences completed during each semester.
- One hundred percent of fees will be refunded for classes canceled by the institution. One hundred percent of fees will be refunded for drops or withdrawals prior to the first official day of classes for the regular academic terms and prior to the beginning of summer term. One hundred percent of fees will be refunded in case of student's death.

### *Return of Title IV Federal Student Aid*

This requirement applies to the student **ONLY** if the student receives federal student aid, **AND** the student withdraws prior to completing 60 percent of the period for which the aid was provided.

- The federal law requires federal aid recipients to “earn” the aid they receive by staying enrolled in college. Students who withdraw prior to completing 60 percent of the semester for which they received federal student aid may be required to return some or all of the aid they were awarded.
- The law assumes that the student used the Title IV student aid to pay his/her institutional charges—tuition, fees, dorm room, and board; thus, if the student withdraws prior to completing 60 percent of the semester for which aid was awarded, a pro-rata amount of that aid must be returned to the federal government.
- The university will restore to the appropriate federal fund source a proportional share of the institutional charges that the student paid. In general, the effect of the “return of Title IV aid” by the institution will be to reduce the student’s outstanding loan balance. If the amount returned by the university is not enough to repay the entire “unearned” amount of student aid according to the length of enrollment, the student will be required to return portions of the federal student aid received to pay non-institutional charges.
- Amounts that must be returned to federal aid sources (whether by the university or by the student) will first be applied to federal loans. With respect to any amount the student owes after the university has returned its share, the student will be permitted to repay loans based on the original terms of the loan agreement. In the case of “unearned” portions of federal grants or scholarships, the student will be expected to pay 50 percent of the “unearned” portion immediately.
- Any refund due to the student from the University for payment to cover institutional charges will first be applied to obligations to return “unearned” aid. Thus, portions of institutional refunds may be applied on the student’s behalf to outstanding Stafford or Perkins loans or to the federal portions of grants or scholarships and not actually refunded to the student. (This policy is based on 34 CFR, Section 668.22 of Title IV of the Higher Education Act of 1965, as amended.)

# DOCTOR OF PHARMACY DEGREE PROGRAM

## Degree Offered and Requirements

The Gatton College of Pharmacy offers the Doctor of Pharmacy degree (PharmD). The PharmD degree is conferred by the Tennessee Board of Regents upon certification by the faculty that the student has successfully completed all requirements. All courses and practice experiences of the approved curriculum, required and elective, must be completed with a minimum passing grade of C. The student must complete the didactic portion of the curriculum (first three years) within five years of initial enrollment, unless the time has been extended for military service.

In addition to completing the prescribed curriculum and meeting the scholarship requirements of the program, students must have satisfied all financial obligations to the College or University in order to qualify for graduation and receipt of the degree.

## Doctor of Pharmacy

The PharmD curriculum<sup>1</sup> is intended to prepare pharmacists who will be able to:

- *provide patient-centered care*, through the ability to:
  - design, implement, monitor, evaluate, and adjust pharmacy care plans that are patient-specific; address health literacy, cultural diversity, and behavioral psychosocial issues; and are evidence-based
  - manage a successful patient-centered practice (including establishing, marketing, and being compensated for medication therapy management and patient care services rendered)
- *provide population-based care*, through the ability to develop and implement population-specific, evidence-based disease management programs and protocols based upon analysis of epidemiologic and pharmaco-economic data, medication-use criteria, medication use review, and risk-reduction strategies
- *manage human, physical, medical, informational, and technological resources*, through the ability to ensure efficient, cost-effective use of these resources in the provision of patient care
- *manage medication use systems*, through the ability to apply patient- and population-specific data, quality improvement strategies, medication safety and error reduction programs, and research processes to minimize drug misadventures and optimize patient outcomes; to participate in the development of drug use and health policy; and to help design pharmacy benefits
- *promote the availability of effective health and disease prevention services and health policy* through the ability to apply population-specific data, quality improvement strategies, informatics, and research processes to identify and solve public health problems and to help develop health policy

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<sup>1</sup> As defined by the Accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree. Adopted January 15, 2006. Accreditation Council for Pharmacy Education.

To be capable of the above, pharmacy graduates also must be able to:

- communicate and collaborate with patients, care givers, physicians, nurses, other healthcare providers, policy makers, members of the community, and administrative and support personnel to engender a team approach to patient care
- retrieve, analyze, and interpret the professional, lay, and scientific literature to provide drug information and counseling to patients, their families or care givers, and other involved healthcare providers
- demonstrate expertise in informatics
- carry out duties in accordance with legal, ethical, social, economic, and professional guidelines
- maintain professional competence by identifying and analyzing emerging issues, products, and services

**Student Learning Outcome Expectations** (approved by the Faculty Council on January 22, 2008)

Upon graduating from the Doctor of Pharmacy program students will competently be able to:

Patient-centered care

1. Identify and assess the medical problems of patients.
2. Design a plan to address each of the medical problems of patients.
3. Work with healthcare providers and patients to implement a plan to address the medical problems of patients.
4. Monitor and evaluate patients and their medical problems and, when necessary, adjust the plan to address each problem.
5. Consider patients' health literacy, cultural diversity, economics, healthcare access and behavioral psychosocial issues when communicating with patients or when designing, evaluating or modifying therapeutic plans.
6. Counsel and provide information to patients, their caregivers and other healthcare providers on medications and other medical issues.
7. Document patient care activities.
8. Compound drugs in appropriate dosage forms.
9. Coordinate the accurate, safe and efficient distribution and dispensing of medications.
10. Administer vaccines and/or other medications to patients as appropriate.

Population-based care

11. Participate in the development of medication policies, health policies and pharmacy benefit programs.
12. Promote effective health and disease prevention services.
13. Identify and contribute to the interdisciplinary resolution of public health problems.
14. Develop, conduct and analyze medication use reviews.
15. Interpret epidemiologic, pharmaco-economic and medication use reviews data.
16. Develop and implement population-specific disease management programs and protocols.

### Resource Management

17. Develop, market and manage a patient-centered pharmacy practice.
18. Seek compensation for medication therapy management and patient care services rendered.
19. Manage human, physical, medical, financial, informational and technological resources to provide patient care.
20. Use quality improvement strategies, medication safety programs and research processes to minimize drug misadventures and optimize patient outcomes.

### Professional Behavior and Essential Skills

21. Apply basic knowledge and principles of pharmaceutical sciences, clinical sciences and socio-behavioral sciences to engage in critical thinking and solve problems.
22. Use technology to enhance the practice of pharmacy.
23. Identify, retrieve, analyze and interpret the professional and scientific literature.
24. Make healthcare decisions that are based on the evidence in the professional and scientific literature.
25. Communicate and collaborate with patients, caregivers, healthcare providers and members of the community to improve healthcare.
26. Understand the needs of the Appalachian patient and the unique challenges of rural healthcare.
27. Carry out duties in accordance with legal, ethical, social, economic, and professional guidelines.
28. Maintain professional competence through lifelong learning and by identifying and analyzing emerging issues, products, and services.
29. Be a lifelong educator of patients, students, colleagues and other healthcare professionals.

### **Curriculum Outline<sup>2</sup>**

#### Year 1 - Fall Semester

PMSC	3102	Immunology	2
PMSC	3111	Medical Terminology	1
PMSC	3114	Biochemistry, Molecular Biology and Genetics	4
PMSC	3116/3110	Anatomy and Physiology and Lab	6
PMSC	3122	Pharmacy Calculations	2
PMPR	3142	Pharmacy Practice I – Introduction to Patient Care I	2
PMPR	3141	IPPE-P1 – Community or Institutional Practice	1
		Semester Total Hours	18

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<sup>2</sup> Prospective applicants are encouraged to view the current curriculum on the internet at [www.etsu.edu/pharmacy](http://www.etsu.edu/pharmacy) as changes may have occurred.

Year 1 – Spring Semester

PMSC	3204	Pathophysiology	4
PMSC	3223	Pharmacology I	3
PMSC	3231	Compounding and Dispensing Lab	1
PMSC	3235	Pharmaceutics and Biopharmaceutics	5
PMPR	3243	Non-Prescription Pharmacotherapy and Self-Care	3
PMPR	3242	Pharmacy Practice II – Introduction to Patient Care II	2
PMPR	3241	IPPE–P1 – Community or Institutional Practice	1
		Semester Total Hours	19

Year 2 – Fall Semester

PMSC	4123	Pharmacology II	3
PMSC	4124	Principles of Medicinal Chemistry	4
PMSC	4134	Pharmacokinetics and Pharmacogenomics	4
PMPR	4143	Pharmacy Practice III – Evidence-Based Practice I	3
PMPR	4163	Introduction to Pharmacotherapy	3
PMPR	4182	Communication Skills for Health Professionals	2
		Semester Total Hours	19

Year 2 – Spring Semester

PMPR	4200	Pharmacotherapy I	5
PMPR	4201	Pharmacotherapy I Lab	1
PMSC	4223	Pharmacology III	3
PMPR	4243	Pharmacy Practice IV – Evidence-Based Practice II	3
PMPR	4283	Pharmacy Law and Ethics	3
		Elective course	2 - 3
		Semester Total Hours <sup>a</sup>	17-18

Summer Between Second and Third Year

PMPR	4322	IPPE–P2 – Community Practice (80 hrs - 2 weeks)	2
PMPR	4332	IPPE–P2 – Institutional Practice (80 hrs - 2 weeks)	2

Year 3 – Fall Semester

PMPR	5100	Pharmacotherapy II	5
PMPR	5101	Pharmacotherapy II Lab	1
PMPR	5142	Natural Medicines	2
PMPR	5143	Pharmacy Practice V – Institutional	3
PMPR	5152	Patient Assessment	2
PMPR	5182	Principles of Healthcare Delivery	2
PMPR	5361 <sup>b</sup>	Clinical Seminar I	1
PMPR	4341 <sup>b</sup>	IPPE–P3 – Clinical	1
		Elective course	2 - 3
		Semester Total Hours <sup>a</sup>	19-20

### Year 3 – Spring Semester

PMPR	5200	Pharmacotherapy III	5
PMPR	5201	Pharmacotherapy III Lab	1
PMPR	5233	Clinical Pharmacokinetics	3
PMPR	5243	Pharmacy Practice VI – Community	3
PMPR	5253	Advanced Clinical Practice Skills	3
PMPR	5361	Clinical Seminar I	1
PMPR	4341	IPPE–P3 – Clinical	1
		Elective course	2 - 3
		Semester Total Hours <sup>a</sup>	19-20

### Year 4 – Clinical Calendar Year<sup>c</sup>

APPE	6001	Institutional Practice	6
APPE	6002	Community Practice	6
APPE	6003	Acute Care Practice	6
APPE	6004	Ambulatory Care/Primary Care Practice	6
PMPR	5461	Clinical Seminar II	1
APPE	xxxx	Elective Advanced Practice Experience	6
APPE	xxxx	Elective Advanced Practice Experience	6
		Year 4 Total Hours	37

Total Program Hours 150 – 153

<sup>a</sup>Total semester hours vary depending on credits of elective chosen

<sup>b</sup>Course continues into the next semester; 1 hr credit is awarded following spring semester

<sup>c</sup>Students are required to complete six 6-week advanced pharmacy practice experiences during the 12-month period beginning the 2<sup>nd</sup> week of May and ending the 1<sup>st</sup> week of May of the following year.

### **Elective Courses**

Students are required to complete three elective courses (totaling at least six credit hours) with the minimum passing grade prior to the start of Year 4. Only courses which appear on the Approved Electives list may be used to fulfill this requirement. Research or internship experiences may be utilized to meet elective requirements if approved by the Curriculum Committee. Students should refer to the Gatton College of Pharmacy Student Handbook for complete information about scheduling electives.

### **Professional Experience Program**

Students are required to participate in the Professional Experience Program (PEP) during all four years of the curriculum. Many of these experiences are offered in practice sites away from Johnson City. The student should be prepared to incur additional expenses while on PPEs. Assignments will normally be made as early as possible, giving the student time to secure housing and make plans for off-campus experiences. In addition, enrollment in experiential education courses requires appropriate immunization status and verification of such status.

Professional practice experiences are developed by the responsible faculty member and are approved by the College's Curriculum Committee. Students may recommend clinical sites

for experiential rotations but cannot make arrangements with individual practitioners or agencies. All clinical experiences must be undertaken at sites with formal contracts between the affiliate and the College of Pharmacy, and with preceptors who hold formal appointments in the College or have some formal relationship with the College. Contracts or appointments, and preceptors and sites, need to be consistent with the philosophy and objectives of the educational program. This involves an assessment of the affiliate and/or potential faculty member to ensure a quality learning experience for the student.

Given that the necessary contracts and appointments are legal documents, they often require several months to finalize before a student may be assigned to a site. If a student wishes to recommend a particular clinical site or practitioner for a rotation, please contact the Director of Experiential Education. Please remember there are site and practitioner requirements that limit where and when students may be assigned, and not all sites may qualify. Students cannot be placed at an experiential site until all paperwork is completed and formal approval is given by the Director of Experiential Education.

Students will not be placed in sites where there is a conflict of interest in evaluating student performance. Such conflicts include, but are not limited to, assignment to a relative or close family friend, assignment to a site where the student has previously or is currently employed, and assignment to a preceptor who has a business or financial relationship with the student or a family member of the student.

### **Course Descriptions**

NOTE: Course descriptions and prerequisite/co-requisite information provided is subject to change. Additionally, the frequency, number and type of elective course offerings are dynamic in nature. Please consult the web site ([www.etsu.edu/pharmacy](http://www.etsu.edu/pharmacy)) for the most current information.

### **Department of Pharmaceutical Sciences (David S. Roane, Ph.D., Professor and Chair)**

#### **PMSC 3102 Immunology**

A basic immunology course designed to introduce pharmacy students to major concepts in the innate and the acquired immune system.

#### **PMSC 3111 Medical Terminology**

Medical terminology is the basis of written and verbal communication between all healthcare professionals. The course will examine the root, prefixes, and suffixes of medical terms, and present the language basis of the major medical terms for the organ systems of the body. This course will provide a foundation for subsequent vocabulary building throughout the educational and post-educational career in the health professions.

#### **PMSC 3114 Biochemistry, Molecular Biology and Genetics**

Biochemical understanding of proteins, sugars, lipids, vitamins and nucleic acids is fueling the explosion of knowledge in physiology and medicine. This course will demonstrate how basic principles of biochemical structure govern metabolic pathways in normal human health, malfunction of these pathways in disease, and the chemical basis for drugs that are prescribed to correct these malfunctions.

### PMSC 3116/3110 Anatomy and Physiology with Lab

This course should provide students with an understanding of the basic principles and concepts of anatomy and cellular and organ system physiology, leading to an appreciation of the sites and mechanisms of action of drugs in producing both therapeutic and adverse effects. This course should also provide an excellent foundation for understanding of the physiological basis of pharmaceutical and patient-centered care. Laboratory activities will include the use of microscopes with prepared slides, physiology demonstration/exploratory labs, physiology tutorials, anatomical models, and a few dissections.

### PMSC 3122 Pharmacy Calculations

Course content includes an introduction to the history of pharmacy, prescription terminology, systems of measurement and pharmacy calculations. Students will apply appropriate mathematical concepts found within the practice of pharmacy, including prescription compounding and patient specific determinations. Emphasis will be placed on improving and applying problem-solving skills for the needs of an individual patient within the practice of pharmacy.

### PMSC 3204 Pathophysiology

Provides students with an understanding of the basic principles and concepts of cellular, organ system, and generalized pathophysiology, leading to an appreciation of disease and pharmacotherapy, and the course should provide an excellent foundation for understanding of the basis of patient-centered care. *Prerequisite: PMSC 3116 and 3110*

### PMSC 3223 Pharmacology I

Pharmacology I is the first of a three part lecture series designed to provide an understanding of how drugs exert their effects on living systems. Drug mechanisms of action, metabolic fates, indications and adverse effects will be presented, with an emphasis upon the pharmacology of autacoids, antimicrobial, anti-inflammatory and antineoplastic agents. *Prerequisites: PMSC 3116 and 3110, PMSC 3114, and PMSC 3102*

### PMSC 3231 Compounding and Dispensing Lab

This course involves processing a prescription or medication order, the preparation and dispensing of pharmaceutical solution, emulsion, suspension, semi-solid and solid dosage forms and development and practice of the patient counseling skills necessary for proper use of the compounded product. During the laboratory session, emphasis will be placed on the selection of proper excipients, based on physico-chemical principles, for use in the extemporaneous compounding preparation. *Co-requisite: PMSC 3235; Prerequisite: PMSC 3122*

### PMSC 3235 Pharmaceutics and Biopharmaceutics

The principles of this course include the preparation, physicochemical evaluation, stability, liberation, absorption, distribution and action of drugs from pharmaceutical drug delivery systems. The course includes the study of the pharmaceutical principles for solid, liquid and disperse systems and the mechanisms of drug release with emphasis on solid and semi-solid systems, the formulation and development of a variety of immediate release, modified release and novel drug delivery systems, the study of physicochemical principles and

pharmaceutical drug delivery systems and their composition both outside and inside a living organism, principally humans, and the implications and relationship with patient-centered care. In addition, this course will provide an in-depth knowledge of the preparation, drug liberation and absorption of drugs from various drug delivery systems. Students also learn about the design and evaluation of dosing regimens and drug delivery systems that overcome barriers and optimize drug action, and minimize adverse effects. Drug absorption processes, bioavailability and bioequivalence determination and interpretation will be included as an introduction to pharmacokinetic principles. *Prerequisite: PMSC 3122; Co-requisite: PMSC 3231*

#### PMSC 4123 Pharmacology II

Pharmacology II is the second of a three-course lecture series designed to provide an understanding of how drugs exert their effects on living systems. Drug mechanisms of action, metabolic fates, clinical use(s) and adverse effect(s) will be presented. The emphasis of this course will be on the pharmacology of the following systems: autonomic nervous, the cardiovascular, renal, pulmonary, gastrointestinal, and drugs affecting the vascular compartment. *Prerequisites: Successful completion of all PMSC courses offered during P1 year*

#### PMSC 4124 Principles of Medicinal Chemistry

This course will provide students with an understanding of the basic principles and concepts of medicinal chemistry, including an overview of the relationship of drug structure to pharmacological activity and an understanding of the processes involved in the design and development of modern pharmaceuticals.

#### PMSC 4134 Pharmacokinetics and Pharmacogenomics

This course provides students with an understanding of the concepts of absorption, distribution, metabolism, and elimination of drugs. Students learn how to apply mathematical principles to the study of pharmacokinetics. Also, students understand the physiological factors may change pharmacokinetic parameter. In addition, the pharmacokinetic and pharmacodynamic factors involved in drug response variability are discussed. *Prerequisites: PMSC 3235 and PMSC 3231*

#### PMSC 4223 Pharmacology III

As the final course of the three-part lecture series, this course is designed to provide an understanding of the biological basis of drug actions. Topics include drug mechanisms of action, metabolic fates, indications, and adverse effects, with a focus on the pharmacology of drugs that act on the central nervous system and endocrine system. *Prerequisite: PMSC 4123*

**Department of Pharmacy Practice**  
**(Ralph A. Lugo, PharmD, Professor and Chair)**

**PMPR 3142 Pharmacy Practice I – Introduction to Patient Care I**

The first of a two-course sequence, this course is designed to introduce the first-professional year pharmacy student to the role of the pharmacist in the community pharmacy and healthcare system. Students will survey the history of the profession, be introduced to the laws and regulations that govern the practice of pharmacy, and will receive an introduction to community practice, issues of professionalism and ethics, interpersonal communication and patient counseling, and the top 200 drugs in community practice.

**PMPR 3242 Pharmacy Practice II – Introduction to Patient Care II**

The second of a two-course sequence, this course is designed to introduce the first-professional year pharmacy student to the evolving practice of pharmacy. An introduction to institutional practice will be presented, including order processing, medication administration records, sterile product preparation, and the salient elements of the medical record. Students will learn general elements of patient assessment, including taking medication histories and vital signs. The social aspects of health and illness in the rural Appalachian region will be explored. Students will begin learning medical terminology using an organ system approach.

**PMPR 3243 Nonprescription Pharmacotherapy and Self-Care**

This course will serve as an introduction to nonprescription medications and remedies in the treatment of common community illnesses for which pharmacists are consulted. Students will be given an introduction to the pathophysiology of the illness; the pharmacology of the nonprescription agents used to treat the illness, and will be expected to counsel patients on nonprescription drug use in the community pharmacy setting.

**PMPR 4143 Pharmacy Practice III – Evidence-Based Practice I**

The course introduces students to the evidence base for pharmacy practice including research design, data analysis, and biostatistics in the interpretation and critical analysis of biomedical literature with the purpose of developing evidence-based care recommendations for patients or patient populations.

**PMPR 4163 Introduction to Pharmacotherapy**

This course will provide a broad overview of the medication therapy, or pharmacotherapy, of diseases and other medical problems. A particular emphasis will be placed upon interpreting patient's laboratory values and making clinical decisions based on those interpretations. The knowledge and skills learned in this course will be utilized heavily in the upcoming Pharmacotherapy series. *Prerequisite: Must have progressed to P2 year.*

**PMPR 4182 Communication Skills for Health Professionals**

Communication is the foundation upon which professionalism develops. The skills that are necessary are well defined and are not the same as social communication skills. These skills can be learned, and if learned, will lead to satisfaction and positive outcomes. When not learned, the opposite frequently occurs. The course is designed to help students develop initial communication competencies. *Prerequisite: Must have progressed to P2 year*

#### PMPR 4200 Pharmacotherapy I

This course series will teach students to identify and assess medical and drug-related problems in patients and to recommend the appropriate pharmacotherapy to achieve positive patient outcomes. The course consists of 5 hours of lecture each week. *Prerequisite: Must have progressed to the P2 year*

#### PMPR 4201 Pharmacotherapy I Lab

This course series will teach students to identify and assess medical and drug-related problems in patients and to recommend the appropriate pharmacotherapy to achieve positive patient outcomes. The course consists of one laboratory session each week. *Prerequisite: Must have progress to the P2 year*

#### PMPR 4243 Pharmacy Practice IV – Evidence-Based Practice II

This course expands on the literature evaluation and evidence-based medicine concepts presented in the Evidence-Based Practice I course and serves as an introduction to the principles of drug information. Students will learn: processes for answering drug information questions; how to differentiate between and within the different types of literature; how to search for information using a variety of resources; how to develop evidence-based care recommendations; how to communicate responses to drug information questions; and how to effectively provide written drug information. The course series will provide students with the skills to effectively analyze and interpret medical literature and will introduce students to the basic concepts of evidence-based medicine. *Prerequisites: Successful completion of PMPR 4143 and must have progressed to P2 year*

#### PMPR 4283 Pharmacy Law and Ethics

This course consists of a study of federal and state pharmacy, drug, and related laws. Through self-study, lecture, and case studies, students learn the substance of these laws and their application to pharmacy practice. Discussion of societal and healthcare system issues, such as abortion and the right to die, demonstrates the broader societal role of the pharmacist. In light of continuing expansion of the pharmacist's role in the delivery of healthcare services, attention is given to ethical and legal issues surrounding direct patient care services, including an examination of professional liability (civil, criminal, and disciplinary).

#### PMPR 5100 Pharmacotherapy II

This course series will teach students to identify and assess medical and drug-related problems in patients and to recommend the appropriate pharmacotherapy to achieve positive patient outcomes. The course consists of 5 hours of lecture each week. *Prerequisite: Must have progressed to P3 year*

#### PMPR 5101 Pharmacotherapy II Lab

This course series will teach students to identify and assess medical and drug-related problems in patients and to recommend the appropriate pharmacotherapy to achieve positive patient outcomes. The course consists of one laboratory session each week. *Prerequisite: Must have progressed to P3 year*

#### PMPR 5142 Natural Medicines

This course is designed to give the student an overall perspective of Natural Medicine with respect to the history, philosophy, and methodology of this science. The body of literature regarding the safety and efficacy of complementary and alternative medicine is growing, although research for many of these therapies does not exist or is in early phases. This class includes a comprehensive review of selected herbs and supplements, designed for use by the clinicians. The topics covered are selected based on utilization data, sales trends, frequency of information requests, and safety concerns.

#### PMPR 5143 Pharmacy Practice V – Institutional

Pharmacy Practice V is intended to expose the student to the complexities of institutional pharmacy in its various forms. The emphasis will be on hospital pharmacy but will also include long-term care, nuclear pharmacy, hospice care, and the pharmaceutical industry.

#### PMPR 5152 Physical Assessment

This course will introduce students to basic physical assessment of patients, including pharmacy-specific aspects (medication histories, drug adverse effects, and point-of-care testing). The student will be trained in the conduct of physical assessment using standardized patients. Elements of the physical exam covered in this class include: vital signs, including measurement of blood pressure, respiratory rate, heart rate, and temperature; inspection, palpation, percussion, and auscultation of the cardiovascular, pulmonary, and gastrointestinal systems; basic eye examinations; neurologic assessment; and inspection and examination of the integument and musculoskeletal systems. The knowledge and skills learned in this course will be utilized heavily on advanced practice experiences and in clinical pharmacy practice. *Prerequisite: Must have progressed to P3 year; Co-requisite: PMPR 5100 and PMPR 5101*

#### PMPR 5182 Principles of Healthcare Delivery

To provide an understanding of the professional, economic, and public policy aspects of pharmacy and the healthcare system, including anticipated changes in healthcare and the role of pharmacists.

#### PMPR 5200 Pharmacotherapy III

This course series will teach students to identify and assess medical and drug-related problems in patients and to recommend the appropriate pharmacotherapy to achieve positive patient outcomes. The course consists of 5 hours of lecture each week. *Prerequisites: Must have progressed to P3 year*

#### PMPR 5201 Pharmacotherapy III Lab

This course series will teach students to identify and assess medical and drug-related problems in patients and to recommend the appropriate pharmacotherapy to achieve positive patient outcomes. The course consists of one laboratory session each week. *Prerequisite: Must have progressed to P3 year*

#### PMPR 5233 Clinical Pharmacokinetics

This is an advanced course on pharmacokinetics and pharmacodynamics of the time course of drugs in the body. Pharmacokinetic aspects include absorption, distribution, metabolism and elimination and they apply to patient dosing, initial and maintenance dosing and dosing adjustments. Pharmacodynamic aspects include quantitative relationships between drug concentrations and wanted or undesired effects and dosing adjustment based upon appropriate monitoring. *Prerequisite: PMSC 4134*

#### PMPR 5243 Pharmacy Practice VI – Community

This course is designed to provide a broad overview of management skills and marketing considerations to pharmacy students. Basic marketing, management, accounting and personnel issues will be covered. Emphasis will be placed on steps and skills necessary in developing a service from a perceived need to fruition. Consideration of personal finance and self-wealth goals will also be addressed.

#### PMPR 5253 Advanced Clinical Practice Skills

This course will have a large emphasis on active learning. Students will be expected to use knowledge from the basic as well as clinical sciences and apply this information to the direct care of patients. Students should heavily rely on basic skills from the Pharmacotherapy series and build upon their current knowledge base using drug information and literature evaluation skills to develop appropriate evidence-based plans for patient cases. Approximate times will be a 2-hour small group session, a 1-hour large group session, and outside of class group time to complete assignments.

#### PMPR 5361 Clinical Seminar I

This year-long course is the first in the Clinical Seminar series, and provides the foundation and formal instruction for the series. In this class, students will receive instruction on the preparation of formal clinically oriented seminars, observe and evaluate seminars presented by 4<sup>th</sup> year pharmacy students during the fall session of the class, and observe and evaluate previously recorded faculty seminars. These activities are designed to prepare students to synthesize and present a 45 minute seminar during the P4 year. *Prerequisites and/or Co-requisites: Must have progressed to P3 year.*

#### PMPR 5461 Clinical Seminar II

This course is the second in the Clinical Seminar series, and provides the final opportunity for students to construct and present a clinical seminar. In this class, students will be mentored by faculty on the development and presentation of a 35-45 minute seminar on a topic of their choosing (may select from a list provided by faculty, or may suggest another topic for approval by the course coordinators). These activities are designed to allow students to practice their presentation skills in front of their peers, and provide experience and feedback on the preparation of a formal, clinically relevant, evidence-based seminar. *Prerequisite: Successful completion of PMPR 5361; Co-requisite: Must be currently participating in Advanced Pharmacy Practice Experiences (APPEs)*

## **Professional Experience Program**

### Introductory Practice Experiences

#### **PMPR 3141 IPPE-P1 – Community or Institutional Practice**

Students will participate in an Introductory Pharmacy Practice Experience (IPPE) by spending 3 hours per week for 13 weeks in a community or institutional pharmacy. The IPPE promotes an introduction to pharmacy practice in a structured and supervised setting and enhances students' awareness of many aspects of the profession. Students are exposed to the role and responsibilities of the community and institutional pharmacist; the importance of effective communication between pharmacists, patients and other healthcare providers; and the application of local, state and federal laws governing pharmacy practice.

#### **PMPR 3241 IPPE-P1 – Community or Institutional Practice**

Students will participate in an Introductory Pharmacy Practice Experience (IPPE) by spending 3 hours per week for 13 weeks in a community or institutional pharmacy. The IPPE promotes an introduction to pharmacy practice in a structured and supervised setting and enhances students' awareness of many aspects of the profession. Students are exposed to the role and responsibilities of the community and institutional pharmacist; the importance of effective communication between pharmacists, patients and other healthcare providers; and the application of local, state and federal laws governing pharmacy practice. At the end of the semester, classroom time will be assigned to provide reflection on experiences.

#### **PMPR 4322 IPPE-P2 – Community Practice**

This is an early pharmacy practice experience in a community pharmacy practice setting involving the application of knowledge and skills acquired by the student during the first two academic years. This will consist of two consecutive weeks at forty hours per week, to be scheduled during the time between semester 4 and semester 5 of the program.

#### **PMPR 4332 IPPE-P2 – Institutional Practice**

This is an early pharmacy practice experience in an institutional pharmacy practice setting involving the application of knowledge and skills acquired by the student during the first two academic years. This will consist of two consecutive weeks at forty hours per week, to be scheduled during the time between semester 4 and semester 5 of the program.

#### **PMPR 4341 IPPE-P3**

Students will complete their required IPPE hours during the year by participating in patient-centered care in various healthcare settings including: inpatient acute care, ambulatory care, long-term care facility, Dispensary of Hope, immunization clinics, and health-related service projects. This is a year-long course.

### Advanced Practice Experiences - Required

#### **APPE 6001 Institutional Practice**

This pharmacy practice experience in an inpatient hospital setting exposes the student to the wide variety of daily duties often required of the pharmacist while in an institutional

pharmacy. Some of the areas that will be explored include the medication use process, drug distribution, sterile products preparation, automation, operations management, resource management and institutional legal and regulatory standards.

#### APPE 6002 Community Practice

This pharmacy practice experience in a community pharmacy setting is intended to expose the student to a variety of patient-centered services. These services include but are not limited to medication dispensing, patient counseling, drug therapy monitoring, medication therapy management, and drug information services. Resource management and operations management will also be incorporated into the experience.

#### APPE 6003 Acute Care Practice

This pharmacy practice experience focuses on providing patient-centered care to hospitalized patients. The student will apply their therapeutic knowledge to assess and develop therapeutic plans for patients in collaboration with other healthcare professionals, especially physicians. The student will also be involved in taking medication histories, monitoring patient progress and providing drug information to health care professionals and patients.

#### APPE 6004 Ambulatory Care/Primary Care Practice

This pharmacy practice experience is focused on providing patient-centered care of patients who are receiving care in a clinic, physician office or other ambulatory setting. Students will gain experience in communication and assessment skills, physical assessment, chronic disease management and preventative care, and therapy modifications for special patient groups. Other skills developed include drug literature analysis, patient education and counseling, interprofessional communication, and designing and implementing safe, efficacious and cost effective drug therapy to the patient.

### Advanced Practice Experiences - Electives

#### APPE 7001 Institutional Practice

This pharmacy practice experience in an inpatient hospital setting exposes the student to the wide variety of daily duties often required of the pharmacist while in an institutional pharmacy. Some of the areas that will be explored include the medication use process, drug distribution, sterile products preparation, automation, operations management, resource management and institutional legal and regulatory standards.

#### APPE 7002 Community Practice

This pharmacy practice experience in a community pharmacy setting is intended to expose the student to a variety of patient-centered services. These services include but are not limited to medication dispensing, patient counseling, drug therapy monitoring, medication therapy management, and drug information services. Resource management and operations management will also be incorporated into the experience.

#### APPE 7003 Acute Care Practice

This pharmacy practice experience focuses on providing patient-centered care to hospitalized patients. The student will apply their therapeutic knowledge to assess and develop therapeutic plans for patients in collaboration with other healthcare professionals, especially physicians. The student will also be involved in taking medication histories, monitoring patient progress and providing drug information to health care professionals and patients.

#### APPE 7004 Ambulatory Care/Primary Care Practice

This pharmacy practice experience is focused on providing patient-centered care of patients who are receiving care in a clinic, physician office or other ambulatory setting. Students will gain experience in communication and assessment skills, physical assessment, chronic disease management and preventative care, and therapy modifications for special patient groups. Other skills developed include drug literature analysis, patient education and counseling, interprofessional communication, and designing and implementing safe, efficacious and cost effective drug therapy to the patient.

#### APPE 7006 Retail Management Administrative

This pharmacy practice experience focuses in a community chain pharmacy administrative setting is intended to expose the student to the role and responsibilities of a pharmacy district supervisor and administrator. The student will be exposed to the business aspects of pharmacy operations. This will include not only the financial resource aspects but also the human resource aspects of pharmacy management within a corporate environment.

#### APPE 7007 Institutional Management Administrative

This elective pharmacy practice experience in a hospital pharmacy administrative setting is intended to expose the student to the role and responsibilities of the Director of Pharmacy and administrator. The student will be exposed to the management of pharmacy operations. This will include financial and human resource management within an institutional environment.

#### APPE 7008 Institutional Formulary Management

This elective pharmacy practice experience will focus on population-based care and the management of drug formularies. Students will be exposed to techniques to address prescribing habits within an institution, pharmacoeconomic analyses in the managed care environment, PBMs, evidence-based medicine, formulary management, and patient outcomes.

#### APPE 7009 Community Based Infusion Services

This elective pharmacy practice experience will focus on providing infusion services from a community-based pharmacy operation. The student will gain experience in parenteral and enteral nutrition and formulations. Research, preparation and distribution of intravenous products and supplies to home bound or specialty institutionalized patients will be a routine part of the student's experience.

#### APPE 7010 Clinical Management Services

This is an elective advanced pharmacy practice experience. While working with Clinical Management Services the student will be exposed to a pharmacy benefit and wellness operation. At the conclusion of the rotation, each student should have an understanding of the services a PBM provides to their employer clients, individual employees, third party administrators, contracted pharmacies, and internal employees. Student participation and observation of services include therapeutic substitution recommendations, drug utilization review activity, prior authorizations (PAs), clinical and pharmacoeconomic steering committees, client quarterly reviews and implementation of benefit policies which reflect current clinical and economic environments.

#### APPE 7011 Nuclear Pharmacy and Pharmaceuticals

This elective pharmacy practice experience introduces the student to the practice of nuclear pharmacy. The nuclear pharmacy experience will concentrate on pharmaceutical care and radiopharmaceutical compounding, quality assurance, health physics and regulatory compliance. The student will have the opportunity to communicate with the nuclear medicine personnel and participate in the clinical use of diagnostic and therapeutic radiopharmaceuticals.

#### APPE 7012 Pharmacist State Association

This elective pharmacy practice experience is designed to broaden the student's knowledge and understanding of pharmacy association management. It is structured to provide experiences in national and state practice issues, education, member services, student development, policy and advocacy, and public relations.

#### APPE 7017 Compounding Specialty Pharmacy

This elective pharmacy practice experience in a community pharmacy setting will provide the student with the experience of compounding specialty medications that are not commercially available in necessary dosage forms for unique patient populations. Regulations, special equipment and space considerations will be addressed. Marketing of this specialized service will also be part of the learning experience.

#### APPE 7018 Geriatric Care

This elective pharmacy practice experience is designed to provide the student with an in-depth experience in the provision of pharmaceutical care to older patients and those requiring long term care services. Training involves providing for the special needs of elderly patients through knowledge of geriatric disease states, aging organ function and related drug response alterations, including pharmacokinetic and pharmacodynamic alterations. Other issues such as health maintenance, compliance, patient education, and social issues are also emphasized.

#### APPE 7019 Critical Care

This elective APPE is an inpatient experience designed to enable the student to acquire skills and knowledge regarding basic principles of specific critical care disease states and their treatment. Students will spend time in the intensive care units gaining experience in areas such as hemodynamic monitoring, shock, burns, infectious disease, analgesia, and drug

overdose management. Treatment of critical pathology associated with pulmonary, cardiac, renal, neurological, and hepatic organ systems is stressed.

#### APPE 7020 Advanced Community Pharmacy Services

This elective pharmacy practice experience in a community pharmacy setting is intended to expose the student to a variety of patient-centered value added services. These practices provide services that are not limited to patient counseling, drug therapy monitoring, and drug information services. Other activities such as Medication Therapy Management consultations, specialty compounding and immunizations are routine value added services for these practices. Resource management and operations management will also be part of the educational endeavors the student will experience.

#### APPE 7021 Alternative and Complementary Medication and Therapies Research

This elective pharmacy practice experience will provide the student with the opportunity to improve and polish drug information investigative and writing skills. Excellent writing and communication skills are required for this experience. Alternative medications and complementary medications are fully explored. Activities for the student include active participation in such things as yoga and reflexology.

#### APPE 7022 Psychiatry

This elective pharmacy practice experience will provide in-depth exposure to the pharmacotherapy of mental health. The student will gain experience in applying therapeutic knowledge to develop an assessment and plans for patient care while collaborating with other health care professionals to monitor drug therapy of patients with psychiatric diseases or drug abuse problems. The student will gain experience in treating diverse psychiatric and behavioral problems, including schizophrenia, depression, mania, bipolar disease, phobic states, substance abuse, personality disorders and related behavioral problems.

#### APPE 7023 Nutritional Support

This experience is designed to provide the student with the opportunity to gain knowledge, skills, and practical experience in basic nutritional principles, nutritional assessment, and management of the patient requiring enteral and/or total parenteral nutrition. Students will participate in managing patients through assessing and diagnosing nutritional status, and designing and monitoring nutritional and electrolyte treatment plans. Experience is gained working with a broad spectrum of patients, including trauma and surgical patients, patients having endocrine abnormalities, and renal- and hepatic-compromised patients. The student will also learn about various infusion techniques and systems for administering nutritional agents.

#### APPE 7024 Pediatrics

This elective pharmacy practice experience is designed to enable the student to acquire skills and knowledge regarding basic principles of pharmacotherapy for common childhood diseases. The student will gain experience in applying therapeutic knowledge to develop an assessment and plans for patient care while collaborating with other healthcare professionals. Students will gain experience caring for pediatric patients with acute and chronic conditions in such areas as infectious disease, cardiology, pulmonology, oncology,

and rheumatology. Training involves knowledge of pediatric conditions, developmental organ function and related dose-response alterations, and pharmacokinetic and pharmacodynamic predictions.

#### APPE 7025 Pharmacokinetics

This elective pharmacy practice experience is designed to give the student hands-on experience in clinical pharmacokinetics. The student will assess the utility of population averages in prediction drug concentration of dosage as well as learn to base therapeutic recommendation on measured drug concentrations. This experience is directed toward monitoring drug therapy based on patient response rather than the sheer manipulation of numbers. Expertise in calculations is expected from didactic course work.

#### APPE 7026 General Medicine

This elective pharmacy practice experience in an in-patient hospital setting is designed to give the student a basic understanding of disease states encountered in internal medicine. While participating in the team based approach to health care, application of therapeutics in patient care and skill development in taking medication histories, monitoring patients, providing drug information as well as patient information will be emphasized.

#### APPE 7027 Family Practice

This elective pharmacy practice experience is intended to provide the student with a basic understanding of common disease states encountered in family practice medicine. The student will obtain training and experience in the areas of clinical pharmacokinetics, drug therapy evaluation, interpretation of laboratory results, effective communication with other members of the healthcare team, drug interaction screening, drug literature and new product evaluation, formulary research for the P & T Committee, and patient education.

#### APPE 7028 Infectious Disease

This elective pharmacy practice experience in an institutional setting is intended to expose the student to appropriate utilization of antimicrobial agents in the hospital setting. Antimicrobial resistance and its effect on antibiotic utilization will be discussed and reviewed. The student will receive training and experience in the areas of clinical pharmacokinetics, drug therapy evaluation, interpretation of laboratory results, effective communication with other members of the healthcare team, drug interaction screening, drug literature and new produce evaluation, formulary research for the P & T Committee, and patient education.

#### APPE 7029 Internal Medicine

This elective pharmacy practice experience is designed to develop an understanding of pharmacotherapy for the patients followed by the medical team. An ancillary goal is to allow the student to develop the ability to effectively gather and disseminate information, and communicate with patients, nurses, the physician, the pharmacist and other health care practitioners specific information necessary in the care of patients.

#### APPE 7031 Surgery

This elective pharmacy practice experience is designed to provide students with experience in the fundamentals of surgery pharmacy. After completing this clerkship, the student will have a better understanding of the drugs used in surgery, surgical procedures and general patient care.

#### APPE 7032 Academic Pharmacy Practice

Students will participate in all parts of the academic process including literature review of teaching methods, facilitating small groups, preparing lectures, syllabi, and examination questions, preparing equipment for laboratory sessions, grading selected assignments, evaluating the current curriculum, and being an active participant in committee meetings and decision-making at the college level. Students will work with the primary preceptor(s) in discussions, as well as independently to accomplish assigned tasks to expose the student to what it means to be an academician in all three pillars of academia. *NOTE: Cannot be counted towards the required 36 weeks of APPEs; Requires permission of the instructor.*

#### APPE 7033 Renal Failure/Dialysis/Solid Organ Transplant

A CMS requirement for credentialing is to have full participation from a clinical pharmacist on the fully integrated interdisciplinary team that treats and monitors renal and solid organ transplant patients. This pharmacy practice experience focuses on providing patient-centered care to hospitalized and ambulatory renal failure patients, dialysis patients and solid organ transplant patients. The focus of the transplant care will be on kidney transplants but some liver and pancreatic transplant care will be involved as well. The student will apply their therapeutic knowledge to assess and develop therapeutic plans for patients in collaboration with the other healthcare professionals. The student will also be involved in taking medication histories, monitoring patient progress and providing drug information to healthcare professionals and patients. Outpatient education at both pre and post op will be a vital responsibility of the student.

#### APPE 7034 Outpatient Oncology/Hematology

This experience is designed to provide the student with the opportunity to gain knowledge, skills, and practical experience in working with outpatients and inpatients with neoplastic disease and the rational therapy with oncological agents. The student will work closely with the healthcare team and patients in pain management, nausea/vomiting management, and side effects management. The student will participate in designing customized medication patient regimens and educating the patients regarding their therapy. The student will also be assisting in monitoring patients while they are receiving intravenous chemotherapeutic medications on site. Some compounding of chemotherapeutic agents will be required.

#### APPE 7035 Post-Op Orthopedic Care

This experience focuses on providing patient-centered care to patients who have undergone orthopedic surgery. This experience is with a dedicated clinical pharmacist who is responsible for post orthopedic patients of the decentralized practice area in the Joint Camp. This experience is unique to post orthopedic surgery; no other post surgery patients are serviced by this practice. Participation in “speed rounds” with the orthopedic surgeons and team will be part of the student responsibilities by applying their therapeutic knowledge to

assess and develop collaborative therapeutic plans for patients in the surgery and physical rehabilitation center. The student will also be involved in taking medication histories, monitoring patient progress and providing drug information. The student will be monitoring and adjusting anticoagulation medications and optimizing patient profiles by performing Medication Therapy Management functions. Pharmacokinetics of vancomycin and the aminoglycosides will be an essential function of the student.

#### APPE 7036 Indian Health Service

This experience is designed to provide the student with the opportunity to work within the hospitals and clinics provided by the Department of Health and Human Services through the agency, Indian Health Service. This agency is responsible for providing American Indians and Alaska Natives with federal health services. In this course, students will learn how to incorporate modern and currently accepted healthcare practices into the Indian cultures and traditional tribal healing methods. Students will gain valuable knowledge into cultural diversity and the unique needs of these patient populations. Students will be involved in counseling on every new outpatient medication using the I.H.S. format, with the goal of no patient knowledge gaps regarding therapy and medications. Participation in the anticoagulation, lipid, hypertension and dialysis clinics reviewing and monitoring therapy and making therapy adjustment will also be part of the student's experience. Students will have the opportunity to spend time in the inpatient areas as well. Inpatient time will be spent on the floor and at patient bedside performing kinetic calculations and monitoring therapy. Students will have the opportunity to compound necessary IV medications if needed..

#### APPE 7037 Pharmaceutical Industry-Drug Information

This elective pharmacy practice rotation will provide the student with an insight into the roles responsibilities and daily activities of Pharmacists in drug information within the Pharmaceutical Industry. The student will not only become familiar with the process of obtaining and evaluating information from the medical literature, but will be able to present the information among other professionals. This course will provide the student the ability to learn how to apply information obtained from various sources to answer drug information questions received from healthcare professionals, patients/caregivers and the general public. The student will also become familiar with the medical and technological resources utilized to provide accurate information as well as the ethical issues pertaining to communicating drug information.

### **Approved Didactic Electives**

#### College of Pharmacy Offerings

##### PMPR 7101 Folk Medicine and Remedies of Southern Appalachia (2 credit hours)

An introduction to Appalachian folk medicine will be presented, including the examination of health, illness, and the treatment of disease from a pharmacist's perspective. This includes discussion of various theories of illness, types of healers, nostrums, and the empirical basis for the remedies and alternative forms of therapy. Some of the medicinal properties of the treatments prescribed in the rural Appalachian region will be discussed.

**PMPR 7102 Professional Development for Healthcare Professionals (2 credit hours)**

This course will help facilitate successful careers of young healthcare professionals. The course consists primarily of topic discussions covering an array of issues related to professional development but centered on leadership, organizational, and relational skills. This course will be valuable to those interested in administrative or high level clinical positions, as well as students planning to pursue post-graduate residency training. *Note: Cannot receive credit for PMPR 7102 and ELPA 6450.*

**PMPR 7103 Evidenced-Based Diabetes Management (2 credit hours)**

This web-based, self-directed elective will utilize the DM Educate™ course content (available at [www.dmeducate.org](http://www.dmeducate.org)) to provide an effective, efficient, and flexible mechanism to assure that entry level health professionals have a strong foundation in the principles of diabetes therapy and management. The contributing online faculty are outstanding educators and practitioners from the fields of pharmacy, nursing, medicine, behavioral psychology, dietetics, and exercise physiology. The online learning will be enhanced by biweekly group discussions and other active learning activities designed to supplement the learning objectives of the course curriculum. *Prerequisite: Successful completion of the P2 year in the pharmacy curriculum or with permission of the Department of Pharmacy Practice*

**PMPR 7104 Relationship of Pharmacy and Health Disparities in the Appalachian Region (2 credit hours)**

The U.S. healthcare system is often criticized for its high national costs and outcomes that are less than favorable when compared to other nations. Many poorer outcomes can be observed in differences of health risk, illness, health services utilization and mortality that vary by gender, race and ethnicity, age, and place of residence. This course will engage students in teams to explore regional health disparities and define the influence of the presence or absence of pharmacy-related services and initiatives on regional health.

**PMPR 7105 Interprofessional End-of-Life Clinical Care (3 credit hours)**

This course is an interprofessional elective course with content related to death/dying and quality end-of-life care for graduate students in Social Work, Public Health, Medicine, Nursing, and Pharmacy. This course is designed to assist students in exploring important elements of palliative and end-of-life care to effectively recognize and address the needs of those nearing the end of their lives. Topics to be addressed include pain and symptom management, palliative care and hospice models, end-of-life conversations, ethical dilemmas, grief and bereavement, spirituality, and social, economic and legal issues at the end of life.

**PMPR 7106 History of Pharmacy (2 credit hours)**

History of Pharmacy will survey the historical development of Medicine and drugs from Ancient times through the present. The emergence of Pharmacy and Pharmacists as a distinct profession and professionals will be highlighted, along with the development of the educational, legal, and social framework which supported this development. Through coursework, readings, discussion, and projects students will develop an appreciation for the living history of the profession of Pharmacy and their place in it.

#### PMSC 7201 Veterinary Pharmacy (2 credit hours)

This class contains an overview of biologicals and pharmaceuticals commonly encountered in the practice of veterinary medicine, concentrating on those drugs and diseases that could be encountered by a pharmacist. The course will include agents that are used solely as veterinary pharmaceuticals as well as drugs used in human medicine that have unique application in veterinary practice. Theoretical and practical aspects of veterinary compounding will be discussed and accomplished. The most common companion animal diseases and pharmacotherapy options will be presented and discussed. Diseases communicable between animals and humans (zoonotic disorders) will also be presented.

#### PMSC 7202 Principles of Toxicology (2 credit hours)

This course will provide students with an understanding of the basic principles and concepts of toxicology, including various mechanisms of toxicological response. The course will also present clinical applications, including the toxicology of various drug classes, vitamins, alcohols, metals, environmental chemicals, and agents used for chemical and biological warfare.

#### PMSC 7203 Non-Medicinal Drug Use (2 credit hours)

This course covers a wide range of topics centered around the use of drugs for non-medicinal purposes. Inherent in the course is the discussion on the continuum of legitimate versus non-legitimate drug use, or medical versus non-medical use. The major focus of the subject material pertains to issues of drug abuse, particularly in Appalachia and other rural environments. Other issues such as ergogenic drugs, entheogenics, and cultural drug use, both current and historical, will be considered. Multiple faculty participate in the course.

#### PMSC 7204 Special Problems (1-4 credit hours)

This course will provide the student with an opportunity to learn and apply skills in methods and/or techniques of research, and to demonstrate an ability to work independently.

*Prerequisite: Signed agreement with the student and a specific faculty member and approved by the department chair*

#### Non-College of Pharmacy Offerings

Students' opportunity to enroll in courses offered by other colleges on campus may be dependent upon class space, instructor permission, and/or scheduling constraints.

#### ANTH 3500 Appalachian Folk Medicine (3 credit hours)

The study of folk medical beliefs and practices, focusing on Southern Appalachia from the late 1800s to 1940. Topics examined include folk *materia medica* and therapeutics, magico-religious beliefs and practices, folk healers, folk concepts of illness and human physiology.

#### ELPA 6450 Leadership Studies (3 credit hours)

The purpose of this seminar is to develop a more in-depth understanding of theory and research related to the study of leadership. Although there will be a brief review of traditional theories from traditional approaches (trait, behavioral, etc.) through contemporary approaches (situational, transformational, symbolic, etc.), the focus of this class is on "cutting-edge" ideas. Students are strongly encouraged to explore nontraditional approaches to thinking about how leadership can be conceptualized, explored, and understood, as well as

how to relate their ideas to current models. Emphasis will be given to student-initiated exploration of themes, which underlie leadership. *NOTE: Cannot receive credit for ELPA 6450 and PMPR 7102.*

**ENVH 4357/5357 Toxicology (3 credit hours)**

A study of the essentials of toxicology, including toxicity determinations and measurements, and biologic factors important in understanding toxicity. A review of toxic substances in air, water, foods, and the workplace with a consideration of exposure limits, their rationale and evaluation methods. *Prerequisite(s): CHEM 2010/ 11 and HSCI 3320, or permission of instructor*

**FCNU 4957/5957 Cultural Outreach: Education and Health (3 credit hours)**

This is an interdisciplinary community-based course focused on the education, health and wellness of the Hispanic population in rural Tennessee. The course combines online didactic content and a substantial cultural immersion field experience with Hispanic adults, children and families at off-campus community sites in rural eastern TN. Through an interdisciplinary approach, students are exposed to knowledge from different fields which contribute to a global understanding of bio/psycho/social and educational issues that impact the Hispanic population. Social, cultural, political, economic, environmental, educational, and health issues will be explored.

**IDMD 1940 Rural Health Research and Practice (3 credit hours)**

Student and faculty teams in rural communities partner with communities to assess health priorities and develop plans to address identified needs. Students develop an understanding of interdisciplinary working relationships among health professional disciplines. Students will develop an understanding of issues associated with research involving human subjects and receive IRB Training.

**IDMD 2950 Rural Community-Based Health Project (3 credit hours)**

In this course students work in interdisciplinary teams to develop a community-based health proposal in collaboration with their rural community partners. Through implementing and evaluating the proposed community-based project, students gain hands-on experience in using participatory methods to promote the health of a selected rural population. Students enhance their formal presentation skills through presenting the results of their community-based project.

**IDPH 2010 Rural Health and Community Leadership I (3 credit hours)**

Students learn about caring for communities by conducting assessments using a variety of data sources, developing program plans, participating in a mock epidemic, visiting community agencies and institutions, and identifying local, state, and national trends that impact the community's health.

**PUBH 3080 Principles of Epidemiology (3 credit hours)**

This course is an introduction to epidemiology and the application of epidemiologic principles to the investigation, control, and prevention of disease. The primary aim of the course is to provide a working knowledge of the fundamentals of epidemiology as well as to

serve as a foundation for more advanced study of epidemiologic methods. *Prerequisite): PUBH 3000 or permission of instructor. Cannot receive credit for PUBH 3080 and PUBH 5400.*

**PUBH 4927/5927 Cultural Competence and Spirituality in Health Care (3 credit hours)**  
Health care effectiveness increases when the spiritual and cultural traditions of the patient are addressed. In this class, students will receive an orientation to the practices and concerns of diverse cultural and religious groups.

**PUBH 4937/5937 Stress Management (3 credit hours)**  
Acquaints the student with the literature and research on stress and provides a holistic introduction into the theory and practice of stress management that encompasses physical, emotional, psychological, and spiritual dimensions of stress responses. The course uses an experiential approach to applying coping strategies and relaxation techniques covered in class by requiring students to develop and implement a personal stress management project.

**PUBH 5310 Biostatistics I (3 credit hours)**  
This course introduces the principles of Biostatistics with emphasis on collection, organization, analysis and interpretation of numerical data for populations and individuals. The course presents many statistical methods that have a broad application in health services and biological sciences. Major topics include data presentation, summary measures, probability, confidence interval, hypothesis testing, correlation analysis and simple linear regression. The method of instruction emphasizes understanding of key concepts and statistical techniques through readings assignments and exams, as well as application of Biostatistics principles to cases in public health practice. The course has multiple opportunities to assess competence of students, including grasp of key concepts, statistics methods and application skills.

**PUBH 5400 Introduction to Epidemiology (3 credit hours)**  
This course is an introduction to epidemiology and the application of epidemiologic principles to the investigation, control, and prevention of disease. The use and analysis of health statistics are emphasized. *Cannot receive credit for PUBH 3080 and PUBH 5400.*

**SPAN 1011 Beginning Spanish for Healthcare I (3 credit hours)**A study of the four language skills of speaking, listening, reading and writing, with an emphasis on vocabulary and cultural situations appropriate for healthcare professions.

**SPAN 1021 Beginning Spanish for Healthcare II (3 credit hours)**  
Continuation of the study of the four language skills of speaking, listening, reading and writing with an emphasis on vocabulary and cultural situations appropriate for healthcare professions. *Prerequisite: SPAN 1011*

# PROGRAM INFORMATION AND POLICIES

## Office of Academic Affairs

The Office of Academic Affairs is responsible for all academic aspects of the PharmD program. This includes curriculum issues, notification of students achieving the “Dean’s List,” compilation, distribution and oversight of the class and examination schedule, and implementation of recommendations from the Academic Progression Committee. The office is located in Room 204 of Building 7 on the J.H. Quillen Veterans Affairs Medical Center campus (VA). Students can also reach the office by calling 423-439-6334.

## Academic Performance

Students are required to pass all courses applicable towards the PharmD degree with a minimum grade of “C” during each semester of enrollment. Students failing to meet this standard shall be subject to the action of the Academic Progression Committee (APC).

## Grading System

The College of Pharmacy utilizes a standard letter grading system of A, B, C, D and F. Faculty for an individual course may elect to augment the grading system through use of the plus/minus system; however, the grades of C-, D+, and D- are not used.

The method by which letter grades are assigned is determined by the course coordinator for each course and is included in the course syllabus. Once the method for assigning letter grades is in place for a course during a given semester, it cannot be made more stringent; however, the grading scale can be altered provided the scale is not made more difficult.

Grades of D and F are not considered passing grades and require that a student receiving such a grade remediate the course (see subsection E of the Academic Progression policy below for definition of remediation).

Other grades utilized by the College of Pharmacy are P (pass), I (incomplete) and W (withdraw). A grade of P is assigned to students successfully completing a course graded on a Pass-Fail basis. A grade of I is a temporary grade that may be assigned in cases in which a student, for acceptable reasons, is unable to complete all the requirements of a course. A student must make arrangements to complete the course within twelve months or the grade of I automatically becomes an F. A grade of W is assigned in cases in which a student has been granted permission to withdraw from a course according to the following. A student approved to withdraw from a course up to one-quarter of the course’s duration will receive no penalty (i.e., no record of enrollment). Approved withdrawals occurring after one-quarter and up to three-quarters of the course’s duration will result in a grade of W. Withdrawal after three-quarters of the course has elapsed is not allowed except under documented extenuating circumstances; in such cases, a grade of W will be assigned. Grades of P, I, and W carry no quality points and have no bearing on the GPA.

The College also utilizes grading symbols of + and \* on the transcript. A “+” symbol indicates that a course continued beyond the current semester. An “\*” symbol indicates that additional work was required by a student to obtain the specified course grade.

Grading policies also apply to elective course taken outside of the College of Pharmacy.

The GPA is the weighted average of quality points earned relative to the number of credit hours attempted on a 4.000 scale. To calculate a GPA, the point value of the grade received in a course (see below) is multiplied by the number of credit hours the course is worth to determine the quality points for a course. The sum of quality points earned is then divided by the sum of credit hours attempted.

Letter grade point-values are as follows.

A	4.000
A-	3.700
B+	3.300
B	3.000
B-	2.700
C+	2.300
C	2.000
D	1.000
F	0.000

The GPA is calculated utilizing grades received in all courses attempted. Class rank based upon GPA is determined at the end of each semester, and is used for internal purposes as necessary.

### **Grade Appeal Process**

The grade appeal process affords students the opportunity to pursue a formal course of action to dispute a final course grade. This process does not apply to erroneous grades that result from mistakes in transcription, data entry, simple calculations or other unintentional causes. Changes of erroneous grades are handled quickly and informally, without the need for a grade appeal.

A student may appeal a final course grade if the student has evidence that the grade was assigned in a malicious, capricious, or arbitrary manner. The following steps provide a guideline for the appeals process. All persons concerned with this process should adhere to the time schedule outlined herein. Note that the timeframe may be adjusted due to extenuating circumstances, such as university closings or holidays, at the discretion of College of Pharmacy administration.

The grade appeal process is outlined in Gatton College of Pharmacy Student Handbook, available online at [www.etsu.edu/pharmacy](http://www.etsu.edu/pharmacy). Students wishing to appeal a grade must begin the process within 21 days of when the final course grade is reported to the registrar.

### **Grade Reports**

Grades are available to students online via [GoldLink](#), the University's student information system. Academic departments retain grade documentation for a period of one year. Student concerns regarding academic records will only be addressed within one academic year from the date when the grades in question were posted.

## Academic Honors

### *Dean's List*

The Academic Affairs office will publish an honor roll each semester (Dean's List), consisting of students who demonstrated academic excellence by achieving a 3.5 GPA or better (with no grade below a B-) while enrolled full-time in the Gatton College of Pharmacy with at least twelve hours taken for a letter grade. For each semester in which this is accomplished, the student will receive a letter of recognition signed by the Dean. The student's name may also be published in the College newsletter or other publications.

### *Graduation Honors*

The Gatton College of Pharmacy confers three academic distinctions at graduation which will appear on student diplomas:

*Summa Cum Laude* - students graduating with a pharmacy GPA of 3.900 to 4.000

*Magna Cum Laude* - students graduating with a pharmacy GPA of 3.750 to 3.899

*Cum Laude* - students graduating with a pharmacy GPA of 3.500 to 3.749

## Academic Progression Committee

The Academic Progression Committee (APC), in consultation with the Office of Academic Affairs, is charged with monitoring students' performance during each semester and progress throughout the curriculum. The APC acts on behalf of the faculty as an advocate for student learning, faculty teaching and academic integrity. The committee serves to mediate and facilitate student remediation and retention issues, within the boundaries of academic standards. The emphasis is on learning, understanding and applying the material and skills that are taught throughout the curriculum. The APC becomes involved in academic issues when a student's academic performance falls below the level needed for the successful completion of one or more courses and makes decisions regarding student's retention and progression in the program. The APC Policy, including the composition and function of the APC, is detailed in the Gatton College of Pharmacy Student Handbook found on the web at [www.etsu.edu/pharmacy](http://www.etsu.edu/pharmacy).

## Course Credit and Student Compensation Policy

Students on pharmacy practice experiences may **not** be paid for their activities by the site to which they are assigned. This is an accreditation standard and **cannot** be waived. Students may receive housing, meal and travel allowances from the experiential site for off-campus educational experiences.

Students who work on research projects with faculty or in summer internship experiences with off-campus pharmaceutical companies, regulatory agencies or professional societies/associations, may receive either Independent Study course credit or payment for their work, **but not both**. Further information about the credit and compensation policy can be found in the Gatton College of Pharmacy Student Handbook found at [www.etsu.edu/pharmacy](http://www.etsu.edu/pharmacy).

## **Required Trainings**

### *Immunization Certification*

Students will be required to complete the American Pharmacists Association (APhA) Immunization Certification training during the first month of the first professional year. Training will be scheduled as part of the Introductory Pharmacy Practice Experience (IPPE). This certification consists of a self-study exam, a didactic lecture, a final exam and a practicum. This certification will be at the expense of the individual student. The certification will be active as long as the individual maintains active BLS certification.

### *Occupational Safety and Hazard Administration Certification*

Students will be required to complete an online occupational safety and health (OSHA) training to prepare them for participation in PPEs. The training is completed via an independent study program and must be completed before a student will be allowed to begin his/her introductory PPE. Annual training is required.

### *Sexual Harassment Training*

Consistent with the university's mission and vision, the Gatton College of Pharmacy is committed to treating people with dignity and respect. This ideal involves all employees and students as we strive to work together in an atmosphere conducive to building relationships on honesty, integrity, and trust. Towards this end, student pharmacists will be required to complete training in Preventing Sexual Harassment upon initial enrollment in the College. The training is complete online as a self-study program. Students are required to submit a copy of the certificate of completion to the Office of Student Affairs.

## **STUDENT SERVICES AND RESOURCES**

### **Office of Student Affairs**

The Office of Student Affairs coordinates a number of services for students, including academic advising, tutorial assistance, financial aid, and assistance with personal issues. The office also provides support for the College's student organizations and coordinates special events and programming for students. Information about pertinent services and programs is detailed below. Student Affairs is located in Room 212 of VA Building 7 (Pharmacy Building) and may be reached at 423-439-6338.

### **Faculty Advisors**

Pharmacy students are assigned a faculty advisor upon matriculation. This individual serves as a student's primary academic advisor for the full four years unless a student requests a change in advisor. The role of the advisor is to serve as a resource. Advisors maintain an open door policy and exist to offer guidance in such matters as surviving in pharmacy school, geographic orientation, accessing resources to address personal issues and other issues as necessary. Ideally, the relationship will develop into one in which the student will seek out the advisor for advice and counsel. Students are encouraged to have regular contact with their advisor by e-mail, phone or in person.

### **Tutors**

Students experiencing academic difficulty should first seek assistance from faculty; however, peer tutoring can be arranged to provide students with an additional source of assistance to facilitate learning and mastery of the academic material. Students who have excelled academically and who are identified by the course coordinators are encouraged to serve as peer tutors. These peer tutors work with their peers and underclassmen individually or in groups (when appropriate) on content and test preparation for a specified amount of time as agreed upon by the tutor and the student. Students seeking a tutor or students interested in becoming peer tutors should contact the Office of Student Affairs. If intensive help is required, students should contact the Office of Student Affairs which will assist in developing a support plan utilizing available university services.

### **Library Resources**

The Charles C. Sherrod Library is the central university library in the heart of the main campus. This state-of-the-art facility is a great place to study and do research. Filled with natural light, it has comfortable seating, a 24-hour study room, lots of network connections, laptop computers for checkout to students, used paperbacks for leisure reading, and a friendly and helpful library staff to assist you. A medical library which serves the Division of Health Sciences is located in Building 4 on the VA campus. Students and faculty have full electronic access to journals and texts regardless of whether they are on-campus or off-site. The two libraries currently have over 10,800 full-text electronic titles of which nearly 4,000 are health-related. All electronic texts and journals are available from remote as well as on-campus sites.

The libraries share a single Online Public Access Catalog (OPAC) of library materials and databases. Holdings of the Johnson City Medical Center are included in the OPAC. There is

an agreement through the Sherrod Library to share all library holdings and database subscriptions with all university-affiliated personnel. Anyone with an ETSU e-mail address may access this information through the Medical Library World Wide Web portal. The portal offers faculty, staff, and students the opportunity to personalize the Library web page for their own most efficient use. Users may contribute to the content of the page, which enable them to share useful web sites and other resources with their colleagues.

A consortium, which includes the Medical Library, Mountain States Health Alliance in Johnson City and the Wellmont Health Systems in Bristol/Kingsport, enables faculty, staff, and students of all three institutions to share MD Consult, a full-text peer-reviewed online database of textbooks and journals. The Medical Library is also a member of a state-wide resource-sharing group called TennShare. Members of the TennShare may access the following publications

- Science Direct, one of the world's largest providers of scientific, technical, and medical literature;
- Interscience, the John Wiley & Sons electronic database access to full-text journals;
- StatRefl, full-text medical and drug information for healthcare professionals available online, on CD-ROM and PDA; and
- Tennessee Electronic Library (TEL) that gives member libraries access to 16 electronic databases.

As a member of the Consortium of Southern Biomedical Libraries (CONBLS) the Medical Library provides and receives interlibrary loan services from member institutions at no charge. The Medical Library is a member of the National Library of Medicine's Regional Library System. This affiliation gives the users (both on campus and in remote locations) access to the Loansome Doc system to enable them to order articles from MEDLINE. ETSU is also a member of the OCLC Online Computer Library Center, Inc., through which the university has access to more than 49 million cataloging records created by libraries around the world.

Study rooms in the Medical Library are available for use during regular library hours.

### **ID Card and College of Pharmacy Name Badge**

All students admitted to the Gatton College of Pharmacy are expected to obtain an ETSU Student ID card and a Gatton College of Pharmacy ID name badge. Cards and badges are available during Orientation or any time after registering for classes. Lost, stolen, misplaced or abused cards may be replaced at the ID Services Office at a cost to the student of \$10. The ID Services Office is located on the 2nd level of the D.P. Culp Center (423-439-8316; office hours M-TH 8 a.m. - 7 p.m. and Friday 8 a.m. - 4:30 p.m.).

The ID card provides students with access to university facilities and services, and can be used to create a debit account called ID BUC\$ which may be used to pay for a variety of university services including many vending machines. The ID card is also used to access the College of Pharmacy building outside normal business hours. Students are expected to wear their College name badge at all times and are required to do so while at experiential education sites.

## **Student Engagement and Leadership**

### *Class Officers*

Each class of students elects officers on an annual basis. In addition to providing general leadership for the class, the officers serve as the official representatives of the class to the administration of the College. Elections are conducted under the general guidance of the Office of Student Affairs.

### *College Committees*

Student pharmacists are provided numerous opportunities to participate in the operation and leadership of the College through inclusion in the College's committee structure. Standing committees that include student membership are: the Admissions Committee, Assessment Committee, Curriculum Committee, Dean's Student Advisory Committee, Honor Code Committee, Library Committee, Student-Faculty Relations Committee, Student Organization Coordinating Committee and the Technology Committee. Complete descriptions of the above committees are found in the Gatton College of Pharmacy Student Handbook found on the web at [www.etsu.edu/pharmacy](http://www.etsu.edu/pharmacy).

### *Student Organizations*

The Gatton College of Pharmacy encourages students to become involved in professional organizations and fraternities. The following represents the organizations and fraternities that exist within the College.

- American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP) <http://www.aphanet.org/students>
- Student Society of Health-System Pharmacists (SSHP) <http://www.ashp.org>
- Christian Pharmacists Fellowship International (CPFI) <http://www.cphi.org>
- National Community Pharmacists Association (NCPA) <http://www.ncpanet.org>
- Kappa Epsilon ([www.kappaepsilon.org](http://www.kappaepsilon.org)),
- Kappa Psi Pharmaceutical Fraternity ([www.kappapsi.org](http://www.kappapsi.org))
- Phi Delta Chi ([www.phideltachi.org](http://www.phideltachi.org))
- The Rho Chi Society (honor society) [www.rhochi.org/](http://www.rhochi.org/)

Descriptions of these organizations as well as information about establishing additional student organizations can be found in the Gatton College of Pharmacy Student Handbook found on the web at [www.etsu.edu/pharmacy](http://www.etsu.edu/pharmacy).

## **Alumni Association**

The ETSU Office of University Alumni is the campus contact for University graduates and former students, who upon graduation become members of the ETSU Alumni Association. Alumni may participate in a variety of activities, such as regional chapter activities, constituent societies, special alumni programs, alumni student recruitment, reunions, Homecoming and various events that support ETSU. Many alumni are chosen to participate in the popular "Alumni Return to the Classroom" program, which features alumni as "Professors for a Day" sharing their professional experiences with students during Homecoming week. Alumni also participate in the "Buc Connection" career development network or support student recruitment through the Alumni Admissions Council. ETSU's Alumni Association, in cooperation with the ETSU Foundation, also supports scholarships for academically outstanding students. The Alumni Association Office is

located on campus in room 303 of Burgin E. Dossett Hall, phone (423) 439-4218 - [www.etsu.edu/alumni/index.asp](http://www.etsu.edu/alumni/index.asp).

### **Athletic Events**

East Tennessee State University is a member of the NCAA Division I Atlantic Sun Conference and fields teams in men's baseball, basketball, cross country, golf, tennis, soccer, and track and field. The women participate in basketball, cross country, golf, soccer, softball, tennis, track and field and volleyball. Full-time students are admitted free with a valid student ID to all university sponsored athletic events. One additional companion ticket may be purchased at a discounted rate for all men's basketball games. For information on ticket prices for non-students, please contact the Athletic Ticket Office located on the west side of the Mini-Dome. Office hours are 8:30 a.m. to 4:30 p.m. Monday through Friday. The phone number is 439-5371. Complete information and schedules for the ETSU teams are available on the ETSU athletics web site at <http://www.etsubucs.com/>.

### **Banking**

The Tennessee Teachers Credit Union, located in the University Bookstore, provides full-service banking for students. There is also an ATM machine in the Culp University Center.

### **Bookstore**

The University Bookstore is located in the middle of the D.P. Culp Center. It is open fall and spring semester Monday – Thursday 7:45 a.m. to 6 p.m. and Friday 7:45 a.m. to 5 p.m. You may reach the store by phone at (423) 439-4436. A medical bookstore dedicated to the needs of health science students (i.e., medical, pharmacy and physical therapy) is located on the VA campus. Hours for the medical bookstore are 8:00 a.m. to 4:30 p.m. The phone for the medical bookstore is (423) 439-8016.

### **Buctainment**

Comprised of students, Buctainment plans major campus events such as concerts, movies, lectures, comedy shows, and Homecoming. Students can be involved with Buctainment as a member or programmer, or by attending a show as an audience member. It is a great opportunity to learn the technical, business, and marketing side of the entertainment industry. Buctainment is located in the Center for Community Engagement, Learning, and Leadership, D.P. Culp University Center, lower level, phone (423) 439-6828 or e-mail [etsufun@etsu.edu](mailto:etsufun@etsu.edu).

### **Campus Recreation**

Campus Recreation offers a wide variety of physical activities and recreational sports for the entire ETSU community - students, faculty, and staff. Programs are offered in five areas: fitness, intramurals, non-credit instruction, outdoor adventure, and sports clubs. The Center for Physical Activity (CPA) and Basler Challenge Course serve as the foundation for these programs.

The CPA contains an indoor climbing wall, weight room, aerobic/martial arts studio, indoor swimming pool, three basketball courts, two racquetball courts, 1/8th mile track, locker rooms, and equipment rental center. Campus Recreation also offers a personal training service that includes a weight room orientation, fitness testing, exercise prescription, and

supervised workouts. Hours of operation for basic building services during the fall and spring semesters are 7 a.m.-10 p.m., Monday-Friday, Saturday 10 a.m. - 4 p.m., and Sunday 4 p.m.- 6 p.m. Pool hours are 7 a.m. - 9 a.m., 11 a.m. - 1 p.m., 4 p.m. - 7 p.m. Mondays through Fridays; Saturday 10 a.m. - 4 p.m.; Sunday 4 p.m. - 6 p.m. Hours are subject to change during breaks and holidays.

To obtain more information on Campus Recreation's program and services call 439-7980, or visit <http://etsu.edu/students/intramur>. Other campus opportunities can be explored on the campus web site at <http://www.etsu.edu/etsu/campuslife.asp>.

### **Center for Community Engagement, Learning and Leadership**

The Center for Community Engagement, Learning and Leadership serves as the resource center for all registered student organizations. It provides services and information, such as registration of organizations, assistance with event planning, maintenance of student activity calendar of events, and leadership training for student organizations. There are approximately 150 registered student organizations on the campus of ETSU, representing the diverse interests of our student population. Student organizations at ETSU are categorized into one of the following areas which best describes their general purpose: Academic, Community Service, Governance, Greek, Honors, Religious, Residence Life, University Programs, and Special Interest. Contact the Student Organization Resource Center at (423) 439-6633 or visit the web at [www.etsu.edu/sorc](http://www.etsu.edu/sorc) for more information.

### **Counseling Center**

The University Counseling Center provides an array of counseling and mental health services to ETSU students, including personal counseling, career counseling and assessment, educational programming, psychiatric services, and consultative services. The staff is comprised of psychologists, an outreach coordinator, psychiatric residents, graduate assistants, and support staff. The Center is also responsible for the Campus Alcohol and Other Drug Program and the Campus Advocates Against Sexual Violence Program. We provide our career services through the Peer Career Center, located in the Advisement, Resources, and Career (ARC) Center. Counseling services are confidential and free to all ETSU students. For more information about our services, contact our main number (423) 439-4841 or contact the Peer Career Center (423) 439-8651 - [www.etsu.edu/students/counsel/counsel.htm](http://www.etsu.edu/students/counsel/counsel.htm).

### **Computing Resources**

ETSU provides a wide range of computer resources in support of instruction, research, and public service. The Office of Information Technology maintains four computer labs on the main campus that contain Dell PCs and Macintosh computers. The labs are located in the D.P. Culp Center, Sherrod Library, Sam Wilson Hall and Rogers-Stout Hall. A number of additional labs that are maintained by specific departments, including the Medical Library on the VA campus, are located throughout the campus. A listing of computer labs can be found at [www.etsu.edu/oit](http://www.etsu.edu/oit). The labs provide students with access to a variety of popular and software including Microsoft Office, Microsoft Visual Studio.net, SAS, SPSS, and Minitab, Photoshop, PageMaker, QuarkXpress, and Macromedia Freehand. When not in use as classrooms, computer labs are available for walk-in use by any registered student.

The OIT computer labs are staffed by Lab Monitors (student workers) at all times. While the lab monitors can provide assistance, they are not tutors in the use of the computers and software.

All students are provided with Internet access and an e-mail address that will be active for the duration of their stay at ETSU. Students are able to register for classes and even pay fees online via *Goldlink* on ETSU's web page.

### **Computer Resources Code of Ethics**

All users of any institutionally maintained electronic data, data files, software, and networks are expected to handle the resource in a responsible and ethical manner. A user's interest ceases when it invades the right of personal and/or institutional privacy; results in the destruction of personal and/or institutional property; demonstrates a potential for loss, embarrassment, litigation to the individual and/or institution; or causes a limited resource to be used in a wasteful or careless manner.

All information processed through Computer Services is considered sensitive and/or confidential. The responsibility for the release or discussion of data is assigned to the official custodian of the data file(s). Access to information is based on a legitimate "need to know" and directly related to assigned duties.

University electronically maintained data, data files, software, and networks will be used for authorized purposes only. Users are responsible for the security of the resources.

Any use of the resource deemed irresponsible or unethical (as defined in the Faculty Handbook section 1.10.1) will result in the immediate denial of use of the resource. The violation will be referred to the proper authorities for disciplinary and/or legal action including, but not limited to, restitution, restriction, reprimand, suspension, probation, expulsion, termination, and, if necessary, legal action. Appeals will be handled through due process channels (APA) already established for students and/or staff. Student violations will be referred to the Vice President for Student Affairs and/or Vice President for Health Affairs; faculty violations will be referred to the Vice President for Academic Affairs and/or the Vice President for Health Affairs; and staff violations will be referred to the Vice President for Administration and Development. The following examples attempt to convey the intent of irresponsible and/or unethical use: violation of Federal/State copyright laws; violation of the Family Educational Rights and Privacy Act of 1974; use of the resource for obscene material; deliberate wasteful use of the resource, unauthorized altering of hardware, software, or data; piracy of data or software belonging to another person; or careless use of the resource which may result in the release of restricted information.

### **Computer Network and Internet Access: Privileges & Responsibilities**

East Tennessee State University (ETSU) operates a wide-area network that interconnects local area networks in academic and administrative offices, student computer labs, and in the future dormitory rooms. The university maintains connections into the Tennessee Education Cooperative Network (TECnet), the Internet and the World Wide Web. Thus, the university's network is a part of the global network that provides access to information and information

processing technologies. By having access to the university's network and its resources, students, faculty, and staff can communicate and collaborate among themselves and their counterparts throughout the world. This privilege carries with it responsibilities with which all users must comply.

Everyone within the ETSU community who uses networked computing and communications facilities has the responsibility to use them in an ethical, professional and legal manner, and to abide by TECnet policies. Users should respect the privacy rights of others. ETSU's facilities and network access capabilities should never be used for purposes intended to incite crime. Communications which violate Tennessee, federal, or international law are not acceptable. For example, the use of ETSU's computer and network resources to threaten or harass others or the misrepresentation of one's identity in electronic communications for the purpose of illegal or unauthorized actions or activities will not be tolerated.

These statements concerning responsibility are not meant to be exhaustive. Any questionable use should be considered "not acceptable." Serious or repeated instances of abuse will be referred to the proper authority for disciplinary or legal action.

**\*\*WARNING\*\*** Any person who knowingly brings on campus, has in their possession or distributes any virus without the authorization and written permission of the Division of Information Resources, will be considered to be in violation of the above and will be vigorously prosecuted. **\*\*Campus\*\*** is defined to include any property owned, leased, maintained or controlled by ETSU and includes any site or area where any system owned, leased, operated and/or maintained by ETSU is housed.

**NOTICE TO USERS:** It is the policy of East Tennessee State University to protect all institutional computing resources including, but not limited to, hardware and software, consisting of the actual equipment being supplied by the university as well as the programs and related materials used in conjunction therewith. In accordance with local, state, and federal law, indiscriminate examination of individual user's files is not permitted, nonetheless as a means of maintaining the integrity and security of those aforementioned resources.

East Tennessee State University retains the right to inspect individual accounts and files stored on any system owned, maintained and/or leased by said university. While no prior authorization by individual users is required to inspect those files and accounts, the user is, by virtue of accepting the account offered by ETSU and "logging" on to its computing equipment, granting to the university prior unrestricted permission, subject to university policy, to review, examine and/or otherwise view, by any method at the sole discretion of the university and without any additional advance notice to said user, any account and/or file stored on university computer resources.

Should such a review take place, the user will be given notice, as a courtesy only, of the results of said review within a reasonable time after the review is completed. While use of university computing resources for personal use is strictly forbidden, should the user have materials for which he/she has any reasonable expectation of privacy or which the user

considers to be confidential for any reason, the user should retain those materials on a disk which can be secured as would any other personal items or materials which one consider private in nature.

For such a policy to work, it is essential that users observe responsible and ethical behavior in the use of the resources. In an effort to assist the user community in effective use of the limited computer resources, it seems reasonable to highlight some specific responsibilities and types of behavior that represent abuse of a user's privilege. The examples do not constitute a complete list but are intended to convey the intent of the code.

Users should not damage or attempt to damage computer equipment or to modify or attempt to modify equipment so that it does not function as originally intended. It is equally wrong to damage or modify or attempt to damage or modify the software components: operating systems, compilers, utility routines, etc.

Users should not use or attempt to use an account without authorization from the owner of that account. Users have the responsibility of protecting their accounts through the proper use of passwords, but the fact that an account is unprotected does not imply permission for an unauthorized person to use it. Further, accounts are to be used only for the purposes for which they have been established. [Only the individual owner of an account is authorized to use that account. Providing passwords or in any way permitting or making it possible for anyone other than the authorized owner of the account to use computer resources is not authorized and may be a violation of Tennessee Law. Under this condition both the owner and the unauthorized user may be subject to legal action if determined to be appropriate by ETSU legal counsel.] Additionally, it is wrong to use a university-sponsored account for funded research, personal business, or consulting activities. There are special accounts for such purposes.

Users should not use private files without authorization. Owners of such files should take precautions and use the security mechanisms available. However, the fact that a file is not protected does not make it right for anyone to access it, unless it is specifically designed as a public access file. It is equally wrong for anyone to change or delete a file that belongs to anyone else without authorization. Violation of property rights and copyrights covering data, computer programs, and documentation is also wrong. In the event of accidental access of private files, confidentiality of those files must be maintained.

Any deliberate wasteful use of resources is irresponsible; it encroaches on others' use of facilities and deprives them of resources. Printing of large unnecessary listings and the playing of games solely for entertainment are examples of such abuse. Users are expected to be aware of the resources they are using and to make reasonable efforts to use these resources efficiently.

All state and federal copyright laws will be abided by at all times. Users must not copy any part of a copyrighted program or its documentation which would be in violation of the law or the licensing agreement without written and specific permissions of the copyright holder. Serious or repeated instances of abuse of computer facilities and resources will be referred to

the proper authorities for disciplinary or legal action including, but not limited to, restitution, restrictions, reprimand, suspension, probation, expulsion, or termination.

### **Disability Services**

In compliance with federal regulations outlined in Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, East Tennessee State University makes accommodations, course substitutions, and other academic adjustments when necessary to ensure equal access for students with disabilities. While all students with disabilities are protected from discrimination, some students may not be eligible for all of the services coordinated by Disability Services. Classroom and testing accommodations are made on an individual case-by-case basis. Students who wish may request an accommodation or academic adjustment because of a disability by completing the intake process with Disability Services self-identity.

During the intake process, Disability Services informs students of procedures surrounding the accommodation process, student responsibilities, as well as ETSU responsibilities. Eligibility for classroom and testing accommodations and other support services coordinated by Disability Services is based on the review of student's documentation of disability. Intake applications are not complete until Disability Services has received and reviewed current documentation of disability. Individualized education plans (IEP) cannot be used as documentation; however, information included in an IEP may be helpful when identifying the services a student may utilize while at ETSU.

In order to establish eligibility, the documentation provided should follow the established guidelines and include:

- Statement of diagnosis, date of most recent evaluation, and when available, date of original diagnosis by an impartial professional,
- Description of diagnostic criteria and/or diagnostic tests used,
- Description of the current impact of the disability in an academic environment,
- Credentials of the diagnosing professional,
- Documentation of attention deficit disorders should be no more than three years old, and
- Documentation of learning disabilities should be no more than five years old with results based on an adult measurement scale.

The diagnosing professional must have specific training and expertise in a field related to the type of disability being diagnosed. For example, a psychologist, psychiatrist, or educational examiner must make a learning disability diagnosis. Documentation not including the information outlined above or from a professional whose credentials are not generally indicative of expertise in the specific disability being diagnosed can not be used to establish eligibility for services. ETSU does not provide any type of learning disabilities evaluations; however, Disability Services maintains a list of professionals in private practice that can evaluate learning disabilities.

Disability Services is located in the D.P. Culp Center, on J. L. Seehorn, Jr. Road (v/tdd) (423) 439-8346, (tdd) (423) 439-8370 - [www.etsu.edu/students/disable/disable.htm](http://www.etsu.edu/students/disable/disable.htm).

### **Early Childhood Learning and Development**

The Center for Early Childhood Learning and Development operates programs to serve the needs of young children and their families. Some of these programs offer child care services for families. The Infant-Toddler programs serve children ages three months to three years in a full-year, full-day program. The Early Learning Program, Child Study Center, serves children ages three through five years of age in a full-year, full-day program. Students who are interested in enrolling their children in either of the programs can obtain more information by calling (423) 439-7555. Enrollment is on a limited basis. <http://child.etsu.edu>.

A child care program, Little Buccaneers Student Child Care Center, specifically designed to meet the needs of ETSU students, opened in June 1997. ETSU students can enroll their children for blocks of time each semester that would accommodate their child care needs while attending classes and during study times. This program is supported by the Student Activities Allocation Committee and ETSU. Information for this program can be obtained by calling 439-7549.

### **Housing and Residence Life**

Student pharmacists who want to live on campus will probably find the following residences more conducive for professional studies. Buccaneer Ridge has fully furnished 2 and 4 bedroom units. Buccaneer Village has efficiencies, one bedroom, and two bedroom units for families. Detailed information on university housing, including costs, is available at <http://www.etsu.edu/students/housing/housing.htm>.

#### *Buccaneer Village*

Apartments are available for married or single parents or single graduate and professional students. These include one and two bedroom apartments for married or single parents and a limited number of private efficiency apartments for graduate students. Rent, which includes water, telephone (except for long-distance calls), data access, and cable TV hookup, is payable on a per semester basis. Electric bills are payable by the month.

#### *Buccaneer Ridge Apartments*

Two and four single occupancy bedroom apartment units are available. Each apartment contains a furnished living area, single bedrooms with double bed, closet, desk, and chest of drawers; kitchen facilities, including full-sized refrigerator, stove, microwave, and garbage disposal; washer and dryer; patio or balcony; and two bathrooms. Each bedroom is provided with an alarm system; telephone, cable TV and data jack; and individual locks. Residents enjoy a clubhouse with copier and fax availability; lounging pool; volleyball and basketball courts; exercise room; access gate; and individual leases with no connection fees.

#### *Application Procedure*

An application for housing may be obtained by contacting the Department of Housing and Residence Life. Early application, preferably before April 1, for fall semester and October 1 for spring semester is encouraged. Assignments for fall semester begin in April and mid-December for spring. A completed application and a \$100/\$150 reservation/damage deposit is required and accepted at any time. Detailed information about on-campus housing may be obtained by contacting the Department of Housing and Residence Life at (423) 439-4446 or on the web at [www.etsu.edu/housing/housing.htm](http://www.etsu.edu/housing/housing.htm).

Off-campus housing in the Johnson City area is plentiful. Additional off-campus housing information is available at the Adult, Commuter, and Transfer Services web site.

([http://www.etsu.edu/students/acts/off\\_campus\\_housing.asp](http://www.etsu.edu/students/acts/off_campus_housing.asp))

### **International Programs and Services**

The International Programs and Services Office, located on the first floor of Yoakley Hall, serves the international community of visiting international students and scholars from more than 60 countries who attend or visit ETSU. Programming, advising, immigration paperwork, community outreach and the Friendship Family Program are among the many services offered by the office. ([www.etsu.edu/honors/international](http://www.etsu.edu/honors/international))

### **Public Safety**

The Public Safety Building is located at the entrance of the university on University Parkway and has personnel on duty 24 hours a day for assistance. The emergency telephone number is 911. The public safety staff is composed of 21 state-certified sworn police officers who are also trained firefighters. Public safety is a full-service police department encompassing traffic and parking enforcement, uniformed patrol, criminal investigations, and crime prevention education. Public Safety also provides these services: an escort service, engravers, booster cables, and battery booster packs. The non-emergency telephone number is (423) 439-4480. The number for the administrative offices is (423) 439-6900.

### **Student Government Association**

The Student Government Association (SGA) strives to represent the opinions of the students on every aspect of campus academic and extracurricular life. Its members work closely with students, faculty, and administration to provide advice and information and a strong voice in the governance of the university. The SGA office is located near the Center for Community Engagement, Learning, and Leadership on the lower level of the D.P. Culp University Center, phone (423) 439-4253.

### **Student Health Services**

The Student Health Clinic is part of the College of Nursing Faculty Practice Network. Clinic services are available to all enrolled students. The professional staff includes nurse practitioners, physicians, registered nurses, and a health educator. Services include: Management of acute, episodic illnesses and injuries, Referrals for assistance in managing chronic disorders, Immunizations, Women's health program and assistance with family planning, Men's health program, Allergy clinic for those receiving allergy injections, Patient education programs on a variety of topics. The Student Health Clinic is located in room 160 Nicks Hall. Please call (423) 439-4225 for further information.

The Dental Hygiene Clinic offers comprehensive preventive therapeutic procedures such as scaling and polishing teeth, pit and fissure sealants, nutritional counseling, periodontal therapy, patient education and exposing and developing radiographs. All treatment is performed, for a modest fee, by dental hygiene students under the supervision of the licensed dentist and dental hygiene faculty. Services are open to all students, university employees, and the general public. Appointments may be obtained by contacting the Dental Hygiene Clinic at 439-4514 in Lamb Hall, room 71.

The Speech-Language-Hearing Clinic, a component of the Department of Communicative Disorders, provides professional speech-language pathology and audiology services to students, faculty, and the general public. The service is provided by speech-language pathology and audiology graduate students under the direct supervision of licensed Speech-Language Pathologists and Audiologists. The areas of service include speech and hearing evaluation, hearing aid evaluation, and treatment of speech and hearing disorders through therapy. Intervention may be available for deficits in articulation, phonology, language, voice, and fluency. The clinic is located in Room 204 of Lamb Hall. Please call (423) 439-4355 for appointments or information.

**University Center, D.P. Culp**

The D.P. Culp University Center is a modern architecturally designed student center conveniently located in the heart of campus. The specific purpose of the Culp Center is to serve students as an integral part of their educational life. The Culp University Center provides a wide variety of services, entertainment, and social activities for the campus community. The Culp Center houses five separate food service areas, the bookstore, the post office, a mini-market, a computer lab, a variety of administrative offices, meeting rooms and conference facilities, a ballroom, and an auditorium/theater. For information regarding the use and reservation of these facilities, contact the Culp Center office at (423) 439-4286.

**ADMINISTRATIVE LISTING**  
*Tennessee Board of Regents*

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**Phil Bredeesen**, Chair  
Governor of Tennessee

**Charles W. Manning**  
Chancellor

**Richard Rhoda**  
Tennessee Higher Education Commission

**Ken Givens**  
Commissioner of Agriculture

**Tim Webb**  
Commissioner of Education

**Agenia W. Clark**  
Nashville (7<sup>th</sup> District)

**John S. Copeland**  
Cookeville (6<sup>th</sup> District)

**Gregory Duckett**  
Memphis (9<sup>th</sup> District)

**Pam Fansler**  
Knoxville (2<sup>nd</sup> District)

**John Farris**  
Memphis (At-large West Tennessee)

**Barry Gidcomb**  
Columbia (Faculty Regent)

**Judy T. Gooch**  
Oak Ridge (3<sup>rd</sup> District)

**Jonas Kisber**  
Jackson (8<sup>th</sup> District)

**Fran F. Marcum**  
Tullahoma (4<sup>th</sup> District)

**Casey McCullum**  
Athens (Student Regent)

**Paul Montgomery**  
Kingsport (1<sup>st</sup> District)

**Howard W. Roddy**  
Hixson (At-large East Tennessee)

**J. Stanley Rogers**  
Manchester (At-large Middle Tennessee)

**Robert P. Thomas**, Vice Chair  
Nashville (5<sup>th</sup> District)

*ETSU Administration*

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**Paul E. Stanton, Jr., M.D.**  
President

**Bert C. Bach, Ph.D.**  
Provost and Vice President, Academic  
Affairs

**Wilsie S. Bishop, D.P.A.**  
Vice President, Health Affairs and  
University Chief Operating Officer

**David Collins, Ed.D, CPA**  
Vice President for Finance and  
Administration

**Richard A. Manahan, Ed.D, CPA**  
Vice President for University Advancement  
and President, ETSU Foundation

*College of Pharmacy Administration*

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**Larry D. Calhoun, PharmD**  
Dean and Professor

**Sherry Armitage, M.A.**  
Executive Assistant to the Dean

**Cheri W. Clavier, M.S.**  
Director of Academic Affairs and  
Assessment

**Michael A. Crouch, PharmD**  
Associate Dean for Professional Education  
and Academic Affairs

**Steve C. Ellis, M.S.**  
Assistant Dean for Student Affairs and  
Director of Enrollment and Student  
Services

**Robin M. Henry, PharmD**  
Director, Experiential Experience

**Ralph A. Lugo, PharmD**  
Chair, Pharmacy Practice

**David S. Roane, Ph.D.**  
Chair, Pharmaceutical Sciences

## FACULTY LISTING

### *Department of Pharmacy Practice*

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**Lugo, Ralph A. (2006)** Professor Chair  
B.S. in Pharmacy (1988) Rutgers University  
PharmD (1991) University of North Carolina Eshelman School of Pharmacy

**Cross, Leonard B. (2010)** Associate Professor Vice-Chair  
B.S. in Pharmacy (1991) West Virginia University  
PharmD (2000) University of Tennessee Health Sciences Center College of Pharmacy

**Creekmore, Jr., Freddy M. (2007)** Associate Professor Vice Chair  
B.S. in Pharmacy (1989) University of Kentucky College of Pharmacy  
PharmD (1990) University of Kentucky College of Pharmacy

**Bossaer, John B. (2009)** Assistant Professor  
PharmD (2007) Purdue University College of Pharmacy and Pharmaceutical Sciences

**Calhoun, Larry D. (2005)** Professor  
B.S. in Pharmacy (1972) University of Tennessee Health Sciences Center College of Pharmacy  
PharmD (1973) University of Tennessee Health Sciences Center College of Pharmacy

**Creekmore, Kathryn A. (2007)** Assistant Professor  
B.S. in Pharmacy (1989) University of Minnesota College of Pharmacy  
PharmD (1990) University of Minnesota College of Pharmacy

**Crouch, Michael A. (2010)** Professor  
B.S. in Pharmacy (1992) University of North Carolina Eshelman School of Pharmacy  
PharmD (1995) Medical University of South Carolina

**Flores, Emily K. (2008)** Assistant Professor  
PharmD (2006) Medical University of South Carolina

**Stacy Eon (2010)** Assistant Professor  
PharmD (2008) Purdue University College of Pharmacy and Pharmaceutical Sciences

**Gentry, Chad K. (2009)** Assistant Professor  
PharmD (2008) University of Tennessee Health Sciences Center College of Pharmacy

**Gray, Jeffrey A. (2008)** Assistant Professor  
PharmD (1996) Mercer University Southern School of Pharmacy

**Hall, Larissa N. (2009)** Assistant Professor  
PharmD (2007) Virginia Commonwealth University School of Pharmacy

**Hess, Jr., Richard A. (2007)** Assistant Professor  
B.S. in Biology (1992) University of South Florida  
PharmD (1998) Mercer University Southern School of Pharmacy

**Hocker, Linsey A. (2009)** Assistant Professor  
PharmD (2007) University of South Carolina College of Pharmacy

**Odle, Brian L. (2007)** Assistant Professor  
B.S. in Chemistry (1990) Middle Tennessee State University  
PharmD (1994) University of Tennessee Health Sciences Center College of Pharmacy

**Stewart, David W. (2007)** Assistant Professor  
PharmD (2003) Campbell University School of Pharmacy

*Department of Pharmaceutical Sciences*

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**Roane, David S. (2006)** Professor Chair  
B.A. in Journalism (1979) Drake University  
B.S. in Zoology (1984) Louisiana Tech University  
Ph.D. (1987) Louisiana State University Medical Center

**Hurley, David L. (2007)** Associate Professor Vice Chair  
B.S. in Biology & Physics (1979) Guilford College  
M.S. (1982) Pennsylvania State University  
Ph.D. (1986) Pennsylvania State University

**Brown, Stacy D. (2007)** Assistant Professor  
B.S. (1998) University of Tennessee at Chattanooga  
Ph.D. (2002) University of Georgia College of Pharmacy

**Collins, Charles C. (2006)** Professor  
B.S. in Pharmacy (1977) West Virginia University  
Ph.D. (1984) West Virginia University

**Harirforoosh, Saeidreza (2007)** Assistant Professor  
PharmD (1991) Tehran University  
Ph.D. in Pharmaceutical Sciences (2005) University of Alberta

**Panus, Peter C. (2007)** Associate Professor  
B.A. (1979) Huntingdon College  
B.S. (1981) University of South Alabama  
B.S. in Physical Therapy (1994) University of South Alabama  
Ph.D. (1985) University of South Alabama

**Pond, Brooks B. (2007)** Assistant Professor  
B.S. (2000) Centre College  
Ph.D. (2004) Duke University Medical Center

**Ramsauer, Victoria Palau (2007)** Assistant Professor  
B.A. (1979) Pontificia Universidad Javeriana  
Ph.D. (1999) Florida International University

### *Faculty Affiliates*

#### *College of Medicine*

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**Duffourc, Michelle M. (1998)** Assistant Professor, Pharmacology  
B.S. (1985) University of South Alabama.  
Ph.D. (1993) University of South Alabama

**Johnson, David A. (1978)** Professor, Biochemistry and Molecular Biology  
Adjunct Faculty, Biological Sciences  
B.S. (1967) Memphis State University  
Ph.D. (1973) Memphis State University

**Robinson, Mitchell E. (1985)** Professor, Biochemistry and Molecular Biology and  
Associate Dean for Graduate Studies Adjunct Faculty, Biological Sciences  
B.S. (1976) University of North Carolina, Chapel Hill  
M.S. (1978) Western Carolina University  
Ph.D. (1983) Wake Forest University Bowman Gray School of Medicine

**Rusinol, Antonio E. (1996)** Assistant Professor, Biochemistry and Molecular Biology  
B.Sc. (1983) National University of Tucuman, Tucuman, Argentina  
Ph.D. (1990) National University of Tucuman, Tucuman, Argentina

**Thewke, Douglas P. (1996)** Assistant Professor, Biochemistry and Molecular Biology  
M.Sc. (1990) Central University of Pondicherry  
M.Phil. (1992) Central University of Hyderabad  
Ph.D. (1995) Central University of Hyderabad

#### *College of Public Health*

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**Chakraborty, Ranjan N. (2001)** Assistant Professor, Health Sciences  
B.S. (1979) Gujarat University, India  
M.S. (1981) University of Baroda, India  
Ph.D. (2003) Sardar Patel University, India

**Gallagher, Michael T. (1989)** Professor and Chair, Health Sciences  
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