

East Tennessee State University



College of Pharmacy

Catalog

2007 to 2008

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ACADEMIC CALENDAR January 2008 through May 2010 Official as of January 15, 2008 (Subject to Change)

Semester Five Class of 2010 Semester Three Class of 2011 Semester One Class of 2012 Orientation – Class of 2012 Classes begin Labor Day Fall Break Thanksgiving Holiday Last day of classes Final Exams

Semester Four Class of 2010 Semester Two Class of 2011

Classes begin Martin Luther King Holiday Spring Break Good Friday Last day of classes Final exams

Final exams

Semester Four Class of 2010 – Summer Continuation

EPPE I Community (two consecutive weeks during summer) **EPPE II Institutional** (two consecutive weeks during summer)

Semester Five Class of 2010 Semester Three Class of 2011 Semester One Class of 2012 Orientation – Class of 2012 Classes begin Labor Day Fall Break Thanksgiving Holiday Last day of classes Final Exams August 6 to 9, 2008 August 11, 2008 September 1, 2008 October 13 to 14, 2008 November 27 to 28, 2008 December 5, 2008 December 8 to 12, 2008

January 7, 2008 January 21, 2008 March 3 to 8, 2008 March 21, 2008 May 2, 2008 May 5 to 9, 2008

To be assigned To be assigned

August 6 to 9, 2008 August 11, 2008 September 1, 2008 October 13 to 14, 2008 November 27 to 28, 2008 December 5, 2008 December 8 to 12, 2008

Semester Six Class of 2010 Semester Four Class of 2011	
Semester Two Class of 2012	
Classes begin	January 5, 2009
Martin Luther King Holiday	January 19, 2009
Spring Break	March 9 to 14, 2009
Good Friday	April 10, 2009
Last day of classes	May 1, 2009
Final exams	May 4 to 8, 2009
First Day of P4 APPEs	May 11, 2009
Semester Four Class of 2011 – Summer Continuation	

Semester Four Class of 2011 – Summer Continuation

EPPE I Community (two consecutive weeks during summer)	To be assigned
EPPE II Institutional (two consecutive weeks during summer)	To be assigned

Semester Seven and Eight Class of 2010: Advanced Pharmacy Practice Experiences

Session One	May 11 to June 19, 2009
Session Two	June 22 to July 31, 2009
Session Three	August 3 to September 11, 2009
Session Four	September 14 to October 23, 2009
Session Five	October 26 to December 4, 2009
Session Six	January 4 to February 12, 2010
Session Seven	February 15 to March 26, 2010
Session Eight	March 29 to May 7, 2010

Semester Five Class of 2011 Semester Three Class of 2012 Semester One Class of 2013 Orientation – Class of 2012 Classes begin Labor Day Fall Break Thanksgiving Holiday Last day of classes Final Exams

August 12 to 15, 2009 August 17, 2009 September 7, 2009 October 19 to 20, 2009 November 26 to 27, 2009 December 11, 2009 December 14 to 18, 2009

Semester Six Class of 2011	
Semester Four Class of 2012	
Semester Two Class of 2013	
Classes begin	January 4, 2010
Martin Luther King Holiday	January 18, 2010
Spring Break	March 8 to 13, 2010
Good Friday	April 2, 2010
Last day of classes	April 30, 2010
Final exams	May 3 to 7, 2010
University Commencement – Class of 2010	May 8, 2010
First Day of P4 APPEs	May 10, 2010

Semester Four Class of 2012 – Summer Continuation

EPPE I Community (two consecutive weeks during summer)	To be assigned
EPPE II Institutional (two consecutive weeks during summer)	To be assigned

Semester Seven and Eight Class of 2011: Advanced Pharmacy Practice Experiences

(Dates are tentative)

Session One Session Two Session Three Session Four Session Five Session Six Session Seven Session Eight

May 10 to June 18, 2010 June 21 to July 30, 2010 August 2 to September 10, 2010 September 13 to October 22, 2010 October 25 to December 3, 2010 January 3 to February 11, 2011 February 14 to March 25, 2011 March 28 to May 6, 2011

INTRODUCTION

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 Tennessee technology centers, enrolling more than 80 percent of all Tennessee students attending public institutions of higher education. 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 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 five years. Students not completing requirements within the five-year period may be required to meet subsequent criteria; it is further provided, however, that the six-year 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:

1. 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.

2. 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 to 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.

3. 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

ETSU contracts the publication of a directory, which shows student names, addresses (email, 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. This form is provided during orientation and is available through the Office of Student Affairs and must be submitted prior to the published last date to add a course for the fall term. 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.

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.

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.

Student's 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 award certificate, associate, bachelor's, master's, educational specialist, doctor of education, Ph.D., M.D. and Pharm.D. degrees.

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 Statement

East Tennessee State University seeks to:

- Educate students to become responsible, enlightened, and productive citizens;
- Conduct scholarship that improves the human condition;
- Serve business, education, government, health care systems, and communities; and
- Enhance the cultural environment of the region.

ETSU Values

ETSU 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.

ETSU Strategic Goals for the 2005-2010 Planning Cycle

- 1. Demonstrate leadership for our region by
 - promoting and enhancing P-16 education,
 - enhancing workforce development for the health professions,
 - establishing successful technology-based start-up and spin-off companies through the ETSU Innovation Laboratory,
 - enhancing students' active development of civic responsibility,
 - pursuing the use of advanced technologies, and
 - expanding externally-funded research.
- 2. Enhancing the rate and diversity of participation in higher education by
 - increasing the rate of participation of targeted student populations, and
 - designing and implementing a multi-variant review model for consonance between student and/or employer demand.
- 3. Demonstrate quality of programs and services by
 - implementing campus-wide quality institutional effectiveness initiatives,
 - providing general education, academic programs and co-curricular opportunities that meet high standards of quality,
 - enhancing civic responsibility and student engagement,
 - recruiting, retaining, and developing faculty and staff diversity,
 - increasing student retention and persistence to graduation, and
 - continued implementation of our SACS Quality Enhancement Plan for student success.
- 4. Demonstrate successful management of resources by expanding use of nationally recognized databases or benchmarking tools to inform resource management,
 - increasing awareness and commitment to philanthropic fund-raising projects,
 - promoting entrepreneurial and partnership initiatives to attain additional resources, and
 - striving to achieve optimal efficiency in its use of resources.

COLLEGE OF PHARMACY

The East Tennessee State University College of Pharmacy is an integral component of East Tennessee State University Division of Health Affairs which is comprised of the 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, which leads to a Doctor of Pharmacy Degree (Pharm.D.), is designed to prepare pharmacists to work in rural community and institutional-based practices.

ETSU along with community leaders had been investigating the feasibility of initiating a college of pharmacy for over a decade. With the state's only college of pharmacy almost 500 miles away, most students from this region choose to attend out-of-state public and private institutions for their pharmacy education. As a result, few return to this area to practice. That fact, plus the lack of state funds for a second state-funded college of pharmacy, has 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 made up of ETSU faculty and staff, pharmacy community leaders, and community leaders at-large began to develop and implement such a plan.

Approval was eventually obtained from the ETSU system, the Tennessee Board of Regents, and the Tennessee Higher Education Commission. 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 that announcement at ETSU. Recognizing the value of a college of pharmacy at ETSU, over 900 individuals and organizations contributed financially to this effort. The support and energy from the people of this region have been clearly evident throughout this process.

Accreditation

The Accreditation Council for Pharmacy Education (ACPE) accredits Doctor of Pharmacy programs offered by Colleges and Schools of Pharmacy in the United States and selected non-U.S. sites. For a Doctor of Pharmacy program offered by a new College or School of Pharmacy, ACPE accreditation involves three steps: Precandidate status, Candidate status, and Full accreditation. Precandidate accreditation status denotes a developmental program, which is expected to mature in accord with stated plans and within a defined time period. Precandidate status is awarded to a new program of a College or School of Pharmacy that has not yet enrolled students in the professional program, and authorizes the school to admit its first class. Candidate accreditation status is awarded to a Doctor of Pharmacy program that has students enrolled, but has not yet had a graduating class. Full accreditation is awarded to a

a program that has met all ACPE standards for accreditation and has graduated its first class. Graduates of a class designated as having Candidate status have the same rights and privileges of those graduates from a fully accredited program. ACPE conveys its decisions to the various boards of pharmacy and makes recommendations in accord with its decisions. It should be noted, however, that decisions concerning eligibility for licensure, by examination or reciprocity, reside with the respective state boards of pharmacy in accordance with their state statutes and administrative rules.

The Doctor of Pharmacy program of East Tennessee State University College of Pharmacy was awarded precandidate accreditation status during the January 10-13, 2007, meeting of the ACPE Board of Directors, based upon an on-site evaluation conducted October 24-25, 2006, and discussion with University and College officials. Following the enrollment of the inaugural class of students in January 2007, an on-site evaluation will be scheduled during academic year 2007-2008 for purposes of gathering additional information to be considered in the Board's consideration of advancement to Candidate accreditation status. Based upon this evaluation, should the Board feel that Candidate status cannot be conferred; the College could respond to the Board's concerns and reapply prior to the graduation of the first class. If Candidate status is not granted, even after reapplication, graduates may not be eligible for licensure as pharmacists. If Candidate status is granted and the program continues to develop as planned, full accreditation of students from the program.

Memberships

American Association of Colleges of Pharmacy – associate institutional member

Diversity

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

Mission

The mission of the ETSU 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 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 health care 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 health care, 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 health care 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 INFORMATION (Fall 2008 entering class)

Admission to the East Tennessee State University College of Pharmacy 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 institutional or rural community pharmacy practice and an interest in rural health. ETSU College of Pharmacy uses a rolling admissions process which allows for interviews and final action on applications throughout the admissions cycle.

Application should be made to the Pharmacy College Application Service (PharmCAS) via its web site, <u>www.PharmCAS.org</u>. Repeat applicants either to PharmCAS or ETSU are required to resend all test scores, references and official transcripts. All materials must be received by PharmCAS prior to our admissions deadline of January 4, 2008.

Supplemental Application

After applying through PharmCAS, a supplemental application must be submitted via the ETSU College of Pharmacy web site. The online application is available at <u>www.etsu.edu/pharmacy</u>. The PharmCAS ID number is required, so applicants must begin their PharmCAS application prior to initiating their supplemental application. The supplemental application and non-refundable fee payment (\$50) must be received in the ETSU College of Pharmacy Admissions Office prior to January 4, 2008. This payment is required to complete the application process and therefore must be received before the application is considered by the Admissions Committee.

Selection Criteria

The Admissions Committee evaluates applicants on the basis of demonstrated academic achievement, PCAT scores, letters of recommendation, pertinent extracurricular activities, evidence of non-scholastic accomplishments, strong knowledge and understanding of the profession and demonstrated motivation for the study and practice of pharmacy consistent with the mission of the ETSU College of Pharmacy. The ETSU College of Pharmacy emphasizes and continues its commitment to increasing the number of qualified pharmacists from currently under-represented minority groups and from disadvantaged backgrounds. The school actively promotes and encourages applicants from these groups. Eligibility for admission shall be determined without regard to age, sex, color, race, religion, national origin, disability, or sexual orientation. Criteria for admission are integrity; willingness and ability to assume responsibility; high scholastic achievement; maturity; intellectual curiosity; and sound motivation.

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 admissions process. These skills and abilities are essential in becoming a practicing pharmacist and a self-directed, lifelong learner.

Requirements for Admission

The ETSU College of Pharmacy has established certain prerequisites for admission that provide an essential background to pharmacy education. The minimum admissions requirements set forth the criteria that must be met before the applicant can be admitted. A higher admissions priority will be afforded to those applicants who exceed the minimum stated requirements.

Citizenship

In order to be admitted, an applicant must be a U.S. citizen or possess a U.S. Permanent Resident Visa and must have completed at least 63 semester hours of undergraduate courses at a college or university that is accredited by a regional accrediting agency that is recognized by the United States Department of Education (U.S.D.E.), which must include the Specific Academic Requirements (see below).

Pharmacy College Admission Test (PCAT)

In an effort to obtain predictive information on our applicants, 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 on the Pharmacy College Admission Test (PCAT) to PharmCAS (code 104). Applicants may submit competitive scores from any administration of the PCAT taken within three (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 preprofessional advisor or at http://www.PCATweb.info.

Misrepresentation of Academic 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.

Experience

Each application is examined for evidence of an applicant's firsthand exposure to health care as an indication 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 ETSU College of Pharmacy encourages applications from residents of Tennessee and residents of our contiguous Appalachian service area interested in our emphasis on the practice of rural institutional or community pharmacy. Because the ETSU College of Pharmacy is a tuition-funded program, tuition is the same for Tennessee residents and non-residents.

Letters of Recommendation

At least two recommendations are required. One letter must be from a faculty member who has taught the student (biology, chemistry, physics or math recommended) or a preprofessional advisor or committee at the applicant's academic institution. The second letter should be from a health care professional capable of attesting to the student's potential as a health care professional. Employer evaluations may also be submitted. PharmCAS instructions should be followed. Applicants are encouraged to provide "Expectations for Those Writing Recommendations" (posted on the ETSU College of Pharmacy web site) to the individuals they use as references.

Interview

Selected applicants are invited to visit ETSU for personal interviews with members of the Admissions Committee. Interviews are held by invitation only, and all related expenses are the sole responsibility of the applicant. 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 accommodation arrangements are the responsibility of the applicant. On the day of the interview, the applicant should expect to meet with two members of the Admissions Committee. The invitation to interview does not guarantee or imply any specific action on the part of the Admissions Committee.

Advanced Standing Applications

Students desiring to transfer into the professional program from another accredited college of pharmacy will be evaluated on an individual basis. To be considered for admission with advanced standing, they must have a competitive grade point average and be in good standing with the school previously attended. Transfer students will be required to provide a transcript of their record at that institution from which they are transferring. If the transfer applicant is determined to be qualified for admission, a personal interview is required. Students should contact the ETSU College of Pharmacy Admissions office for further instructions.

Class Reservation Deposit

Upon notification of acceptance to the ETSU College of Pharmacy, the applicant will be required to pay a non-refundable \$500 class reservation deposit.

Deferred Matriculation

Accepted applicants may request deferred entrance into the College of Pharmacy until the next class for previously unforeseen circumstances. In order to request deferred matriculation, the applicant must forward a letter addressed to the Associate Dean for Student Affairs stating the request and explaining why a later admission is desired. Deferred applicants will be required to confirm their intent to enroll in the following class by the admissions deadline for that class.

Specific Academic Requirements

These prerequisites represent the academic foundation that is deemed necessary for success in the pharmacy curriculum. In evaluating the candidate'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. All science prerequisite coursework must have been taken within ten (10) years of the application deadline. Exceptions to this requirement will be considered only when contemporary evidence of mastery in the subject area can be demonstrated. Courses for which the student received a final grade less than a C- will NOT satisfy the prerequisite. Students are invited to contact the Admissions Office for assistance in evaluating their pre-pharmacy academic plan. Applicants who are in the process of completing the listed required courses at the time of application should note these courses on their application as current courses according to the instructions provided in the application process. All prerequisite coursework must be completed prior to enrollment; however students who will have completed the prerequisites by the end of the spring semester will be more competitive for admission.

Course	Semester Credit Hours
Chemistry with labs	
General Chemistry	8
Organic Chemistry	8
General Physics with labs	8
General Biology with labs	8
Microbiology with Lab	4
Mathematics	
Calculus	3
Probability and Statistics (or equivalent)	3
Communication Skills	
English Composition I and II	6
Oral Communication	3
Economics Principles (micro or macro)	3
Electives in Social and Behavioral Sciences and Huma	nities 9
Total Samastan Cradit Haung (minimum)	63

Total Semester Credit Hours (minimum)

63

Chemistry (16): A minimum of sixteen semester credit hours of chemistry is required. A minimum of two courses must be in general chemistry, which may include inorganic or analytical chemistry, and two additional courses must be in organic chemistry. Each of these courses must be a complete, standard college-level course for science majors with a lab utilizing full laboratory facilities. In instances where students feel uncertain of their preparation in chemistry and wish to take additional work, such courses as advanced analytical chemistry, physical chemistry, biophysical/biological chemistry, or chemical instrumentation should be considered.

Physics (8): A minimum of two courses in physics with a lab for each course is required. The courses are to be math based (either non-calculus or calculus). The areas of study are to include mechanics, heat, light, sound, electricity, and magnetism. Survey types of courses will not satisfy this requirement.

Biology (8): A minimum of two courses in general biology with a lab for each course that has a focus on human processes and disease will fulfill this requirement. Many students may benefit from additional study in the biological sciences. The faculty recommends additional courses in genetics, cellular biology, embryology, and molecular biology.

Microbiology (4): A four-semester-credit course, preferably one that has a biology prerequisite, including lab, will fulfill this requirement. Topics covered in this class should include principles of microbiology, organism identification, virology and immunology.

Mathematics (6): A one-semester calculus course with a minimum of three semester credits is required. In addition, a three-semester-credit math-based statistics course, which covers probability and statistics, is required.

Communication Skills (9): Competency in the use of both oral and written English is considered highly essential to the successful study and practice of pharmacy. The usual college-level introductory courses in freshman English composition and literature will meet six semester credit hours of this admission requirement. Writing-intensive courses are recommended. The other three required credits will be satisfied by an oral communication course, (such as general speech, argumentation and debate, business communication or interpersonal communications) that will facilitate the student's ability to communicate effectively. Courses that focus on public speaking and speech making are not acceptable for this requirement.

Economics (3): A three-semester-credit course in economic principles, either micro-economics or macro-economics, is required.

Electives in Social and Behavioral Sciences and Humanities (9): To fulfill this requirement, a minimum total of nine semester credits are to be in the social or behavioral sciences and in the humanities. Examples: *Social and Behavioral Sciences:* psychology, sociology, political science, and anthropology; *Humanities:* literature, fine arts, foreign language, philosophy, history and religion studies.

Computer Skills: Due to the ever-increasing presence of computers as tools in health care, it is expected that applicants will possess and demonstrate an ability to use computers both in the academic and personal setting.

Advanced Placement or CLEP Credit

A student who has been awarded advanced placement credit, CLEP credit, or other nontraditional credit in required non-science courses by a regionally accredited college or university will have those credits honored. This would also be true for required science courses provided that such placement or credit has been followed by a more advanced course in the same discipline. However, prospective students should be aware that portions of the professional curriculum require solid skills in algebra and introductory integral calculus, and those math skills, if not used, quickly diminish. As such, we strongly recommend that incoming students take appropriate steps to ensure a high level of mathematical aptitude.

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. Pharm.D. 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 Pharm.D. 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 Pharm.D. 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 Pharm.D. 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.

Immunization Requirements for Entering Students

As a prerequisite for clinical practice experiences in the College of Pharmacy, students are expected to have appropriate immunizations for protection of both the student and the patients they may see. Students may not be permitted to participate in rotations if their immunizations are not up-to-date. Pharmacy students must meet the requirements contained within the current edition of the College of Pharmacy Student Handbook.

Registration for Classes

Students enrolled in the College of Pharmacy are registered for a pre-determined set of courses each semester by the Office of Academic Affairs section prior to the beginning of each term. Most courses during the basic science portion of the curriculum are offered once a year, and latitude within the curriculum is allowable only through special arrangement with the Associate Dean for Academic Affairs. Registration for the Pharmacy Practice Experiential portion of the curriculum is accomplished through a schedule that must be arranged and agreed upon between the student and the Director of Experiential Education.

All College of Pharmacy students are required to pay tuition, fees, and other obligations to the university during a designated period at the beginning of each term of registration. Students are not allowed to attend classes or any curricular sessions until all fees are paid in full. A late registration fee will be charged to students who have not cleared their obligations by the designated date. Students are notified in advance of the fee payment period for each term of enrollment.

EXPENSES AND FINANCIAL AID

Through various financial aid programs, the Office of Financial Aid makes every effort to enable any admitted pharmacy student to attend the College of Pharmacy. The college supports the federal and state philosophy that the cost of an education lies primarily with the student and the family to the extent they can pay.

Financial aid is awarded on the basis of demonstrated need, which is the annual cost of attendance less an expected family contribution determined by the federal government. This figure is calculated from the information given on the Free Application for Federal Student Aid (FAFSA). Each student is required to complete the financial aid process in order to be considered for aid.

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 grants (Federal Pell Grant and Federal Supplemental Educational Opportunity Grant). This professional classification does, however, allow pharmacy students to be considered "independent" from their parents for most federal aid programs (the only exceptions being the Pharmacy Health Professions Loan Program and the Scholarship for Disadvantaged Students Program, which still require parental income on the Free Application for Federal Student Aid). This professional classification also raises the annual and aggregate loan limit that students may borrow under the Federal Family Education Loan Program (FFELP).

In order to apply for any of the federal aid programs, a student must submit a FAFSA and indicate the ETSU College of Pharmacy as the college he or she plans to attend (Federal School Code E01254). Students who are eligible for the Tennessee Education Lottery Scholarship must also list ETSU (Federal School Code 003487) as the first school. This should be submitted no later than April 1 of each year in order to be considered for all types of aid. Students may submit the FAFSA after April 1, but will be considered only for the Federal Family Education Loan Program at that time.

The FAFSA may be obtained at any financial aid office or online at <u>http://www.fafsa.ed.gov/</u>. When completing the FAFSA, first-year pharmacy students will answer questions about their student status differently depending upon how many semester credit hours they will have earned prior to beginning the Pharm.D. program.

First-year students who have earned less than 72 undergraduate semester credit hours will indicate that they

- will be earning their "first bachelor's degree",
- will be entering their third/junior year,
- have not and will not complete an undergraduate degree by July 1, 2007, and
- will not be working on a master's or doctorate program.

First-year students who have already earned a bachelor's degree or at least 72 undergraduate semester credit hours and pharmacy students entering their 2nd, 3rd or 4th professional year will indicate that they

- will be earning "a graduate or professional degree",
- will be entering their first graduate/profession year (or continuing graduate/professional or beyond for 2nd-, 3rd- and 4th-year students),
- have not and will not complete an undergraduate degree by July 1, 2007, and
- will be working on a master's or doctorate program

Questions regarding financial aid for College of Pharmacy students should be directed to the ETSU College of Pharmacy Office of Financial Aid.

You may contact the Office of Financial Aid by email at <u>copfa@etsu.edu</u>, by phone at 423-439-6238 or visit the office during normal business hours at Charles E. Allen Hall, Building 2, Room 040 on the VA Campus.

If chosen by the federal government for the information on the FAFSA to be verified, a student must submit a signed copy of the base year income tax form and the verification form sent to the student by the Office of Financial Services. Financial aid available to pharmacy students consists of federally sponsored programs. Other sources of private funds may be available from outside agencies such as the Armed Services (Air Force, Navy, and Army) and professional organizations.

Students may only borrow up to the cost of attendance. This includes tuition, fees, room, board, and transportation, personal and miscellaneous expenses. Student budgets are based on the expected educational expenses of the student and are rarely increased and require documentation of extenuating costs, such as insurance or medical expenses.

Satisfactory Academic Progress

The Higher Education Amendments that govern Title IV Financial Assistance Programs state a student shall be entitled to receive federal student assistance benefits only if that student is maintaining progress in the course of study he/she is pursuing, according to the standards and practices of the institution.

The ETSU College of Pharmacy's Policy of Satisfactory Academic Progress requires a student to complete the pharmacy curriculum by meeting a qualitative grade requirement as prescribed by the faculty. All students must complete the curriculum of each year and receive a grade of "C" or better in all required courses before proceeding to the next year 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 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 Academic Progression Committee, which approval implies the student is making satisfactory academic progress. Therefore, the continued enrollment as a student is in itself an indication the student is maintaining satisfactory academic progress. The Office of Financial Aid is notified of significant actions of the Academic Progression Committee for monitoring purposes to ensure compliance with Title IV regulations.

Students classified as undergraduate students for financial aid purposes must maintain satisfactory progress according to the Financial Aid Satisfactory Academic Progress Policy outlined in the ETSU Undergraduate Catalog.

College of Pharmacy Grants, Scholarships, and Leadership Awards

The College of Pharmacy continues to explore the creation of grants, scholarships and leadership awards. The most current information will be maintained in the Student Affairs Office. The following scholarships are currently available.

Pharmacists Mutual[®] Companies Scholarship

The Pharmacists Mutual[®] Companies Scholarship is awarded annually by the College of Pharmacy. The scholarship amount is \$1000. Criteria for consideration include the following:

- 1. Intent to practice in a state in which Pharmacist Mutual[®] Companies operate
- 2. Desire to be a community practitioner
- 3. Demonstrated academic achievement
- 4. Financial need

Pineville Community Hospital Scholarship Program

The Pineville Community Hospital offers a scholarship program to eligible student pharmacists interested in working in its Pineville, Kentucky, hospital upon graduation and licensure. The scholarship amount varies depending on length of commitment to the hospital after graduation, the school year enrolled and the hospital's determination. More complete information is available from the College of Pharmacy Office of Financial Aid or the Human Resource Director at Pineville Community Hospital (606-337-4281 or gnunnpch@bellsouth.net).

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. The College of Pharmacy Office of Financial Aid can provide information and application assistance.

Loan Assistance

With increasing tuition rates and cost-of-living increases, it is not unusual for a student to borrow money to pay for some or all of his or her education. Federal Perkins Loans (once called National Direct Student Loans) and Federal Health Professions Loans are two such cooperative loan-funding programs available to enrolled students in need of loans to complete their professional education in the College of Pharmacy. For more information about the terms of these loans and for information about other loan programs available to student pharmacists, contact the College of Pharmacy Office of Financial Aid.

Tuition Payment

East Tennessee State University 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 university believes the best way for students to know their current financial obligation for the term is by viewing their account through <u>GoldLink Online</u>. Students who need a printed copy of their account statement may print a statement from GoldLink Online after they have completed their registration.

Students are expected to make payment for all classes for which they are enrolled on or before the payment deadline. Tuition and fees are subject to change by the Tennessee Board of Regents.

All students planning to attend classes at ETSU must pay fees. Students who have loans, grants, scholarships, state or federal vocational rehabilitation, or any other type of financial aid covering all fees must confirm registration on or before the due date for the term (see Pay Fees below). Students who pay fees are considered confirmed when fees are paid. Students with partial financial aid are considered confirmed when the balance is paid.

How Students Pay Fees:

- 1. By GoldLink Online
- 2. Call a cashier at 423-439-4212
- 3. By U.S. mail (Comptroller's Office, PO Box 70719, Johnson City, TN 37614)
- 4. At the cashier windows (Room 202, Burgin Dossett Hall)

Tuition Refund Policy

The university's refund policies for maintenance fees, tuition, and debt service fees are as follows:

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

2. Situations which may permit a refund

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

3. 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 state 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 rotations 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 prior to the beginning of summer term. One hundred percent of fees will be refunded in case of student's death.

4. 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 he/she was awarded aid, a pro-rata amount of that aid must be returned to the federal government.

First, 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 his/her outstanding loan balance. Second, 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, he/she

will be required to return portions of the federal student aid he/she 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 his/her federal loans. With respect to any amount the student owes after the university has returned its share, he/she 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 amounts he/she paid 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 his/her outstanding Stafford or Perkins loan or to the federal portions of his/her grant or scholarship 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.)

The Class Reservation Deposit is non-refundable.

Tuition, Fees and Other Expenses

(As approved by the Tennessee Board of Regents for the Academic Year August 2007 through August 2008)

Supplemental Application Fee <i>Non-refundable; required of all applica</i>	\$50 <i>ints</i>	
Class Reservation Deposit <i>Confirms applicant's desire to accept a</i> <i>applied to first semester tuition</i>	\$500 dmission offer and his/her intention to enroll;	
Tuition and Fees	\$22,909	
Tuition	\$20,994	
Activity Fee	\$40	
Access Fee	\$559	
Debt Service Fee	\$180	
International Education Fee	\$20	
Liability Insurance	\$16	
Health Insurance	\$1100*	
(* for students 40 years of age and over, the fee for Semi-Annual coverage is		
\$1064; waived with proof of me	dical insurance)	

Books and supplies

\$2,000

First year; subsequent years less

DEGREE PROGRAM

The ETSU College of Pharmacy offers the Doctor of Pharmacy (Pharm.D.) degree.

The Doctor of Pharmacy degree is awarded to students who have satisfactorily completed the prescribed College of Pharmacy curriculum with a minimum grade point average of 2.0. All courses and practice experiences, required and elective, must have been completed with a passing grade. The Pharm.D. degree is conferred by the Tennessee Board of Regents upon certification by the faculty that the student has successfully completed all requirements.

In addition to having met the prescribed scholarship requirements, students must have made satisfactory arrangements as to their financial obligations to qualify for graduation.

Curriculum Outline – Class of 2010

This outline is current as of January 15, 2008, and is subject to change. It is presented here to illustrate the course progression that our students scheduled to graduate in 2010 should anticipate.

Year 1 – Semester 1		Credit		
	Cours	Se	Hours	
PMSC	3112	Anatomy and Physiology with Lab	2	
PMSC	3110	Anatomy and Physiology Lab	0	
PMSC	3114	Biochemistry, Molecular Biology and Genetics	4	
PMSC	3104	Microbiology, Virology and Immunology	4	
PMSC	3133	Pharmaceutics and Biopharmaceutics I	3	
PMSC	3122	Pharmacy Calculations	2	
PMPR	3144	Pharmacy Practice I – Introduction to Patient Care	4	
		<i>IPPE-1 part of PPI course</i> \approx 42 <i>hours</i>		
		Semester total	19	
Year 1 –	Year 1 – Semester 2			
PMSC	3213	Anatomy and Physiology with Lab II	3	
PMSC	3210	Anatomy and Physiology Lab	0	
PMSC	3223	Pharmacology I	3	
PMSC	3203	Pathophysiology	3	
PMSC	3232	Pharmaceutics and Biopharmaceutics II	2	
PMSC	3231	Compounding and Dispensing Lab	1	
PMPR	3243	Non-Prescription Pharmacotherapy & Self Care	3	
PMPR	3244	Pharmacy Practice II – Introduction to Patient Care	4	
		<i>IPPE-2 part of PPII course</i> \approx 42 <i>hours</i>		
		Semester total	19	

Year 2 – Semester 3

PMSC	4123	Pharmacology II	3
PMPR	4183	Communication Skills for Health Professionals	3
PMSC	4134	Pharmacokinetics and Pharmacogenomics	4
PMSC	4124	Principles of Medicinal Chemistry	4
PMPR	4142	Pharmacy Practice III – Biostatistics and Study Design	2
PMPR	4161	Interpreting Laboratory Data	1
		Semester Total	17
Year 2 -	- Semes	ster 4	
PMSC	4223	Pharmacology III	3
PMPR	4263	Pharmacotherapy I	3
PMPR	4273	Pharmacotherapy II	3
PMPR	4283	Pharmacy Law and Ethics	3
PMPR	4244	Pharmacy Practice IV – Drug Information and	
		Literature Evaluation	4
		Elective	2 to 3
		Semester Total	18 to 19

Summer Between Semester 4 and 5

		EPPE I - Community (40 hrs a week for 2 weeks) EPPE II - Institutional (40 hours a week for 2 weeks)	2 2
Year 3 -	- Semes	ster 5	
PMPR	5163	Pharmacotherapy III	3
PMPR	5173	Pharmacotherapy IV	3
PMPR	5142	Natural Medicines	2
DMDD	5182	Principles of Health care Delivery	2

PMPR	5182	Principles of Health care Delivery	2
PMPR	5152	Advanced Clinical Practice Skills I	2
PMPR	5143	Pharmacy Practice V – Community	3
PMPR	5161	Clinical Seminar I	1
PMPR	4342	EPPE III - Clinical	2
		(for half the class) 60 hours (4 hours/week for 15 weeks)	1
		Elective	2 to 3
		Semester Total	18-19

Year 3 – Semester 6

I cui c	Nº MICO		
PMPR	5263	Pharmacotherapy V	3
PMPR	5273	Pharmacotherapy VI	3
PMPR	5233	Clinical Pharmacokinetics	3
PMPR	5243	Pharmacy Practice VI – Institutional	3
PMPR	5253	Advanced Clinical Practice Skills II	3
PMPR	5261	Clinical Seminar II	1
PMPR	4342	EPPE III - Clinical	2
		(for half the class) 60 hours (4 hours/week for 15 weeks))
		Elective	2 to 3
		Semester Total	18-19

Year 4

PMPR	6116	Community PPE	6
PMPR	6126	Institutional PPE	6
PMPR	6136	Inpatient/Acute Care PPE	6
PMPR	6146	Primary Care PPE	6
		Elective APPE	6
		Elective APPE	6
		Year 4 Total	36

Curriculum Outline – Class of 2011

Year 1 – Semester 1 Course			Credit Hours
PMSC		Anatomy and Physiology with Lab I	6
PMSC	3110	Anatomy and Physiology Lab	0
PMSC	3114	Biochemistry, Molecular Biology and Genetics	4
PMSC	3104		4
PMSC	3122	Pharmacy Calculations	2
PMPR	3142	Pharmacy Practice I – Introduction to Patient Care	2
PMPR	3141	IPPE 1- community or institutional practice	1
		(40 hours - 3 hours per week for 13 weeks)	
		Semester total	19
Year 1 - PMSC PMSC	3223	Pharmacology I	3 4
PMSC	3235	Pharmaceutics and Biopharmaceutics	5
PMSC	3231	Compounding and Dispensing Lab	1
PMPR	3243	Non-Prescription Pharmacotherapy & Self Care	3
PMPR	3242	Pharmacy Practice II – Introduction to Patient Care	2
PMPR	3241	IPPE 2- community or institutional practice (40 hours - 3 hours per week for 13 weeks)	1
		Semester total	19

Year 2 – Semester 3

PMSC	4123	Pharmacology II	3
PMPR	4183	Communication Skills for Health Professionals	3
PMSC	4134	Pharmacokinetics and Pharmacogenomics	4
PMSC	4124	Principles of Medicinal Chemistry	4
PMPR	4142	Pharmacy Practice III – Biostatistics and Study Design	2
PMPR	4161	Interpreting Laboratory Data	1
		Semester Total	17
Year 2 -	- Semes	ster 4	
PMSC	4223	Pharmacology III	3
PMPR	4263	Pharmacotherapy I	3
PMPR	4273	Pharmacotherapy II	3
PMPR	4283	Pharmacy Law and Ethics	3
PMPR	4244	Pharmacy Practice IV – Drug Information and	
		Literature Evaluation	4
		Elective	2 to 3
		Semester Total	18 - 19

Summer Between Semester 4 and 5

PMPR	4322	EPPE I - Community (40 hrs a week for 2 weeks)	2
PMPR	4332	EPPE II - Institutional (40 hours a week for 2 weeks)	2
Year 3 -	Semes	ter 5	
PMPR	5163	Pharmacotherapy III	3
PMPR	5173	Pharmacotherapy IV	3
PMPR	5142	Natural Medicines	2
PMPR	5182	Principles of Health care Delivery	2
PMPR	5152	Advanced Clinical Practice Skills I	2
PMPR	5143	Pharmacy Practice V – Community	3
PMPR	5161	Clinical Seminar I	1
PMPR	4342	EPPE III - Clinical	2
		(for half the class) 60 hours (4 hours/week for 15 weeks)	
		Elective	2 to 3
		Semester Total	18-21

Year 3 – Semester 6

PMPR	5263	Pharmacotherapy V	3
PMPR	5273	Pharmacotherapy VI	3
PMPR	5233	Clinical Pharmacokinetics	3
PMPR	5243	Pharmacy Practice VI – Institutional	3
PMPR	5253	Advanced Clinical Practice Skills II	3
PMPR	5261	Clinical Seminar II	1
PMPR	4342	EPPE III - Clinical	2
		(for half the class) 60 hours (4 hours/week for 15 weeks)	
		Elective	2 to 3
		Semester Total	18-21

Year 4

PMPR	6116	Community PPE	6
PMPR	6126	Institutional PPE	6
PMPR	6136	Inpatient/Acute Care PPE	6
PMPR	6146	Primary Care PPE	6
		Elective APPE	6
		Elective APPE	6
		Year 4 Total	36

Course Descriptions

Pharmaceutical Sciences - PMSC

PMSC 3104 - Microbiology, Virology and Immunology

A general microbiology course which includes the discussion of: bacterial structures and physiology; bacterial, fungal and viral infectious agents; the response of the host to infection by innate and acquired immune responses; and the control of infectious agents by drug therapy and vaccination.

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 and their malfunction in disease.

PMSC 3116 and 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

Provide 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 to provide an excellent foundation for understanding of the basis of patient-centered care. *Prerequisite: PMSC 3116 and 3110 - Anatomy and Physiology with Lab*

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 & 3110- Anatomy and Physiology with Lab; PMSC 3114 - Biochemistry, Molecular Biology and Genetics; PMSC 3104 - Microbiology, Virology and Immunology*

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. **Corequisite:** *PMSC 3235 - Pharmaceutics and Biopharmaceutics;* **Prerequisite:** *PMSC 3122 - Pharmacy Calculations*

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. This 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 physiochemical 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 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. *Prerequisites: PMSC 3122 Pharmacy Calculations; Corequisite: PMSC 3231 Compounding and Dispensing Lab*

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 previous PMSC courses*.

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: Pharmaceutics & Biopharmaceutics*

PMSC 4223 Pharmacology III

The final course of the three-part lecture series 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 Pharmacology II*.

Pharmacy Practice - PMPR

PMPR 3141 - IPPE 1 - 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 site. The goal of the IPPE is to expose students to entry-level pharmacy practice by shadowing pharmacists (and technicians) in a pharmacy practice site. The IPPE portion of this course promotes an introduction in drug distribution in a structured and supervised setting and enhances students' awareness of many aspects of pharmacy practice. Students are exposed to the role and responsibilities of the community and institutional pharmacist; the importance of effective communication between pharmacists, patients and other health care providers; 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 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 health care 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 courseling, and the top 200 drugs in community practice.

PMPR 3241 - IPPE 2 - 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 site. The goal of the IPPE is to expose students to entry-level pharmacy practice by shadowing pharmacists (and technicians) in a pharmacy practice site. The IPPE portion of this course promotes an introduction in drug distribution in a structured and supervised setting and enhances students' awareness of many aspects of pharmacy practice. Students are exposed to the role and responsibilities of the community and institutional pharmacist; the importance of effective communication between pharmacists, patients and other health care providers; 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 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 into 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 4142 Pharmacy Practice III – Biostatistics and Study Design

This course serves as an introduction to the principles of biostatistics, study design and data analysis. Students will learn basic statistical methods and the application of statistics to clinical research, including identifying types of data, the use of descriptive statistics, various inferential statistical tests, and regression and correlation analysis. The course will introduce students to a practical approach for using biostatistical principles in evaluating clinical trial design, pharmacoeconomic studies, and in evaluating drug literature.

PMPR 4161 Interpreting Laboratory Data

This course will introduce students to interpreting 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. *Prerequisites and/or Corequisites: Must be enrolled in the 2nd professional year of the College of Pharmacy's professional program leading to the Doctor of Pharmacy degree.*

PMPR 4183 Communication Skills for Health Professionals

All health professionals, regardless of discipline, are called on to be outstanding communicators with individual clients/patients, as well as with groups and communities. The faculty of all of the ETSU Health Sciences Divisions schools believes that 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 oriented to the development of <u>competencies</u> and this is how you will be evaluated. This course is a beginning. You will receive continuous follow-up, reinforcement, and expansion of these skills throughout your training. The participating faculty are dedicated to helping you to become the best health care communicator that you can possible be. *Prerequisites and/or Co-requisites: Status as a P-2 student in the College of Pharmacy*

PMPR 4244 Pharmacy Practice IV – Drug Literature Evaluation

This course serves as an introduction to the principles of drug information, literature evaluation, and evidence-based medicine. 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; and how to communicate responses to drug information questions. The course 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.

PMPR 4263 Pharmacotherapy I

This course will teach students to identify and assess the medical problems of their patients and to then recommend appropriate therapy, concentrating on medication therapy or pharmacotherapy, to address those problems. The class will consist of 5 hours of lectures per week and 2 hours of lab time per week. The lab time will consist of activities designed to enhance the learning of the material presented in the lectures. This course lasts for one-half of the semester. *Prerequisites and/or Co-requisites: Must be enrolled in the 2nd professional year of the College of Pharmacy's professional program leading to the Doctor of Pharmacy degree.*

PMPR 4273 Pharmacotherapy II

This course will teach students to identify and assess the medical problems of their patients and to then recommend appropriate therapy, concentrating on medication therapy or pharmacotherapy, to address those problems. The class will consist of 5 hours of lectures per week and 2 hours of lab time per week. The lab time will consist of activities designed to enhance the learning of the material presented in the lectures. This course lasts for one-half of the semester. *Prerequisites and/or Co-requisites: Must be enrolled in the 2nd professional year of the College of Pharmacy's professional program leading to the Doctor of Pharmacy degree.*

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 health care 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 health care services, attention is given to ethical and legal issues surrounding direct patient care services, including an examination of professional liability (civil, criminal, and disciplinary). While the importance of the above issues has grown significantly in very recent years, these issues have not displaced the need to study the expansive body of traditional pharmacy and drug law.

PMPR 4322 EPPE I – Community

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 40 hours per week, to be scheduled during the time between semester 4 and semester 5 of the program.

PMPR 4332 EPPE II – Institutional

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 40 hours per week, to be scheduled during the time between semester 4 and semester 5 of the program.

PMPR 4342 EPPE III – Clinical

This is an early pharmacy practice experience in a clinical pharmacy practice setting involving the application of clinical knowledge and skills acquired by the student. This will consist of a total of 70 hours, which will typically consist of 5 hours per week for a total of 14 weeks during one of the semesters of year three of the pharmacy program.

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 have been selected based on utilization data, sales trends, frequency of information requests, and safety concerns.

PMPR 5143 Pharmacy Practice V – Community

The ability of pharmacists to provide patient care products and services in all practice settings is crucial to the advancement of pharmacy. Pharmacists must have the time, money, technology, motivation, and personnel to provide these products and services, for which management and clinical skills are needed. Pharmacists must integrate their managerial and clinical skills. Based on this, the course is designed to create an environment in which students can learn how to manage and provide patient care in a community pharmacy practice.

PMPR 5152 Advanced Clinical Practice Skills I

This course is designed to introduce the student to the process of advanced patient care in a real care environment. Other activities include orientation for fourth professional year advanced practice experiences, case and short seminar presentation, and first-aid certification.

PMPR 5161 Clinical Seminar I

This course is the first in a series intended to develop a student's ability to evaluate and synthesize pertinent literature and effectively communicate a pharmacotherapy-related topic in a professional manner. The student will present pharmacotherapy issues approved by the course coordinator. Students will be expected to utilize an effective delivery style and present information in an accurate and in-depth manner. Number and specifics of such presentations will be assigned by the course coordinator. The aim of this course series is to encourage students to be self-directed, critically reflective and competent in skills essential to providing optimal patient care and maintaining an effective pharmacy practice. More

importantly, it will prepare students for the challenge of communicating within the profession of pharmacy. As pharmacists transition to a model of practice incorporating patient-centered care, they will encounter unique challenges and identify strategies for resolving therapeutic problems. Sharing this information with colleagues is a necessary component of the practice of pharmacy.

PMPR 5163 Pharmacotherapy III

This course will teach students to identify and assess the medical problems of their patients and to then recommend appropriate therapy, concentrating on medication therapy or pharmacotherapy, to address those problems. The class will consist of 5 hours of lectures per week and 2 hours of lab time per week. The lab time will consist of activities designed to enhance the learning of the material presented in the lectures. This course lasts for one-half of the semester. *Prerequisites and/or Co-requisites: Must be enrolled in the 3rd professional year of the College of Pharmacy's professional program leading to the Doctor of Pharmacy degree.*

PMPR 5173 Pharmacotherapy IV

This course will teach students to identify and assess the medical problems of their patients and to then recommend appropriate therapy, concentrating on medication therapy or pharmacotherapy, to address those problems. The class will consist of 5 hours of lectures per week and 2 hours of lab time per week. The lab time will consist of activities designed to enhance the learning of the material presented in the lectures. This course lasts for one-half of the semester. *Prerequisites and/or Co-requisites: Must be enrolled in the 3rd professional year of the College of Pharmacy's professional program leading to the Doctor of Pharmacy degree.*

PMPR 5182 Principles of Health care Delivery

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

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 Pharmacokinetics and Pharmacogenomics*

PMPR 5243 Pharmacy Practice VI – Institutional

The ability of pharmacists to provide patient care products and services in all practice settings is crucial to the advancement of pharmacy. Pharmacists must have the time, money, technology, motivation, and personnel to provide these products and services, for which management and clinical skills are needed. Pharmacists must integrate their managerial and clinical skills. Based on this, the course is designed to create an environment in which students can learn how to manage and provide patient care in an institutional pharmacy practice.

PMPR 5253 Advanced Clinical Practice Skills II

This course is a continuation of PMPR 5153 involving the process of advanced patient care and preparing the student for the fourth professional year advanced practice experiences.

PMPR 5261 Clinical Seminar II

This course, a continuation of PMPR 5161, will further develop a student's ability to evaluate and synthesize pertinent literature and effectively communicate a pharmacotherapy-related topic in a professional manner. The student will present pharmacotherapy issues approved by the course coordinator. Students will be expected to utilize an effective delivery style and present information in an accurate and in-depth manner. Number and specifics of such presentations will be assigned by the course coordinator.

PMPR 5263 Pharmacotherapy V

This course will teach students to identify and assess the medical problems of their patients and to then recommend appropriate therapy, concentrating on medication therapy or pharmacotherapy, to address those problems. The class will consist of 5 hours of lectures per week and 2 hours of lab time per week. The lab time will consist of activities designed to enhance the learning of the material presented in the lectures. This course lasts for one-half of the semester. *Prerequisites and/or Co-requisites: Must be enrolled in the 3rd professional year of the College of Pharmacy's professional program leading to the Doctor of Pharmacy degree.*

PMPR 5273 Pharmacotherapy VI

This course will teach students to identify and assess the medical problems of their patients and to then recommend appropriate therapy, concentrating on medication therapy or pharmacotherapy, to address those problems. The class will consist of 5 hours of lectures per week and 2 hours of lab time per week. The lab time will consist of activities designed to enhance the learning of the material presented in the lectures. This course lasts for one-half of the semester. *Prerequisites and/or Co-requisites: Must be enrolled in the 3rd professional year of the College of Pharmacy's professional program leading to the Doctor of Pharmacy degree.*

NOTE: Course descriptions and prerequisite/corequisite information provided was accurate as of initial publication, but is subject to change. Please consult the ETSU College of Pharmacy for verification of the most current official information.

Approved Electives within the ETSU College of Pharmacy

PMPR 4501 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 4502 Professional Development for Health care Professionals (2 credit hours) This course will help facilitate successful careers of young health care professionals. The course will consist primarily of topic discussions in lieu of lectures. Topics will include a variety of issues related to professional development centering around leadership, organizational, and relational skills. This course will be valuable to those with interests in administrative or high level clinical positions, including students who plan to pursue post-graduate residency training. Enrollment limited to 20 students.

Approved Electives in other ETSU Colleges

SOAA 3500 Appalachian Folk Medicine (3 credits)

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.

SPAN 1011 Beginning Spanish for Health Care I (3 credits)

A continuation of the study of the four language skills: speaking, listening, reading, and writing, with an emphasis on vocabulary and cultural situations appropriate for health care professions. This course does not satisfy high school deficiencies for students enrolled in areas other than health care professions.

IDPH 2010 Rural Health and Community Leadership I (3 credits)

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.

IDPH 3010 Rural Health and Community Leadership II (3 credits)

Students will collaborate in interdisciplinary student teams and with faculty and community members to provide selected health care interventions to adult populations.

IDPH 3020 Rural Health and Community Leadership III (3 credits)

Students will collaborate with multi-disciplinary students, faculty and community members to provide care to child and adolescent aggregates or families.

IDPH 4000 Community Health Project (3 credits)

In collaboration with community agencies and organizations, students will identify a community health need and then plan, implement and evaluate a community intervention.

FACS 2420 Principles of Nutrition (3 credits)

Introduction of scientific nutrition principles with emphasis on nutritional requirements, dietary sources of nutrients, nutrient utilization, and the impact of nutrition on energy intake and weight control, fitness, disease prevention, the life cycle, food technology, food safety, and the environment.

ENVH 4357/5357 Toxicology (3 credits)

Prerequisite(s): CHEM 2010/11 and HSCI 3320; or permission of instructor. 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.

PUBH 4927/5927 Cultural Competence and Spirituality in Health Care (3 credits)

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 credits)

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.

ACADEMIC REGULATIONS

Academic Performance

Students are expected to pass all courses with a minimum grade of "C" and an overall GPA of 2.000 within the pharmacy professional curriculum. Academic rules and the function of the Academic Progression Committee are explained below. A student who feels his/her grade in a course is inappropriate, should first contact the course director for an explanation. If the answer from the course director is unsatisfactory, the student should then contact the chair of the department to which the course coordinator belongs. Dr. David Roane is the Chair of Pharmaceutical Sciences. Dr. Ralph Lugo is the Chair of Pharmacy Practice. If the student still feels the grade received in a course is inappropriate, the student may appeal, in writing, to the Associate Dean for Academic Affairs. The Associate Dean for Academic Affairs will respond in writing within 10 working days. The Associate Dean for Academic Affairs may request a meeting with the student and the course coordinator. Further appeals will be in accordance with ETSU policies and procedures.

Grading System

The College of Pharmacy utilizes the following grades in evaluating students: A, A-, B+, B, B-, C+, C, D, F, I and W, with A representing excellent, B good, and C adequate. Grades of D and F are failing grades. A grade of D indicates that in the judgment of the course faculty, an additional period of prescribed remediation (assuming no deficiencies in other courses), if successfully completed, will qualify a student for a grade of C* upon remediation. The asterisk appears on the transcript to indicate that the student required remediation to obtain the indicated grade. If a grade of D is not successfully remediated, a grade of F will be assigned. An F grade indicates that the performance of the student is such that only a complete repeat of the course, on approval of the Academic Progress Committee, will be accepted as remediation.

A grade of F will remain permanently on the transcript. The remediated grade earned will be added to the transcript in the academic period in which it is obtained. A student who receives one or more F grades is subject to being dropped from enrollment.

A grade of I (incomplete) may be given in cases wherein students, for an acceptable reason, have been unable to complete all of the required work in a course. An incomplete grade must be removed within twelve months after it has occurred or it will automatically be changed to an F. If the student removes the incomplete within the time period, the instructor may assign any appropriate grade according to the quality of the work completed for the entire course.

Upon approval of the Associate Dean for Academic Affairs, a student may withdraw from a course. Such withdrawal will result in a grade of W.

Grade point values in all College of Pharmacy courses and Practice Experiences are calculated on a four point system with 0.300 being added or subtracted for plus/minus grades, respectively. A class rank based upon grade point values will be calculated and used for internal purposes. In the instance in which a student receives F and successfully remediates the course, the grade point values assigned will be those of the grade earned upon remediation and the total credit hours attempted (originally failing attempt plus the repeat).

Academic Progression and Promotion

Academic Progression Committee

<u>*Purpose*</u> - The Academic Progression Committee (APC) is charged with monitoring students' performance during each semester and progress throughout the curriculum.

<u>Membership</u> - The APC is composed of the Associate Dean for Academic Affairs (ADAA), who will serve as chair of the Committee, and other members of the faculty as defined by the ETSU College of Pharmacy Faculty Bylaws.

<u>Responsibilities</u> - The APC makes recommendations regarding each student's progression in the curriculum. According to the definitions outlined below, the APC will recommend one of the following: normal progression, graduation, academic probation with remedial action, continued academic probation with remedial action, removal from probation, academic dismissal, or other action. Recommendations for graduation are made to both the Dean and faculty since graduation requires approval by the Faculty Council. All other committee recommendations are made to the Dean.

Progression Definitions

<u>Normal Progression</u>. In order for a student to progress through the curriculum, the student must maintain a College of Pharmacy cumulative GPA of 2.000 or greater and must successfully complete all courses with a grade no lower than a "C".

<u>Academic Probation</u>. Academic probation is the initial official action for a student failing to make satisfactory academic progress by not meeting the requirements for normal progression. Depending on the nature of the academic deficiencies and the overall academic record, a student placed on academic probation may or may not be permitted to continue in the regular sequence of the professional curriculum and may be required to repeat a course or courses during the next term in which it is offered. The committee will stipulate a course of action that is necessary to remediate the academic deficits. Students may not be removed from probation until the remedial action has been satisfactorily completed.

<u>Continued Academic Probation</u>. A student may be placed on continued academic probation for failure to make satisfactory progress during a period of academic probation. A student placed on continued academic probation may be required to take a reduced course load. A remediation plan for continued academic probation will be created by the Academic Progression Committee. As long as the student makes satisfactory progress, the student will remain on continued academic probation until all academic deficiencies are corrected.

<u>Academic Dismissal</u>. A student will be subject to academic dismissal from the East Tennessee State University College of Pharmacy when one or more of the following conditions are met:

- The student fails to make satisfactory progress while on continued academic probation;
- A period of academic probation is imposed for a third time; and/or
- The student fails to complete didactic requirements within five academic years at the East Tennessee State University College of Pharmacy.

• A student may be subject to academic dismissal as stated in the Academic Standards section. Students dismissed from the College may seek readmission by applying through the normal admissions process.

Academic Standards

The following academic standards will be used to evaluate students' progression through the curriculum. Although the APC considers the overall record of the student in making decisions, the APC will rely on the following standards:

- All students must maintain a minimum GPA of 2.000 and earn a minimum grade of "C" in each course taken during the time they are students in the College of Pharmacy.
- Any student with a GPA less than 2.000 in a single semester or with a College of Pharmacy cumulative GPA less than 2.000 will be placed on probation and may be subject to dismissal from the College.
- Students who fail to earn a minimum of "C" in one or two courses within a single semester may be placed on probation and will be required to remediate. The APC will determine the level of remediation required.
- Students who fail to earn a minimum of "C" in three or more courses within a single semester may be subject to dismissal from the College of Pharmacy. The APC will determine the recommended course of action.
- A failure in a pass/fail course will be considered a grade less than "C".
- Students on academic probation may have a restricted academic schedule as dictated by the APC and/or the ADAA.
- Students placed on academic probation must meet remediation requirements or other requirements stipulated by the APC before being eligible for removal from probation.
- Students who satisfactorily complete the remediation requirements for probation will be removed from probation.
- Students who are on probation and fail to meet the requirements for remediation or fail to meet the requirements needed to remove them from probation as determined by the APC will be placed on continued academic probation and may be subject to dismissal from the College.
- Students required to go on probation on a second occasion may be subject to academic dismissal from the College.

Academic Progression Committee Procedures and Guidelines

During the academic semester, the Office of the Associate Dean for Academic Affairs monitors students' performance in all courses. Student issues and performance deficits are brought before the committee as needed during the semester and within three working days of the end of each academic term. Accordingly, students with a course grade lower than a C and those already on academic probation will be reviewed by the APC for retention and promotion in the professional program. In such deliberations, the committee will consider student grades, input from the Office of the Associate Dean for Academic Affairs, and any written comments provided by the faculty. All written comments of a student's performance will be shared with the student and will become a permanent part of the student record.

Decisions of the APC (except for recommendations for dismissal) are then sent to the Associate Dean for Academic Affairs for student notification. A student may request, through the Associate Dean for Academic Affairs, to appear before the committee concerning his/her situation. However, students subject to dismissal will be invited to appear before the APC prior to the final committee recommendation. Recommendations for dismissal are sent to the Dean of the College of Pharmacy for final approval before student notification by the ADAA.

The Office of the Associate Dean for Academic Affairs will notify each student who is placed on academic probation or continued academic probation. Notification will be by letter and email. The notification will outline current academic deficiencies and the course of action required by the APC. This may include, but is not limited to, adjustment of academic load, repetition of curricular segments, specific remediation, and participation in counseling sessions. Moreover, students who are on academic probation will not be permitted to:

- Take an independent study elective;
- Serve as officers or committee members in any campus organization;
- Participate in university organizations or extracurricular activities, particularly if participation requires a significant commitment of time.
- Be eligible for college paid travel;
- Be employed by any department or college of the university.

When a student is placed on academic probation, the Associate Dean for Academic Affairs becomes that student's advisor for the duration of the probationary period. Students on any level of academic probation will not be permitted to register for the next semester without consultation with the Associate Dean for Academic Affairs. Students removed from academic probation will be notified by letter and email and instructed to consult with their advisor concerning their future academic schedule.

Remediation

<u>Definition</u>: The ETSU College of Pharmacy defines remediation as the act, process or attempt at correcting academic deficiency; the act or process of providing a mechanism or plan to restore a student to a state of normal progression.

<u>Policy</u>: It is recognized that not all evaluation methods are perfect measures of student knowledge and skills. To minimize the impact on student advancement, and to provide the student an opportunity to demonstrate a sufficient level of knowledge and skill, the ETSU College of Pharmacy requires remediation for its didactic courses. The Academic Progression Committee has been charged by the faculty with the individual application of this policy as it involves student progression and success. All College of Pharmacy courses, whether taught by full-time pharmacy faculty or others, are obligated to comply with the remediation decisions of the Academic Progression Committee.

• For a student who receives an F in a pharmacy course, the typical form of remediation available is to repeat that course at ETSU in its next offering. Exceptional circumstances may allow other alternatives; determination to be made by the APC in consultation with the affected faculty and the Dean of the College of Pharmacy.

- For a student who receives a D in a course, the APC will recommend a remediation method. If there is more than one D within a semester, the APC may recommend repeating all of the D grade courses.
- Individual course syllabi may have specific requirements for achieving a passing grade and/or internal remediation methods that occur during the semester. All such methods require the approval of the APC prior to inclusion in the syllabus.
- Other Academic Progression and Promotion policies may supersede these remediation pathways.
- Changes to this policy cannot take effect until the beginning of the next academic year.

Process Improvement

Any and all College of Pharmacy students, faculty, administrators and staff that have suggestions for improving this policy should submit that information in writing (hard copy or electronic) to the Associate Dean for Academic Affairs.

Changes in this policy will be presented to the faculty at a regularly scheduled faculty meeting for consideration and vote.

Appeals Process

Any student dissatisfied with an action of the APC may appeal to the Dean of the College of Pharmacy. The appeal shall be prepared in writing by the student and shall be submitted within 10 working days of notification of the APC's decision. The Dean will respond with a decision within 5 working days. Students dissatisfied with the decision by the Dean may further appeal the decision to the ETSU Vice President for Health Affairs within 10 working days of notification of the Dean's decision. In the case of dismissal, the initial appeal shall be made to the Vice President for Health Affairs within 10 working days of notification. In either circumstance, the Vice President for Health Affairs within 10 working days of notification. In either circumstance, the Vice President for Health Affairs will respond within 5 working days.

Extension: Should some event or events occur that could significantly affect the notification timeframe listed above, the student may be granted an extension by the ADAA. Such extension may be prospective or retrospective.

Dean's List

The Academic Affairs office will publish an honor roll (Dean's List), made up of students who have demonstrated their academic excellence by achieving a 3.5 grade point average or better (with no grade below a B-) while enrolled as full-time students in the 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 East Tennessee State University College of Pharmacy confers three distinctions at graduation which will be embossed on student diplomas:

Summa Cum Laude students graduating with a pharmacy GPA of 3.90 to 4.00 *Magna Cum Laude* students graduating with a pharmacy GPA of 3.75 to 3.899 *Cum Laude* students graduating with a pharmacy GPA of 3.50 to 3.749

Class Attendance

Every student is expected to attend all class sessions, including laboratories and other activities outside the classroom as deemed necessary by the course instructor, and to take all examinations. Instructors determine their individual policy for class attendance, completion of assigned work, absences at announced and unannounced examinations and excused absences. The attendance policy will be included in the syllabus.

Experiential Attendance

Attendance during experiential rotations is required. The required hours of attendance will be set by each preceptor and may range from 8-10 hours per day. Generally, attendance will be required during weekday daytime hours (between 7 a.m. and 6 p.m.); however some experiential sites may require attendance during alternate times, including evenings and/or weekends. Students are encouraged to contact preceptors in advance to discuss the required schedule. On university holidays, students are expected to abide by the holiday schedule of the experiential site and accordingly, attendance will be determined by the preceptor. Anticipated student absences from experiential rotations must be approved by the preceptor in advance. Preceptors must be informed as soon as possible when a student is too ill to report to the experiential site. Students may be sent home by the preceptor if a student's illness may compromise the health of patients. Preceptors will be encouraged to work with students to allow students to attend appropriate professional meetings and to interview for postgraduate training experiences. Students with such excused absences will still be held accountable for the learning outcomes of the clinical experience and may be required to make up some or all of the time missed from clerkship. In general, students should not miss more than 10 percent of scheduled clerkship days. Preceptors will determine whether learning outcomes have been achieved and whether absences need to be made up at the end of the rotation.

Excused Absences

The following are defined as excused absences (though not an exhaustive listing):

• Student illness or illness of a student's immediate family. (Instructors have the right to request appropriate verification of illness.)

- Death of a member of student's immediate family. (Instructors have the right to request appropriate verification.)
- Travel for participation in intercollegiate athletic events; travel to professional meetings for members of student professional organizations sponsored by the College of Pharmacy; travel for College of Pharmacy classes, travel by individual students representing the College of Pharmacy in special circumstances. (All special circumstances must be pre-approved by the Associate Dean for Academic Affairs.) Instructors may request documentation from appropriate College of Pharmacy personnel to verify the student's participation in the event.
- Major religious holidays: Students are responsible for notifying the instructor in writing of anticipated absences for their personal religious holidays before the end of the second week of the semester.

In all cases, the student bears the responsibility for notifying the instructor before the absence and for making up any missed work. If feasible, the instructor gives the student an opportunity to make up the missed work or examination due to an excused absence during the semester in which the absence occurred. If the instructor feels that the nature of the course is such that classroom participation by the student is essential for evaluation, the instructor, if feasible, gives the student an opportunity to make up the work missed during the semester in which the absence occurred. Exceptions are made in cases of hospitalization of the student or hospitalization or death of an immediate family member. In these cases, students may call the Office of Academic Affairs, which will notify the faculty of the initial absence. However, students must make arrangements to complete all missed assignments and notify their instructors of additional days of absence.

Graduation Attendance

Attendance at the graduation exercises is a testimony of the student's belief in the important role of pharmacy in the professional and academic communities. The College of Pharmacy holds a hooding and recognition program for its graduates, their families, friends and faculty. Information about the graduate recognition program and reservations for the program are handled through the Office of Student Affairs.

ADMINISTRATIVE LISTING

Tennessee Board of Regents

Phil Bredesen Governor of Tennessee, Chair

Charles W. Manning Chancellor

Lana Seivers Commissioner of Education

Ken Givens Commissioner of Agriculture

Richard Rhoda Executive Director Tennessee Higher Education Commission

Frank Barnett Knoxville

Agenia W. Clark Nashville

Gregory Duckett Memphis

Judy T. Gooch Oak Ridge

Jonas Kisber Jackson **Fran F. Marcum** Tullahoma

Millard V. Oakley Livingston

Leslie Parks Pope Kingsport

Howard W. Roddy Hixson

J. Stanley Rogers Manchester

Robert P. Thomas Nashville

William Watkins, Jr Memphis

R. Scott McMillan Faculty Regent, Livingston

John Boots, Jr. Student Regent, Cookeville

ETSU Administration

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

Bert C. Bach, Ph.D. Provost & Vice President for Academic Affairs

David Collins, Ed.D., CPA Vice President for Financial Services **Wilsie S. Bishop**, DPA Vice President for Heath Affairs and University Chief Operating Officer

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

College of Pharmacy Administration

Larry D. Calhoun, Pharm.D. Dean

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

Charles C. Collins, Ph.D. Associate Dean, Academic Affairs

Loni T. Garcia, M.S. Associate Dean, Student Affairs **Steve C. Ellis**, M.S. Assistant Dean, Admissions and Records

Ralph Lugo, Pharm.D. Chair, Pharmacy Practice

David Roane, Ph.D. Chair, Pharmaceutical Science

FACULTY LISTING

College of Pharmacy – Pharmacy Practice

Lugo, Ralph A. (2006) Professor Chair, Pharmacy Practice B.S. in Pharmacy (1988) Rutgers University Pharm.D. in Pharmacy (1991) University of North Carolina Chapel Hill Creekmore, Jr., Freddy M. (2007) Associate Professor Vice Chair, Pharmacy Practice B.S. in Pharmacy (1989) University of Kentucky College of Pharmacy Pharm.D. in Pharmacy (1990) University of Kentucky College of Pharmacy Calhoun, Larry D. (2005) Professor Dean, College of Pharmacy B.S. in Pharmacy (1972) University of Tennessee Memphis Pharm.D. (1973) University of Tennessee Memphis Creekmore, Kathryn A. (2007) Assistant Professor B.S. in Pharmacy (1989) University of Minnesota, College of Pharmacy Pharm.D. (1990) University of Minnesota College of Pharmacy Dumond, Julie B. (2007) Assistant Professor B.S. in Physical Science (2000) Michigan State University Pharm.D. (2004) University of Michigan Garcia, Loni T. (2006) Associate Dean, Student Affairs College of Pharmacy B.S. in Pharmacy (1978) University of North Carolina Chapel Hill M.S. in Pharmacy Practice (1984) University of North Carolina Chapel Hill Henry, Robin (2007) Director, Experiential Education MBA (1997) East Tennessee State University Pharm.D. (1991) Mercer University Southern School of Pharmacy Hess, Jr., Richard A. (2007), Assistant Professor B.S. in Biology (1992) University of South Florida Pharm.D. (1998) Mercer University Southern School of Pharmacy Odle, Brian L. (2007) Assistant Professor B.S. in Chemistry (1990) Middle Tennessee State University Pharm.D. (1994) University of Tennessee at Memphis Stewart, David W. (2007) Assistant Professor Pharm.D. (2003) Campbell University School of Pharmacy College of Pharmacy – Pharmaceutical Sciences Roane, David S. (2006) Professor Chair, Pharmaceutical Science B.A. in Journalism, (1979) Drake University B.S. in Zoology (1984) Louisiana Tech University

Hurley, David L. (2007) Associate Professor
B.S. in Biology and Physics (1979) Guilford College
M.S. in Molecular and Cell Biology (1982) Pennsylvania State University
Ph.D. in Molecular and Cell Biology (1986) Pennsylvania State University

Ph.D. (1987) Louisiana State University Medical Center

Brown, Stacy D. (2007) Assistant ProfessorB.S. in Chemistry (1998) University of Tennessee at ChattanoogaPh.D. (2002) Pharmaceutical Sciences & Biomedical Sciences, 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 Associate Dean, Academic Affairs

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B.A. in Biology (1979) Huntingdon College
B.S. in Basic Medical Science (1981) University of South Alabama
B.S. in Physical Therapy (1994) University of South Alabama
Ph.D. in Pharmacology (1985) University of South Alabama

Pond, Brooks B. (2007) Assistant Professor B.S. in Biochemistry and Molecular Biology (2000) Centre College Ph.D. in Pharmacology (2004) Duke University

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College of Medicine – Biochemistry

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

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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 BiologyM.Sc. (1990) Central University of PondicherryM.Phil. (1992) Central University of HyderabadPh.D. (1995) Central University of Hyderabad

College of Medicine – Pharmacology

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

College of Public and Allied Health – Microbiology

Mustain, Eric L. (1990) Assistant Professor, Health Sciences B.A. (1974) University of Missouri-Columbia Ph.D. (1984) University of Colorado Health Sciences Center

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Gallagher, Michael T. (1989) Professor, Chair, Health SciencesB.S. (1966) University of HoustonM.S. (1970) Northwestern UniversityPh.D. (1974) Baylor College of Medicine

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

Powers, C. Laraine (1995) Associate Professor, Health Sciences B.S. (1983) Memphis State University M.S. (1987) University of Tennessee-Knoxville Ph.D. (1994) University of Tennessee-Memphis