

*Texas Tech University Health Sciences Center*

*School of Pharmacy*

*Doctor of Pharmacy Program*



*2011-2012*

# Academic Year Bulletin

## SCHOOL OF PHARMACY CAMPUSES:

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## BULLETIN

This bulletin is a publication of Texas Tech University Health Sciences Center School of Pharmacy containing information concerning policies, regulations, procedures, programs, courses, schedules, and fees.

The University reserves the right to change curricula, rules, fees, admission requirements, and other requirements without notice. The provisions for this Bulletin do not constitute a contract, express or implied, between any applicant, student, faculty member, or any other person and Texas Tech University Health Sciences Center (TTUHSC).

Texas Tech University Health Sciences Center is open to all persons regardless of race, religion, gender, lifestyle, sexual orientation, disability, or national origin who are otherwise eligible for admission as students.

Once admitted, students need to keep themselves apprised of rules and regulations pertaining to the School of Pharmacy found in the Bulletin and to Texas Tech University, found in the Texas Tech University Health Sciences Center Student Affairs Handbook.

This Bulletin is published by Texas Tech University Health Sciences Center School of Pharmacy, Amarillo, Texas 79106.

Aug 1, 2011

## **TEXAS TECH SYSTEM**

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### **Mission Statement of the Health Sciences Center**

The mission of the Texas Tech University Health Sciences Center is to improve the health of people by providing educational opportunities to students and health care professionals, advancing knowledge through scholarship and research, and providing patient care and service.

### **Vision Statement of the Health Sciences Center**

Texas Tech University Health Sciences Center will be recognized nationally as a top-ranked health sciences university.

### **School of Pharmacy Administration**

Arthur A. Nelson, Jr., R.Ph., Ph.D., Dean

Thomas J. Thekkumkara, Ph.D., Regional Dean, Amarillo

Jose Vega, Pharm.D. Interim Regional Dean, Abilene

Richard D. Leff, Pharm.D., Regional Dean, Dallas

Charles F. Seifert, Pharm.D., Regional Dean, Lubbock

James Stoll, Ph.D. Associate Dean for Faculty Enhancement

Rebecca Sleeper-Irons, Associate dean for Academic Affairs

Summer W. Balcer, M.Ed., Assistant Dean for Student Services

David K. Watson, Assistant Dean for Finance and Administration

Roland A. Patry, R.Ph., Dr.P.H., Chair, Pharmacy Practice

Cynthia L. Raehl, Pharm.D., Chair, Pharmacy Practice

Quentin R. Smith, Ph.D., Senior Associate Dean for Sciences

Ruiwen Zhang, M.D., Chair Pharmaceutical Sciences



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## Dean's Message

The residents of the Texas Panhandle worked for many years to build a pharmacy school. It was the vision of a dedicated group of pharmacists, citizens, and legislators to provide pharmacy education in West Texas.

Today that vision has become evident on the horizon of Amarillo in the lower plain of Lubbock, and the busy streets of Dallas/Fort Worth, and in 2007 the citizens of Abilene dedicated the new campus. The Texas Tech School of Pharmacy has made a significant impact on the health and well-being of many Texas' citizens.

Faculty, staff and, yes, doctoral candidates have come together to provide for the future of pharmacy and patient care. We offer an innovative curriculum. We have progressive teaching methods and technologies that will prepare students for pharmacy practice today and for the years to come. I can assure you that you will be intellectually challenged over the next four years.

I invite you to join in the excitement of the Texas Tech School of Pharmacy. You will partner with other health care professionals to provide patient care. *You* will make a difference and we want to provide you with the knowledge and skills to make that difference be the very best.

*Arthur A. Nelson, Jr., R.Ph, Ph.D.*

### SCHOOL OF PHARMACY PHILOSOPHY

Traditionally, the pharmacist's role has been that of a dispenser of medications. However, this traditional method of practice is no longer adequate to ensure safety and effectiveness in the use of medications and health devices. The focus of practice must change from one of product distribution to a more expansive duty; assuming the responsibility for our patients' outcomes from the medications we dispense.

Health care reform has put an emphasis on primary health care. This emphasis coupled with a lack of access, increasingly rising costs, and a concern for quality is placing the pharmacist in an important role as a member of the primary health care delivery team.

Pharmacists are located in most rural communities and throughout inner cities and urban sprawl across the country. This physical placement of the pharmacist, who is trained in delivering comprehensive care to the public, allows access to primary health care where it is critically lacking. The role of the pharmacist as a member of the primary health care team does not replace the physician, physician assistant or nurse practitioner, but enhances their effectiveness. The pharmaceutical services provided in this changing arena include participating in the drug therapy decision process through recommending therapeutic objectives, selecting the most appropriate drug product to achieve the desired therapeutic outcomes given the patient's unique characteristics, determining dose and dosage schedule, selecting the drug product source of supply and drug preparation, and monitoring the patient's response to the therapy so that the patient receives the optimal benefits with minimal adverse drug effects. Texas Tech University Health Sciences Center School of Pharmacy offers the degree of Doctor of Pharmacy (Pharm.D.) with this expanded role of the pharmacist in mind. The effective delivery of essential primary health care services requires a greater responsibility of the pharmacist and a greater depth and breadth of education to support it.

It is a goal of all educators to foster within students the desire to learn and the ability to discover. Our curriculum has been designed to encourage intellectual development and help the student become a competent

and skilled professional pharmacist. This is accomplished through conceptual competence, technical competence, integrated competence and career marketability.

Pharmaceutical education must provide students a fundamentally strong science base enabling them to understand the progression of diseases and how drug therapy can influence or reverse this process. Pharmacists evaluate clinical studies and use data to reach conclusions regarding a variety of issues. Graduates must be mathematically competent in the resolution of problems related to drug therapy. Analytical thinking must be cultivated allowing today's pharmacy pharmacist to be effective in decision making. Communication skills are essential in preparing the student to be an effective pharmacist. Graduates must have an understanding of the social context in which their profession is practiced. They must learn to first listen in order to effectively convey information regarding drug therapies. There must also be sensitivity to patients of all socio-economic levels and cultural backgrounds whose native language is not English.

TTUHSC School of Pharmacy's program is student centered, focusing on problem-based educational strategies. The curriculum provides an integrated course context of pathophysiology, pharmacology, medicinal chemistry and therapeutics, built on a solid understanding of the biomedical sciences. It offers expanded practice management instruction and clinical experiences early and throughout the four-year professional program. Each of the curricular and instructional strategies has been precisely balanced to give the academic and clinical preparation to optimally succeed in any pharmaceutical profession.



### MISSION STATEMENT

Our mission is to enhance the lives of the diverse people of Texas and beyond, through excellence and innovation in: educating health-care practitioners, researchers, and educators, providing pharmaceutical care and service, and advancing knowledge through scholarship.

### VISION STATEMENT

Our vision is to become internationally recognized for expanding the pharmacist's role as a leader in healthcare by developing models and excellence in patient-centered care and collaborative drug therapy management through an innovative educational curriculum, while advancing healthcare and science through cutting-edge research.

### CULTURE STATEMENT

Our culture -the way we live and act -is created by a strong commitment to a set of core values based on mutual respect, professionalism and integrity. As a community of learners, we are committed to...

- A student-centered, positive learning community. We foster a personal dedication to the pharmacy profession and excellence in education, practice and research.
- Collaborative interpersonal relationships—defined as mutual learning, open communication and shared responsibility among faculty, administration and students.
- Compassionate care, an unwavering dedication, to each patient's pharmaceutical care needs.

- This care is supported by sound biological and behavioral understanding of healthcare.
- Community involvement and serving the healthcare needs of the citizens of Texas. Our outreach projects enrich our community and provide students with a sense of public responsibility. Life-long learning and a willingness to change, be progressive, make timely and vigilant decisions, and evaluate our performances against stated goals.

### OUTCOMES

The results of embracing and living the Texas Tech School of Pharmacy values are excellence; innovative pharmaceutical education; preparation of professionals with an unwavering ethical foundation; a positive, rewarding and stimulating work environment; and a noticeable and positive impact on the communities in which we work, study, and live.

Academic and healthcare environments that encourage open debate and dialogue, the introduction of new ideas and practices, innovation through collaboration, and an unwavering commitment to self-improvement.

### ACCREDITATION

The Doctor of Pharmacy Program of the Texas Tech University Health Sciences Center is fully accredited by the Accreditation Council for Pharmacy Education (ACPE). Questions about the accreditation status of the Texas Tech University Doctor of Pharmacy Program may be directed to the Accreditation Council for Pharmacy Education at 20 North Clark Street, Suite 2500, Chicago, Illinois 60602-5109 (telephone 312-664-3575).

The Texas Tech University Health Sciences Center is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award baccalaureate, masters, doctoral, and professional degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of the Texas Tech University Health Sciences Center. The Commission should be contacted only if there is evidence that appears to support the institution's significant non-compliance with a requirement or standard.

### PURPOSES AND FUNCTIONS

The purpose of the program is to prepare entry-level pharmacy practitioners with minimum competencies in the following areas:

1. Provide patient centered care which is defined as the ability to design implement, monitor, evaluate and adjust pharmacy care plans as well as manage a patient-centered practice to include establishing, marketing and being compensated for medication therapy management and patient care services rendered.
2. Manage human, physical, medical, informational, and technological resources, which is defined as the ability to ensure efficient, cost-effective use of resources in the provision of patient care.
3. Manage medication-use systems which is defined as the ability to apply patient- and population-specific data quality improvement strategies, medication safety and error reduction programs, and research processes to minimize drug misadventures and optimize patient outcomes; to participate in the development of drug use and health policy; and to help design pharmacy benefits.
4. Promote the availability of effective health and disease prevention services and health policy, which is defined as the ability to apply population-specific data, quality improvement strategies, informatics, and

research processes to identify and solve public health problems and to develop health policy.

5. Provide population based care, which is defined as the ability to develop and implement population-specific, evidence based disease management programs and protocols.

## **GENERAL IN FORMATION**



The Texas Tech University Health Sciences Center was created with the establishment of the School of Medicine by the 61st Texas Legislature in May, 1969 as a multi-campus system; establishing Lubbock as the central administrative unit, with other regional campuses. The School of Medicine formally opened in 1972. The Amarillo campus accepted medical residents as follows: 1974 -Family Medicine, 1978 -Pediatrics, 1979 -OB, 1982 -Internal Medicine and Psychology/Neurology, 1988 -Internal Medicine/ Pediatrics. The first medical students entered class in Amarillo in 1978.

The School of Nursing was initiated with the first class in 1981. Nursing education is focused in Lubbock and Odessa. West Texas A&M University and Amarillo College offer nursing programs at the associate, baccalaureate and masters level in the Panhandle.

In 1993, the 73rd Texas Legislature approved an expansion of the School of Allied Health, which was established in 1983, and a new School of Pharmacy. Pharmacy is the first academic program of the University to be administratively based outside the main campus in Lubbock. These two schools have expanded the missions of Texas Tech University Health Sciences Center at Amarillo.

The Allied Health curriculum at Amarillo currently is divided into two programs, physical therapy and occupational therapy. Other programs offered by the school at other campuses include Medical Technology, Communications Disorders, and Emergency Medical Technology.

### **The School of Pharmacy**

The School of Pharmacy accepted its first class of 64 full-time students into the professional program beginning Fall, 1996. Currently, 130 students are now admitted once each year in the fall semester. Students may be admitted to the Amarillo campus or the Abilene campus. If admitted to the Amarillo campus, students spend their first two years on the Amarillo campus, then complete their third and fourth years on one of the regional campuses – Amarillo, Dallas/Fort Worth, or Lubbock. If assigned to Abilene, students will stay for the duration of their pharmacy education. The School of Pharmacy has more than 445 students enrolled in professional and postgraduate programs. The School of Pharmacy employs approximately 90 full-time equivalent faculty, 23 post-doctoral pharmacy residents, and 38 graduate teaching and research assistants; approximately 113 staff serve the students and programs of the School.

The School of Pharmacy is based in a 102,000 sq. ft. building on the Amarillo campus of the Texas Tech University Health Sciences Center. The building was provided through funds donated by the people of Amarillo. The Pharmacy building features: a 240-seat lecture center and five classrooms offering interactive video conferencing capabilities and network capabilities. These classrooms allow students to interactively view and respond to off-site based instruction while also having computer access to images via the Internet. Other facilities include a Drug Information Center, multiple small group conference rooms, museum, teaching laboratory, and student lounge.

The Pharmacy Building is located directly across Coulter Drive from Northwest Texas Hospital. The campus is comprised of the School of Pharmacy, the Texas Tech Clinic and the schools of Medicine and Allied Health Sciences, and Library of the Health Sciences Center.

The Abilene campus is housed in a 35,000 building located adjacent to the Hendrick Medical Center. It offers two video conferencing classrooms outfitted with high speed data ports for each student, two flexible seating classrooms, a drug information center, six case study rooms, teaching laboratory for compounding and dispensing drugs, a patient counseling practice room, a physical assessment laboratory, student lounge and study areas, and a 4,600 research laboratory.

The Dallas/Fort Worth campus is centered on the campus of the Dallas Veterans Affairs Medical Center. The Pharmacy School building is approximately 10,000 sq. ft. and houses a P3 classroom linked to the other campus, administrative and faculty offices, small group rooms and a student lounge. Students have rotations among numerous hospitals, clinics and community pharmacies throughout the Metroplex, working on teams of medical students and other health professionals throughout their two years.

The Lubbock campus is part of the 1+Million TTUHSC complex on the Texas Tech University campus. Lubbock students have access to all facilities and programs that and a comprehensive health sciences center and major academic campus of more than 30,000 students offer. Pharmacy students share classrooms, clinics, and hospitals with medical, nursing and other allied health sciences students.

### Affiliated Teaching Hospitals

School of Pharmacy faculty and students provide patient care in the following hospitals:



### Amarillo VAMC

The Amarillo Department of Veterans Affairs Medical Center is a 254 bed General Medicine and Surgery facility employing 850 people. It offers health services to a large geographic area encompassing the Texas Panhandle as well as parts of New Mexico, Oklahoma, Colorado and Kansas. The medical center has a highly complex pharmacy offering a wide variety of service to include: total computerization, unit dose, I.V. admixture, oncology preparation, drug information, investigational drugs, and an open front outpatient pharmacy. Special programs are pharmacist-directed lipid, ulcer and anticoagulant clinics.

### Baptist/Saint Anthony's Healthcare System

This combined healthcare facility is jointly licensed as a 746-bed acute care medical surgical facility. Current pharmacy practice includes the traditional aspect of unit dose distribution as well as clinical services such as target-drug monitoring, a decentralized pharmacy, drug information, clinical interventions, creatinine-clearance estimations and dosage adjustment recommendations. Staff

pharmacists also participate in patient teaching programs.

### Northwest Texas Healthcare System

Northwest Texas Hospital is a 300 bed general acute care hospital with services in Pediatrics, Pediatric Intensive Care, Labor & Delivery, Neonatal Intensive Care, Amarillo Emergency Receiving Center, medical and surgical services including, Medical and Surgical Intensive Care, Coronary Intensive Care and Level II Trauma Center Services. Pharmacists are actively involved in drug information counseling, patient profile review and drug monitoring, pharmacy and therapeutics functions, medication use evaluation, adverse drug reaction reporting, improving the quality of drug therapy, cost containment, assisting in Code Blue responses, documenting their impact on drug therapy, and continuous quality improvement and total quality management team activities.

### ABILENE



### DALLAS/FORT WORTH

#### VA North Texas Health Care System

The primary teaching site of Texas Tech Health Sciences Center School of Pharmacy (Dallas/Ft. Worth Regional Center) is the VANTHCS hospital. The School of Pharmacy's Regional Center classroom building is physically located on the campus of the VANTHCS and many clinical pharmacy faculty practice and teach at the VA facilities. The mission of the VANTHCS is to provide quality patient care to veterans; facilitate an environment for excellence in education; establish a climate which enhances research; and support the Department of Defense in a national emergency.

#### Baylor Health Care System

The Baylor Health Care System has facilities located in Dallas, Fort Worth, Garland, Grapevine, Irving, Waxahachie, and Plano. All of these sites are exemplary experiential clerkship sites utilized by the School of Pharmacy. Baylor Dallas has exemplified excellence in patient care, medical education, research, and community service. *U.S. News & World Report* has ranked Baylor Dallas among the best hospitals in the United States. Baylor Dallas is ranked among the 50 top hospitals in each of the following six specialties; digestive disorders (ranked 18); gynecology (19); heart & heart surgery (26); kidney disease (39); neurology & neurosurgery (34); and orthopedics (20).

#### Texas Health Resources

Texas Health Resources (THR) is one of the largest faith-based, nonprofit health care delivery systems in the United States. The system serves more than 6.2 million people living in 29 counties in north central Texas. In 2003, more than one in five area residents receiving in-patient care sought treatment

at a THR hospital. THR was formed in 1997 with the merger of Fort Worth-based Harris Methodist Health System and Dallas-based Presbyterian Healthcare Resources. Later that year, Arlington Memorial Hospital joined the THR system. THR has 13 hospitals with 2,405 licensed hospital beds, employs more than 17,300 people and counts more than 3,200 physicians with active staff privileges at its hospitals. Experiential clerkship sites are highly sought by Texas Tech Health Sciences Center School of Pharmacy students.

### Methodist Health Systems

Methodist Health System offers health and hope to more than 300,000 people a year at our hospitals and family health centers in North Texas. From education and health screenings to multi-organ transplants and advanced cancer treatment and care, we serve our community with some of the latest in preventive, diagnostic, and treatment technology. Every program and treatment is part of our resolve to be an active and compassionate partner in the good health of the entire community. School of Pharmacy students seek unique experiential clerkship sites at Methodist Health System.

### Children's Medical Center Dallas

Children's is a private, not-for-profit institution. It is the only Dallas healthcare facility that deals exclusively with a variety of diseases and disorders among children from birth to age 18. The center is licensed for 406 beds, including a 52-bed pediatric intensive care. The hospital also has more than 50 outpatient clinics and a state-of-the-art emergency center designed specifically for children. Children's is one of only 14 national pediatric research centers sanctioned by the National Institutes of Health. Faculty members of the University of Texas Southwestern Medical Center at Dallas are members of the Children's medical staff. They conduct research that is instrumental in developing treatments, therapies and greater understanding of pediatric diseases. This research is nationally recognized for programs devoted to cancer, cardiothoracic, neonatology, kidney disease, infectious disease, pharmacology, sickle cell disease and psychiatry. Specialized training in pediatric pharmacy is critical to School of Pharmacy students.

### Cook Children's Health Care System

Cook Children's Hospital is a private, not-for-profit institution. It is the only Fort Worth healthcare facility that deals exclusively with a variety of diseases and disorders among children from birth to age 18. The medical center is licensed for 282 beds designed specifically for children. Cook's provides quality health care to children through an integrated system which oversees a continuum of services ranging from simple preventive checkups at pediatrician's offices to highly specialized hospital-based critical care. Specialized training in pediatric pharmacy is critical to School of Pharmacy students.



### Covenant Health System

Covenant Health System is the largest healthcare institution in the West Texas and eastern New

Mexico region, with 1338 licensed beds, 4,500 employees and more than 600 admitting physicians at its cornerstone facilities in Lubbock including Covenant Medical Center, Covenant Medical Center-Lakeside, and Covenant Children's Hospital. Led by Covenant Hospital Levelland and Covenant Hospital Plainview, Covenant has a network of 18 leased, managed and affiliated community hospitals and eight Covenant Family Healthcare Centers as well as physician offices offering primary medical care in the region.

#### Mildred and Shirley L. Garrison Geriatric Education and Care Center

Mildred and Shirley L. Garrison Geriatric Education and Care Center is a state of the art 120-bed teaching nursing home. It is the only teaching nursing home of its kind in the country located on a Health Sciences Center campus. There are 60 beds devoted to progressive Alzheimer's care with 20 beds each devoted to mild, moderate, and severe dementia. There are 60 beds devoted to medical care with a 30-bed skilled nursing facility. The Garrison Center is also equipped with state of the art telemedicine equipment and a distance learning classroom.

University Medical Center University Medical Center is a 416 bed tertiary care teaching hospital which provides 21.8 million dollars annually in charity care to Lubbock and surrounding counties. It is home to the only burn unit, Level-I trauma center and bone marrow transplant unit in the region. It also houses a 42-bed NICU, 24-Bed PICU, 24-bed SICU, 14-bed MICU, and brand new cardiac care floor. It is also home to the Children's Miracle Network hospital for the city of Lubbock and the newly renovated Southwest Cancer and Research Center.

Veterans Affairs Outpatient Clinic The Veterans Affairs Outpatient Clinic in Lubbock is an outreach center from the Amarillo Veterans Affairs Health Care System. The clinic is a brand new 40,000 square foot facility with over 60,000 outpatient visits per year. There are three pharmacist-run clinics including medication referral (diabetes and hypertension), lipid lowering, and anticoagulation.

### **The Program**

The School of Pharmacy offers the Doctor of Pharmacy (Pharm.D.) as its single professional degree. The 4-year professional program, requiring at least two years of pre-professional studies that may be completed at any accredited college or university.

Doctoral Candidates are admitted once each year for enrollment in the fall semester, which starts in early August. Studies must be on a full-time basis. Doctoral Candidates will spend the majority of each weekday in classes, laboratories, or clinical experiences.

Texas Pharmacy Museum Tucked away in the basement of the Texas Tech School of Pharmacy building, the 3,000 square-foot Texas Pharmacy Museum is the only site in the state that specializes in collecting, preserving and laying items that document the history of pharmacy. The museum's collection consists



of

approximately 10,000 items including pharmacy art books, containers, laboratory glassware and various other commercial remedies, products, and tools of the trade dating as far back as the Civil War. Since it opened in 1998, these pieces of drugstore history have made their way to the museum from 90 different donors in Texas, California and Pennsylvania.

Personal images may be captured during events organized and hosted by the University using film photography, digital photography, video or other mediums and may be used on the Website, University prospectus or course brochures, other publicity material (such as internal and external newsletters), exhibition of student work or graduation ceremony brochure and may be provided to the media for publication in local or national newspapers or educational magazines. At no time will the School or University sell a personal image.



**ACADEMIC CALENDAR FOR 2011-2012**

	Summer 2011	Fall 2011	Spring 2012
<b>Registration</b>			
Early Registration for Returning Students	April 6, 2011- May 13, 2011	June 1, 2011-August 12, 2012 (Any registration after July 13 will not appear on e-bill from Bursar but you are responsible for billing amount)	Subject to change: November 12-December 18, 2011
Regular Registration for New Students	NA	June 1, 2011-August 12, 2012 (Any registration after July 13 will not appear on e-bill from Bursar but you are responsible for billing amount)	NA
Orientation and Basecamp for New P1 students - Mandatory	Orientation: August 1- 5; Basecamp: August 8-12		NA
Classes Begin	May 16, 2011	P1's August 1, 2011 P2-P4's August 15, 2011	January 3, 2012
12 <sup>th</sup> Day of Semester – No new enrollment after this date	June 1, 2011	P1's August 16, 2011 P2-P4's –August 30, 2011	January 19, 2012
Rotation 1	May 16-June 24, 2011		
Rotation 2	July 5-August 12, 2011		
Rotation 3		August 15-September 23, 2011	
Rotation 4		September 26-November 4, 2011	
Rotation 5		November 7-December 16, 2011	
Rotation 6			January 3-February 10, 2012
Rotation 7			February 13-March 23, 2012
Rotation 8			April 2- May 11, 2012
P3 High Risk Drug Knowledge Exam			January 6, 2012
Semester Exams	Rotations are assigned times	December 12-16, 2011	May 7-11, 2012
<b>Special Activities</b>			
White Coat Ceremony		White Coat Ceremonies – Amarillo, August 7, 2011 at Globe News Center, Abilene, August 14, 2011 at Paramount Theater	
Annual Assessment Day			January 28, 2012
Career Fair		November 30, 2011-Dallas – P4 students only	March 7, 2012-Amarillo P1-P3 students only.
Graduation			Hooping May 19, 2012; Graduation May 20, 2012
No didactic classes for P1-P2 students.			February 29, 2012 - No didactic classes for P1-P2 students; Clerkships for P3-P4 and electives for P3 will meet
Marsh Lecture			February 27-29, 2012
Recognition of Excellence Awards			April 27, 2012 Excellence Awards – Convocation Hour
<b>Class Closings</b>			
Student Holidays	June 26-July 4, 2011	September 5, 2011	January 16, 2012 Martin Luther King Day
Thanksgiving		November 24-25, 2011	
Winter Break		December 17-January 2, 2011	
Spring Holiday			Student Spring Break March 24-April 1, 2012
Memorial Holiday	May 31, 2010		May 28, 2012

\*Dates subject to information yet to be received from the Bursar's Office. Please refer to the Billing Schedule when received.

## PHARMACY LICENSURE

Graduates from the Texas Tech University Health Sciences Center School of Pharmacy will be eligible to apply for licensure in any state or territory of the United States. Licensure as a pharmacist is administered by boards of pharmacy in each state. Every state and territory requires graduates to complete the North America Pharmacy Licensure Examination (NAPLEX), as well as a state prepared examination on laws and rules for pharmacy practice within the state. The NAPLEX is administered throughout the country at testing centers using testing procedures. Scores may be reported to any state. Many states require some internship experience after completing the degree requirements. Students are advised to contact the board of pharmacy in the state they desire to apply for licensure for more detailed information on requirements. In Texas, the Board of Pharmacy may be contacted as follows:

Texas State Board of Pharmacy  
333 Guadalupe  
Tower 3, Suite 110  
Austin, Texas 78701  
(512) 305-8000



## TEXAS RESIDENCY

Texas Tech University Health Sciences Center School of Pharmacy gives preferential admission status to residents of the state. This means that when competing for admission, a Texas resident will be admitted before a student of equal qualifications with non-resident status. The rules and regulations for determining residence status are pursuant to the Title 3, Texas Education Code, Statute/Sections 54.052 and 54.055.

## HEALTH SCIENCES CENTER STUDENT SERVICES

Contact the Office of Student Affairs in the School of Pharmacy if you have any questions.

### **Office of Student Services (806) 743-2300**

This office handles centralized support services for the institution. Some of the services include but are not limited to: the institutional student handbook, disability services, non-academic grievances; counseling services, health insurance, student fees, student government, student organizations, and graduation.

Institutional Student handbook. This handbook works hand in hand with your school's catalog and handbook to provide you with a full scope of your rights as a TTUHSC student.

Disability Services. TTUHSC complies with the American with Disabilities Act (ADA), Section 504 Rehabilitation Act of 1973, and state and local requirements regarding students with disabilities. A student must register with the Office of Student Services and file appropriate documentation in order to be eligible for any disability benefits and services described in this operating policy.

Program of Assistance for Students. PAS is a program that enhances wellness by providing you and your family the opportunity to manage life's problems.

Health Insurance. You are **REQUIRED** by Texas Tech University Health Sciences Center (TTUHSC) to pay a Medical Services Fee per semester. With this fee, you can access healthcare in the clinic and see a nurse or physician for minimal or limited minor problems. Health insurance is not required to obtain services from the Family Practice Clinic which are located on each of our campuses with the exception of Dallas and Abilene. Health plan coverage is strongly recommended for all students to cover major medical, emergency care, specialty care, and pharmacy as these services can be expensive and are not covered by the health care provided by TTUHSC. TTUHSC highly encourages and strongly recommends that each student possess medical insurance for emergency situations, and for basic medical care needs. You may obtain suitable coverage from the following provider at a very competitive price if you do not have other insurance. Students must be enrolled in 1 or more credit hours to be eligible for Academic Health Plans, [www.academichealthplans.com/ttuhsc](http://www.academichealthplans.com/ttuhsc).

Updated information on immunizations will be provided during your school's orientation. If you require an immunization administered by the Family Medicine clinic, you will be required to pay a fee. For additional information on centralized services please visit [www.ttuhsc.edu/student-services](http://www.ttuhsc.edu/student-services) .

Services common to the students on all campuses for the Schools of Pharmacy, Medicine, Allied Health, and Nursing are under one office. The basic elements of this office are:

**Office of the Registrar (806) 743-2300**

As custodian of the students' permanent academic records, the Registrar's Office is also responsible for registration, grade reports, transcript requests, enrollment and veteran certification. Questions related to Texas residency status are also resolved in this office.

**Office of Financial Aid (806) 743-3025**

Students desiring financial assistance or information regarding loans and scholarships find assistance within this office. Federal, state and local programs are available to students who appropriately demonstrate financial need.

1. Office of Student Services in Lubbock (806) 743-2300 Student needing information about TTUHSC's health insurance, student organizations, graduation application, graduation dates, and graduation regalia.
2. Student Affairs in Amarillo (806) 354-5418; students needing assistance with campus issues, application, academic issues, and personal counseling should seek help here.
3. Student Affairs in the School of Pharmacy (806) 354-5457 Amarillo office
  - A. Extracurricular Events Information about tickets to cultural events in the community is available through the Office of Student Services.
  - B. Recreation Center Each campus has information regarding the facilities at each location.
  - C. Amarillo HSC Student Senate The Office of Professional Affairs serves as sponsor and provider of staff support to School of Pharmacy Senators to the Amarillo HSC Student Senate, which was established to foster better relationships between the students in all three schools.

4. The following are contact numbers for additional offices with the School of Pharmacy.

A. Amarillo

Dean's Office (806) 354-5457

Department of Pharmacy Practice (806) 356-4000 Ext. 238

Department of Pharmaceutical Sciences (806) 356-4015 Ext. 245

Instructional Services (Computers) – (806) 356-4000 Ext. 266

Financial Administration (806) 354-5463

Drug Information Center (806) 356-4008

Managed Health Care (806) 356-5375

B. Abilene

Regional Dean's Office (325) 676-7948

B. Lubbock

Regional Dean's Office (806) 743-4200

C. Dallas/Ft. Worth

Regional Dean's Office (214) 654-9404

You are urged to contact the School of Pharmacy, Office of Student Affairs at (806) 354-5418 with questions pertaining to any of these areas.

#### HEALTH SCIENCES CENTER HEALTH SERVICES

Counseling Services Confidential mental health services are available for students. These services include help in stress management, crisis, relationships, family problems, anxiety, depression, and any other situations with potential to interfere with academic success. Psychologists provide the needed free sessions. Psychiatric referral is available when needed. They are available for consultation and counseling regarding personal, academic, and career issues. *These services are structured in such a manner as to provide and maintain strict confidentiality.*

### Immunizations

- ◆ Updated information about immunizations will be provided during your school's orientation. If you require an immunization administered by the Family Medicine clinic, you will be required to pay a fee.
- ◆ For an immunization, it is not necessary to be seen by a physician, but a nurse appointment is required. Female students must have a nurse appointment for a pregnancy test prior to an MMR immunization.
- ◆ Please bring your immunization records with you at the time of your first visit.
- ◆ Please contact the Office of Student Services for the most up-to-date information on immunizations.

### Pharmacy

The Student Health Fee does not include a prescription benefit; thus, students are responsible for medication costs. However, a discounted option for pharmacy services includes Wal-Mart's \$4 Generic Drug program. The Family Medicine clinic should be able to provide more information.

### Confidentiality

All medical records are strictly confidential. By federal law, information cannot be released to anyone without the written consent of the patient, except as required by a court. You may have copies of your immunizations upon request. We will be happy to send copies of laboratory tests or other information to your physician of choice, upon your written release.

### Clinic Locations

**Texas Tech Physicians of Amarillo  
Family & Community Medicine**  
1400 Coulter, Suite 5100, Amarillo, TX 79106  
Phone: 806-351-3777  
8-5, Monday-Friday  
Emergencies: BSA Hospital

**Texas Tech Physicians of El Paso  
Family & Community Medicine**  
Texas Tech Family Medicine Center  
9849 Kenworthy, El Paso, TX 79924  
Phone: 915-757-2581  
8-5, Monday-Friday  
Emergencies: Thomason Hospital

**Texas Tech Physicians of Lubbock  
Family & Community Medicine**  
TTUHSC Building, 1st Floor, Medical Pavilion  
3601 4th Street, Lubbock, TX 79430  
Phone: 806-743-2757  
8-5, Monday-Friday  
Emergencies: University Medical Center

**Texas Tech Physicians of Odessa  
Family & Community Medicine**  
Health Center, 1st Floor  
701 W. 5th Street, Odessa, TX 79763  
Phone: 432-335-5333  
8-5, Monday-Friday  
Emergencies: Medical Center Hospital

## Health Services for TTUHSC Students

Allied Health • Medicine  
Nursing • Pharmacy  
Graduate School of  
Biomedical Sciences

**Texas Tech Physicians**  
Amarillo  
El Paso • Lubbock  
Permian Basin



Department of  
Family & Community  
Medicine

## Health Services for TTUHSC Students

rev. 5/10

### Eligibility

The Texas Tech Physicians Family & Community Medicine clinic provides health services to TTUHSC students who are currently enrolled and have paid the Student Health Fees as part of tuition and fees. To receive health services, you must present a Student I.D. card at the time of the appointment. If you also have private insurance in addition to Student Health Services, you will need to submit your receipt for the co-pay to your insurance company for reimbursement.

*The Student Health Fee covers only those services provided by the Family & Community Medicine clinic and specific laboratory and radiology service performed at cooperating locations. All other charges incurred are your responsibility.*

### Clinic Appointments

- ◆ Please call to make an appointment. If you need to be seen for a sudden illness, please call that day as early as possible.
- ◆ If you need to be seen after clinic hours, call your campus's clinic phone number and ask to leave a message for the on-call physician.
- ◆ When you check in, please inform the receptionist that you are a TTUHSC student. If you come to the clinic without an appointment, it may be necessary for you to wait for a physician.

Immunizations, paper work, and routine procedures are not ordinarily considered urgent care, and may not be taken care of on the same day as requested.

### Staff

The medical staff of the Texas Tech Physicians Family & Community Medicine clinic is composed of faculty and resident physicians and a nursing staff.

### Emergencies

If you have a health emergency that requires you to be seen at a hospital emergency room, go to the hospital listed for your campus under "Clinic Locations." *Visits to an emergency room that generate a charge from either TTUHSC or the hospital are your responsibility.*

### Fees

Effective 9/1/2007, TTUHSC students are required to pay the following fees:

Physician Visit.....	\$10
Physician Visit with Pap Test and/or STD* testing.....	\$25
*testing for chlamydia, gonorrhea or syphilis	
Physician Visit with Colposcopy Procedure.....	\$60

### Services Covered

Medically Necessary Laboratory Services  
(ordered by Family Medicine Clinic)

Chemistry	Virology
• Glucose, Random/Fasting	• Chlamydia testing
• Amylase	• Hematology
• Lipase	• CBC w/diff
• Potassium	• CBC w/o diff
• Total Protein	• Sed Rate
• Total Bilirubin	<b>Immunology</b>
• Calcium	• RPR (syphilis)
<b>Profiles</b>	• Monospot
• Chemistry Profile	• Pregnancy Test (Qualitative Only)
• Lipid Profile	Blood or Urine
• Liver Profile	
• Thyroid Function Panel	
<b>Microbiology</b>	
• Strep Screen	
• Throat Culture	
• Urine Culture	
• Urinalysis	
• GC Testing	

### Radiology Services

- Chest
- Pelvis
- Humerus
- Wrist
- Femur
- Ankle
- Ribs
- Hips
- Elbow
- Hand
- Knee
- Foot
- Spine
- Shoulder
- Forearm
- Finger
- Tibia/Fibula
- Abdomen

All covered laboratory and radiology services must be ordered by the Family Medicine physician. Any additional lab tests or radiology services, consultations, visits to other departments at TTUHSC, or visits to an emergency room that generate a charge from either the Texas Tech Physicians Family & Community Medicine clinic or the hospital will be your responsibility.

If you receive a bill from TTUHSC for services covered by the Student Health Fee, please bring the bill to the Texas Tech Physicians Family & Community Medicine clinic as soon as possible.

### Services NOT Covered

- ◆ Emergency room visits
- ◆ Hospitalizations
- ◆ Laboratory (other than listed)
- ◆ Radiology (other than listed)
- ◆ Procedures (other than colposcopy)
- ◆ Immunizations
- ◆ TB & AIDS tests
- ◆ Antibody Titers
- ◆ Durable medical equipment (DME)
- ◆ Medications administered in clinic

*The Health Services provided to you as a TTUHSC student do not constitute a health insurance policy. For questions about services, please contact the Office of Student Services 806-743-2300*

## Health Services for TTUHSC Students



### Campus Parking

Limited parking facilities are available. Any student wishing to park on any of the campuses will be required to obtain a permit and pay the Parking Permit Fee.

### Student Housing

The School of Pharmacy does not furnish living quarters for its students. Housing is individual and each student makes his/her own arrangements. Most students live in apartments or houses in the community. Apartment guides may be obtained from the School of Pharmacy, Office of Student Affairs.

## *FINANCIAL INFORMATION*

Tuition and fees are established each year by the Board of Regents. In addition to tuition and fees, students are responsible for their books, supplies, travel and personal expenses associated with completing their clinical experiences. A laptop computer, compatible with the School's system is also required. Contact the Office of Student Affairs to receive the specifications. A \$100 application fee must be submitted with the application for admission. The application fee is non-refundable. Applications will not be processed without this fee. The fee is waived for TTUHSC employees on at least a 9-month appointment, their spouses and dependent children under age 25. Upon acceptance of an offer of admission, the student pays an additional \$100 nonrefundable placement guarantee fee.

### Financial Aid



Texas Tech University Health Sciences Center believes the primary responsibility for financing education lies first with the student and his/her family. When the total resources they can provide do not meet expenses, it is the objective of the financial aid program at TTUHSC to provide financial assistance to students who, without such assistance, would not be able to pursue advanced education. Financial Aid at TTUHSC comes from many sources. Although qualifications for each funding program might differ, no student shall be excluded from participating in or be denied the benefits of any financial aid program on the basis of age, sex, race, color, religion, national origin, or disability.

For specific information contact the TTUHSC Financial Aid Office at (806) 743-3025. Students enrolled in the pharmacy program in Amarillo may use the phone in the Office of Student Affairs to make a toll free call to the Financial Aid Office in Lubbock. Inquire in the Student Affairs Office. Information regarding step-by-step instructions for completion of financial aid can be found on our website.

### Scholarships

Awards distributed by the School of Pharmacy are based on academic achievement, leadership, extra-curricular activities, and financial need. Scholarship recipients are selected by the School of Pharmacy Faculty Scholarship Committee, a subcommittee of the Student Affairs Committee. Award decisions are made in the summer for the following academic year.

To be considered for scholarships for the upcoming school year, students must submit an online application no later than May 23rd. Currently enrolled students with a minimum cumulative GPA of 80.0% and entering students with a minimum GPA of 3.0 (GPA calculated using only required prepharmacy course grades) are eligible. Entering students' transcripts must be on file with the Office of the Registrar by June 1st. To be considered for need-based scholarships, the applicant must submit a FAFSA by June 1.

For additional information, contact the Office of Student Affairs at: 806-354-5418 or [linda.goldstein@ttuhsc.edu](mailto:linda.goldstein@ttuhsc.edu) .

Scholarships available to TTUHSC Center School of Pharmacy students include:

SOP Academic Achievement  
J.V. Adcox Memorial  
Amarillo Area Foundation Community  
Bexar County Pharmaceutical Association  
CAB Bond Memorial  
Bill Wehner Memorial  
Byrd Family  
The **CH** Foundation  
CVS  
Cardinal Health  
Ashlyn B. Cox Memorial  
Dean's Leadership

Gary Collins  
 James A. "Buddy" Davidson  
 Norman J. Dozier Memorial  
 Eckerd  
 Joshua Carnes Memorial  
 Jean C. Stockton  
 HEB Pharmacy  
 Lonnie and Nancy Hollingsworth  
 Katelyn Jill Turner Memorial  
 MedcoHealth Solutions  
 Michael Patry Memorial Scholarship  
 National Association of Chain Drug Stores Foundation  
 Pharmacists Mutual  
 Purdu Pharma  
 Reinhaus Family Foundation  
 Reverend Arthur Nelson, Sr. and Anne Nelson Memorial  
 Roberta High Memorial  
 Scholarship for Disadvantaged Students  
 SOP Academic Excellence  
 Sybil B. Harrington Foundation  
 Tarrant County Pharmaceutical Association  
 Texas Federation of Drug Stores  
 Tom Thumb/Randalls/Safeway  
 United Supermarkets  
 Walgreens Diversity  
 WalMart  
 Weinstein Family  
 West Texas Pharmaceutical Association

### Academic Year 2011-2012 Estimated Tuition

	Tuition	TX Resident	Non-TX Resident
State Tuition			
39 credit hours @\$150/credit hour (Texas Resident)		\$5,850.00	
39 credit hours @\$413/credit hour; (Non-Resident)			\$16,933.00
Institutional Tuition			
39 credit hours @\$160/credit hour		\$6,240.00	
39 credit hours @\$160/credit hour (Non Resident)			\$6,240.00
<b>Total Tuition</b>		<b>\$12,090.00</b>	<b>\$23,173.00</b>

#### ESTIMATED FEES

Malpractice Insurance (each fall semester/per year)	\$17.00	\$17.00
Medical Services Fee (\$70.00/semester)	\$140.00	\$140.00
Immunization fee all students fall semester	\$50.00	\$50.00

Student Services Fee (\$11.00/cr hr, max \$132	\$264.00	\$264.00
Course Fees (14 @ \$45 max)	\$630.00	\$630.00
Lab Fees (3 courses @ \$30.00/course)	\$90.00	\$90.00
Drug Information and Materials Fee (each fall)	\$160.00	\$160.00
Clinical Immunization Fee (\$40.00/fall semester)	\$40.00	\$40.00
Identification Card Maintenance Fee (\$5.00/semester)	\$10.00	\$10.00
Identification Card Replacement Fee (\$10.00/occurrence)	\$10.00	\$10.00
Information Technology Fee (\$10.00/cr. hr.)	\$390.00	\$390.00
Record Processing Fee (\$5.00/semester)	\$10.00	\$10.00
Outcomes Assessment Fee (spring only)	\$175.00	\$175.00
Orientation fee P1 fall only	\$50.00	\$50.00
Parking Fee	\$65.00	\$65.00
International Education fee 4.00 per semester	\$8.00	\$8.00
Clinical Simulation Center Fees for P1 Spring,	\$300.00	\$300.00
Phar 1171, Phar 1131, Phar 1101 and Phar 1401	\$400.00	\$400.00
<b>Total Fees for First Year</b>	<b>\$2,809.00</b>	<b>\$2,809.00</b>
<b>Total of Tuition, Fees &amp; Expenses for First Year</b>	<b>\$14,899.00</b>	<b>\$25,982.00</b>

Estimated Books and Supplies for First Professional Year		
Text books	\$500.00	\$500.00
Lab jacket/name badge	\$45.00	\$45.00
Laptop computer (range \$2,500 - \$4,000)	\$3,250.00	\$3,250.00
<b>Estimated Total for Outside Expenses for First Year</b>	<b>\$3,795.00</b>	<b>\$3,795.00</b>

#### **ADMISSION FEES**

Placement Guarantee Fee (Non-Refundable)	\$100.00	
Application Fee (Non-Refundable)	\$100.00	
Application Fee PharmD/MBA (Non-Refundable)	\$175.00	

Tuition, fees and expenses are subject to change at any time without notice.

Tuition is set by Texas State Statute and fees are set by the Texas Tech University

Health Sciences Center Board of Regents each year. Students are also responsible for their

personal expenses, including travel and housing during their clinical experiences.

#### **Other Fees**

Graduation Fee	\$75.00	\$75.00
Clinical Simulation Center Fees for P2	\$300.00	\$300.00
Phar 2203, Phar 2101, and Phar 2104		
Late Payment Fees (after the 2nd working day following the billing due date, \$50.00 per due date)	\$50.00	\$50.00
Late Registration Fee (beginning 1st class day)	\$50.00	\$50.00
Returned Check Charges (per occurrence)	\$30.00	\$30.00
Post Census Day Matriculation Fee	\$200.00	\$200.00

#### **Refunds**

Prior to the first day	100 percent
During the 1st five class days	80 percent

During the 2nd five class days	70 percent
During the 3rd five class days	50 percent
During the 4th five class days	25 percent
Any time after	None

### Emergency Tuition Loan Program

Resident and non-resident students as well as students that do not apply for financial aid may be eligible for an emergency loan.

*This loan is used exclusively for payment of current tuition and fees.* There is no minimum hour requirement. Students may apply for this loan through the Financial Aid Office. A promissory note must be signed and funds will be applied to the student's account. The loan amount will cover the cost of tuition and fee charges for the currently enrolled classes. The loan is of 90-day duration or the close of the semester (whichever comes first) and is payable in full no later than the established due dates. The interest rate is five percent per annum and is calculated from the loan origination date. This loan **program may not be available for summer sessions.**

Tuition and fees will be established each year by the Board of Regents. In addition to tuition, students are responsible for their books, supplies, travel and personal expenses associated with completing their clinical experiences. A laptop computer, compatible with the School's system is required.

### DOCTOR OF PHARMACY ADMISSIONS POLICY

Admission to the Texas Tech University Health Sciences Center School of Pharmacy is open to all individuals who have permanent U.S. residency status. Applicants who are residents of Texas and adjacent counties in New Mexico, Oklahoma and Arkansas are given preference over equally qualified out-of-state applicants. Applicants must have completed at least two years of pre-professional studies at any regionally accredited U.S. college or university and must present official transcripts of having completed 72 hours of designated courses with a grade of C or better. Applicants must complete the application form, request three letters of reference from individuals who can attest to the applicant's morals, ethics, academic and life experiences. Applicants are provided the opportunity, through the consideration of personal statements, recommendations, and essays to demonstrate their potential contributions to diversity. Applicants must also complete the Pharmacy College Admissions Test (PCAT) with a preferred composite score of 50% or better.

### THE ADMISSION PROCESS and PharmCAS

The Admission Process begins in early June each year and continues through the regular admission deadline. During the spring, prior to fall admissions each applicant will have a staff review of their application reviewed upon receipt. Applications will be assessed on the following criteria. To be eligible for review, each applicant must have a minimum pre-pharmacy grade point average (GPA) of 3.0 on a 4-point scale on the list of prerequisite courses completed by the published deadline date each year. The pre-pharmacy grade point average (GPA) is calculated by considering only the last grade received for designated courses taken in the general requirements. Students making application shall have completed, or expect to complete at least two full academic years of pre-pharmacy before entering the Pharm.D. program in August. Completion of all prerequisite courses should be within the last seven (7) years, i.e., Fall 2012 minus 7 = Fall 2005, and will require a written request to have the Dean's approval for older course work. Courses will vary somewhat, based on the curriculum offered at various schools. General requirements are as follows:

General Chemistry (for majors), with lab 8 SCH\*\*  
Organic Chemistry, with lab 8 SCH\*\*  
General Physics (trig or calculus based), 4 SCH\*\*  
General Biology (for majors), with lab 8 SCH\*\*  
Human-based science course (3000 level) 3SCH\*\*\*\*\*  
Microbiology, with lab 4 SCH\*\*  
Calculus 3 SCH\*\*  
Statistics 3 SCH\*\*  
Speech (public speaking) 3 SCH\*\*  
Economics, macro 3 SCH\*\*

\*English Comp I 3 SCH

\*English Comp II 3 SCH

\*English Literature 3 SCH

\*Humanities/Social Sciences 15 SCH\*\*\*\*

\*If you have earned a bachelor's degree from an accredited college or university in the United States prior to enrolling in the School of Pharmacy, you are exempt from the English and Humanities/Social Sciences requirements

**Legend:**

\*\*Used in the calculation of the pre-pharmacy GPA (grade point average).

\*\*\*Humanities/Social Sciences: Courses may be selected from any mix of Anthropology, Communications (excluding Public Speaking which is a prerequisite), Economics (excluding Economics prerequisite), Ethnic Studies, Family Living/Human development, Geography, History, Journalism, Philosophy, Political Science (Government), Psychology, and Sociology. Performing and Fine Arts (including Music, Physical Education, and Foreign Languages. Computer Sciences or similar courses will not meet this requirement. Prerequisite groupings for Humanities/Social Sciences, e.g., 6 hours of history and 6 hours of government are not required by the TTUHSC School of Pharmacy. Advanced Placement (AP), CLEP, and Dual Credit are accepted if documented on your transcript from an accredited U.S. college or university.

\*\*\*\*A three thousand level course is required in the broad field of human-based sciences. Specific branches may include anatomy, biology, biochemistry, bioengineering, bioinformatics, biomechanics, biomedical research, biophysics, biotechnology, developmental biology, genetics, histology, microbiology, molecular biology, neurobiology, pathophysiology, pharmacology, physiology, and virology. A three thousand level course is based on the Texas Common Course Numbering System (TCCNS). Some schools may use a three digit numbering system. A three hundred level course may not qualify as a three thousand level TCCNS course equivalent. Applicants wishing to have a course evaluated for approval may submit a request to the Office of Student Services.

PCAT (Pharmacy College Admission Test)

The Pharmacy College Admission Test also known as the PCAT is required of all applicants who apply for admission to the School of Pharmacy. It is highly recommended that you take the September when applying to TTUHSC School of Pharmacy. All applicants who are interested in taking the PCAT should go to the link on our website for further information. The link to the website contains most of the information in their Candidate Information Booklet. This website contains the PCAT on-line application. <http://harcourtassessment.com/haiweb/Cultures/en-US/Harcourt/Community/PostSecondary/Products/PCAT/PCATHome.htm>

## **THE PHARM D. ADMISSIONS PROCESS - REVIEW OF APPLICATION AND ADMISSIONS CRITERIA**

All of your application materials are important and will be reviewed by the Admissions Committee as part of the overall process. Once you have completed the application on-line, paid your application fee, submitted your transcripts, given your references their forms to complete, and taken the PCAT with your grades having been received by PharmCAS, your application will go through a 6-step review process.

### **Step 1 – Staff Review**

The admissions staff will review your completed application to determine whether all documents are complete and whether you meet the minimum admissions requirements. We will compute your adjusted Pre-pharmacy GPA, using the last grade you received in your courses and we will also determine that none of the Pre-pharmacy courses were more than 7 years prior to the date you would start classes. If all these checks are cleared, the status of your application will be posted on-line and verifying that your application is complete. We recommend you first review the on-line posting since your records will be updated there.

### **Step 2 – Admissions Committee Review**

The Admissions Committee is composed of a cross section of faculty members and advanced students who review each application to determine which applicants will be invited to the Amarillo or Abilene campus for an interview. To select those to interview, we compute each applicant's probability of successfully completing the curriculum (4 years of pharmacy studies with a composite GPA above 75% and no course failures), by a regression formula that includes your Pre-Pharmacy GPA (as computed on your application), and the Composite, Biology, Chemistry and Reading scores on your PCAT. Through statistical analysis of our previous students' success in the curriculum, we have found that these elements are highly predictive of an applicant's success or failure in the program. Once the probabilities are computed, we then invite those with the highest probability of being academically successful for an interview.

The academic rigor of the program is significant and every student must be able to handle the demands of the courses, but we know that academic abilities alone are not the only factors that determine overall success as a pharmacist. Therefore, we typically extend interview offers to about 2.5 times as many applicants as we have slots in the class, to allow you to demonstrate your personal strengths beyond your academic abilities. Those abilities, like communication skills, critical thinking skills, ability to work in teams, etc., typically cannot be measured accurately by GPA and PCAT scores alone. Thus, we want to be sure to admit applicants who we know can be both academically successful and also have the basic abilities that will make them leaders in pharmacy and caring practitioners for their patients.

If you are not offered an opportunity for an interview, it doesn't mean that we believe you wouldn't be a good student; we simply have so many applications that it is impossible to spend a day with every person who meets the minimum requirements. We must focus on those applicants who we determine have the best chance to be successful in a very difficult academic program. If you are not extended an interview invitation, please call to make an appointment

with one of our counselors after May 1 to meet face-to-face and review your application. We can explain why you fell short and make suggestions on how you could enhance your application for the next year if you wish to re-apply.

### Step 3– Adjustments to Your Interview Invitation

Your Interview Invitation Score will be adjusted by reviewing your transcripts for each “F” and “D” previously made in the prepharmacy course requirements.

### Step 4 – On Campus Interview

If you receive a letter extending you an interview opportunity, the letter will give more directions on how to set-up the interview and possible dates. You will need to come to the campus in Amarillo or Abilene for your interview.

**Preparing for the Interview...** is the hardest part of the process. This is a challenging day, but we try to help you through it. Some suggestions:

**Dress Professionally.** When you look professional, you act it....but be sure it is comfortable and you feel good about the way you look.

**Be on Time.** If you feel rushed or start late, it sets you up to feel frazzled. Get a good night's sleep the night before.

**Be Honest.** If you do not know an answer, say "I don't know." Faculty interviewing you will know the difference. If it is a question about you or your wanting to be a pharmacist, have something to say. Smile. Be cheerful and positive.

**Look People in the Eye.**

**Relax.** This day will be very hectic and by the end, you will feel drained. You will participate in group problem solving, be interviewed by faculty members, take a cognitive thinking test, and have a session on the technology used for classes and the required hardware and software students must have. Remember, we haven't lost anyone yet.

**Ask Questions.** This day will also include a tour of our facilities and an opportunity for you to ask questions of students, faculty, and our staff.

Good Luck!

## **During the Interview...**

You will participate in several different assessments of your abilities. You cannot really prepare anything...just be relaxed and do your best on everything you are asked to do.

- The interview will start with welcome and general directions for the day. It is not an assessment, simply a time to get to know you and for you to get to know the other applicants that will be with you for the day. Your performance in other activities during the day will be assessed to determine an overall Interview Score.
- You will be asked to complete a creative writing exercise on a topic that you will be given for that day. We will be assessing your grammar, spelling, punctuation, and sentence structure. Most importantly, we will be looking to see if you develop a logical argument for your points and whether you present a comprehensive analysis. You should also come to a conclusion about what you think about the topic.
- You will take a standardized test to assess your critical thinking abilities. Pharmacy requires you take information from multiple sources and critically analyze the information relative to a specific patient's problem with their medication. This test will allow us to assess your basic abilities to accomplish these ends. Again, the content is not important and you cannot prepare for the test.
- As a pharmacist, you will be required to work effectively with a team of physicians, nurses and other pharmacists to solve patient and operational problems. To allow us to determine your basic teaming skills, you will be in a group of 5-6 other students and asked to group problem solving on a potential pharmacy problem. You do not need to know anything about pharmacy beyond what you have learned in your pre-pharmacy courses; we are most interested in your abilities to work within a group in reaching a solution.
- The final assessments come from one-on-one interviews with faculty members, pharmacists who assist in evaluating students and one of our existing students. They will be interested in why you want to be a pharmacist, any experiences you have had with pharmacy, your extracurricular activities while in college, your interpersonal abilities, your strengths, and weaknesses. You will be able to really "tell your story" in these sessions, so think about these types of general questions before you come, not to have a "predetermined answer" – we can always spot an answer that is not genuine – but rather your real thoughts and ideas. There will be two individuals interviewing you. Be prepared to discuss some of your life's experiences; we want to get to know you.
- Finally, we will give you a tour of the school, some time to ask questions about anything you have not received full information, and get a general feel about whether TTUHSC SOP is the right place for you. You will also be given information on how to determine your overall status in the admissions process and how to get any further information you may desire.

Yes, the day is full and you will be anxious over the outcome, but the interview is the best way for

you to understand what the SOP is about and to give you the opportunity to demonstrate that you would be successful in the program and as a pharmacist.

### Step 5 – Ranking of Applicants

Once all the data are compiled, the Admissions Committee rank-orders the students based on the Interview Scores.

### Step 6 – Diversity Factors

The Texas Tech Board of Regents have instructed all programs to identify and use diversity factors to ensure that our classes reflect the cross-section of factors that are reflective of the population of Texas. The U.S. Supreme Court has given guidelines for professional programs to use diversity factors in their admissions process and TTUHSC SOP fully complies with these guidelines. For example, there are no quotas or target percentages of the class that must meet any or all of these diversity factors, factors are not weighted in the admissions formula, and diversity factors will not move an applicant into the class admitted without fully meeting the requirements for admissions. We are required to give a full review of each application and only apply diversity factors when individuals with these factors enrich the qualities of the class.

The diversity factors (in no priority order) considered by the Admissions Committee are as follows:

- a) Is the applicant's official residency in an area classified by Texas as underserved with health professionals? These are typically a socio-economically depressed area or from a rural county (population less than 50,000).
- b) Is the applicant fluent in Spanish and English language skills?
- c) Has the applicant distinguished themselves in extracurricular activities directed to health care or community service?
- d) Other special considerations as presented by the applicant.

This step gives the Admissions Committee the opportunity to ensure appropriate diversity in the class beyond a priority rating as determined in Step 5.

### Step 7 – Establishing the class and alternate list

When we have finished steps 1-6, the Admissions Committee will identify those applicants who are extended offers and those that will be retained on an alternate list. We complete what is termed "rolling admissions" meaning that we admit some students throughout the admissions and interview process, but hold a number of positions until the final interviews are completed and the Committee can consider the full applicant pool. At the time we have completed all reviews, typically in early May, within 48 hours we will post your status on the SOP Admissions WEB page, and within 7-10 working days, send you a letter notifying you that you have either been admitted or have been placed on the alternate list. A nonrefundable placement guarantee fee of \$100.00 is required with your acceptance.

If you do not make the first admissions list, please don't give-up on being admitted to the SOP. We encourage applicants to consider several pharmacy schools. The number of applicants interested in

studying pharmacy is so great you need to give yourself the opportunity to be successful by applying to several programs. Therefore, we always have applicants that we offer admission who select other schools that are closer home or is a better match to their career goals. As we learn that an applicant has accepted a position in another school, we will select from the alternate list and offer them admissions. If you are in this situation, we will change your status on the WEB page and send you a letter notifying you of your admissions. If you are an alternate, keep monitoring the Admissions WEB page to see how you may move-up and be accepted for the fall class.

Please be sure to contact the Office of Student Affairs if you have any questions about how your application was reviewed. Best wishes.

### Felony Conviction

One additional criterion for admission to the SOP is not having any felony convictions. Most hospitals, clinics and many community pharmacies will not accept students for professional practice experiences if s/he has been convicted of a felony. Therefore, we are not able to place a convicted felon in the required professional practice experiences, thus s/he cannot meet the requirements for graduation. Students with felony convictions will not be admitted. If you have any questions, please do not hesitate to contact Student Affairs. If a matriculated student has a felony conviction during their studies, s/he will be disenrolled from the School and TTUHSC. A Criminal Background Check is required prior to matriculation into our program.

### Required Application Documents:

All prerequisite courses must be completed with a grade of “C” or better. Note: Prerequisites and the completion of the PCAT do not have to be completed prior to submitting and finalizing an application. However, these must be completed prior to matriculation. A bachelor’s degree is not required. Refer to “Important Dates and Deadlines” on the web for specific deadlines for the completion of prerequisites. The following admission documents must be submitted to the School of Pharmacy by the required deadline for students to be eligible for fall admissions:

1. Completed Online PharmCAS Application and online Supplemental Application.
2. Pharmacy Experience Essay
3. Official Transcript(s) documenting the completed pre-pharmacy and general education requirements with a grade of “C” or better sent directly to PharmCAS. Transcripts are required for all college courses taken, regardless of grade or part of the pre-pharmacy requirement. Official transcript(s) documenting prerequisites that are completed after the deadline date should be submitted immediately upon completion of the course and received within two weeks after the end of the semester but no later than July 31. Students who do not submit transcripts of all college courses taken are subject to disenrollment when discovered at a later date.
4. A Supplemental Application Fee of \$100, nonrefundable. Applications will not be processed without this fee. The fee is waived for employees of TTUHSC on at least a 9-month appointment, their spouses and dependent children under age 25.
5. Three Letters of Recommendation electronically submitted to PharmCAS. Pharmacy College Admissions Test (PCAT) scores or proof that the test will be taken prior to enrollment in the school and preferably by the September test date.
6. Completed and clear Criminal Background Screen.
7. Immunizations and CPR Certification

The pharmacy experience essay and the reference letters are used to evaluate the overall qualifications of the candidate. The School of Pharmacy application is an online document that can be found on our web site at <http://www.ttuhschool.edu/sop/> Please go to our website for the online application, PCAT information, course matrix information, and Important Dates information.

### Technical Standards Required for All TTUHSC Pharmacy Students

To complete the required School of Pharmacy curriculum, students must be able to perform the following minimum technical functions:

#### Visual Acuity – Required to Dispense Medications

- Accurately read 6-point type with the assistance of a magnifying glass or lenses
- Distinguish the markings on typical commercially prepared tablets and capsules
- Hand, Finger, Eye Manipulations – Required to Compound Medications
- Accurately measure liquids with a syringe
- Accurately measure liquids and powders with typical measuring devices required by Texas State Board of Pharmacy regulations to be standard compounding equipment in a pharmacy
- Mix liquids and powders in a mortar and pestle
- Ambulate – Required to Monitor Patients
- Move within and among patient care areas minimally with the assistance of a wheel chair and/or personal assistant

### Foreign Student Information

As an international applicant, you are also required to complete an International Student Application. This document is available on our web site and download the word document for Admission to the Texas Tech University Health Sciences Center School of Pharmacy in addition to completing the online application for the School of Pharmacy. You will find a Checklist of Documents Required that you can print to help guide you through the process. Please send all application materials and fees to the address listed on the applications. The deadline for the International Student Application and the online application for foreign students is December 1. A foreign transcript course by course evaluation is required for any course being considered as a prerequisite.

The School of Pharmacy accepts applications only for the fall semester. Before an application can be considered, you must have the Pharmacy College Admission Test (PCAT) results and TOEFL scores reported to us. The PCAT booklet explains procedures that must be followed by foreign students to obtain testing. Applicants who have demonstrated significant achievement through PCAT scores and grade point average and who will complete both the pre-pharmacy and general education requirements may receive an admission interview. The purpose of the interview is to give you an opportunity to personally present your unique qualifications and see if our program will meet your needs.

**You are responsible for your own transportation, accommodations and meals if invited for**

**an interview.** An interview does not guarantee admission, but you cannot be admitted without an interview.

### Transfer Credits and Pre-Pharmacy Equivalencies

Admission of transfer students is based on receipt of required documentation of credits earned and selective admission factors. Students are required to submit official transcripts from all colleges or universities attended. Evaluation of transfer credit for each student is completed upon receipt of all documents required for admission. The SOP maintains a separate matrix of accepted prerequisite courses and corresponding course numbers for most colleges and universities in Texas. Courses on the matrixes are equivalent to the pre-pharmacy courses required by Texas Tech School of Pharmacy. The matrixes may be accessed from a page on our website linking each school to its specific information.

### Advanced Placement

Students who have been granted credit through successful completion of the subject examination in the College Level Examination Program (CLEP), the International Baccalaureate Program or the Advanced Placement Examination Program and who have evidence of these credits on their college or university transcripts, may meet prerequisite requirements.

### Experiential Learning

Credit for Life Experiences gained through employment and other activities may be granted by the Dean. A portfolio documenting learning and life experiences as they relate to specific courses is required. The learning experiences must be equivalent to what would otherwise be achieved at the college or university level.

### Foreign or International Institution Evaluation

Official records are original signed documents issued by the institution or duplicate copies of the original which bear an original seal of the issuing institution and registrar's signature or some person who is an official of the issuing school. Conferral of degrees, diplomas, certificates, or professional titles must be verified by official copies of same, dated entries of the academic record, or official statements from the institution or governmental agency granting the degree, certificate, or title. Date of formal conferral must be shown. The certificate of conferral must refer to the degree, diploma, certificate, or title in its exact original designation. Unless academic records and diplomas, degrees, or certificates are issued in English by the institute itself, authorized English translations must accompany the official documents in their original language. All translations must be literal and complete renditions of the original documents.

### Regular Admission Review

The deadline for regular admission review is a published date each year (see SOP web page). Applications will not be considered unless all documents have been received in the School of Pharmacy, Office of Student Services by the required deadline. All prerequisite course work must be completed by July 31.

## **PHARM D. / MBA PROGRAM**

The idea of a Pharm.D-MBA program was born in early 2006 in discussions between several faculty at the Texas Tech University Rawls College of Business and the Texas Tech University Health Science Center, School of Pharmacy. The central theme to the discussions was the need to develop and train the future leaders of the profession. The Health Organization Management concentration within the MBA program matched what the pharmacy faculty believed were the necessary areas of focus to develop strong leaders in health care organizations.

The curriculum emerged after several rounds of negotiation between the programs keeping in mind the accreditation requirements of business and pharmacy. The curricular design model was determined after reviewing other Pharm.D-MBA programs matched with the teaching schedules and course prerequisites. Rather than adopting the various models currently in use throughout the U.S., the faculty chose to use a dual-degree approach and integrate both programs into a typical 4-year course of study. Since the program was structured to be a dual-degree, it was essential that all of the approved content for both degree plans be met.

The initial plan was to create several tracks for Pharm.D students to obtain the MBA. The first track would be to offer the opportunity of taking the MBA coursework to rising P-2 and rising P-3 students with the goal to phase out the P-3 program and only retain the rising P2 program. This track required the development of separate curricula to ensure that all requirements for both the Pharm.D and MBA were met. The first students began class in the summer 2009. This track will end with the graduation of this first class.

The second track was viewed as the most desired by the faculty at both colleges. This involved offering the program to P0-P1 students (accepted into pharmacy school but not currently enrolled in pharmacy courses) as well as rising P2 students. The P0 students would begin MBA coursework in the summer prior to enrollment in the pharmacy school. The rising P2 students would begin their MBA program in the summer between the P1 and P2 years. The summer 2010 class was the first under this track. The third track was viewed as a future development and would involve the creation of a post-Pharm.D graduate program that might, if the student chose, involve a concurrent 2-year management residency program. A start date for this track has not been identified.

The Pharm.D-MBA program at Texas Tech is the 31st program in the country and is the only program between Georgia and Arizona. The HOM program at the College of Business is one of the few accredited programs for health organization management in the country.

### **Applicants for the PharmD-MBA Dual Degree program MUST have a prior baccalaureate or higher degree to be admitted into the program.**

The TTUHSC School of Pharmacy will require completion of a PharmD-MBA Application form by December 1 of each year. A PharmD/MBA selection committee will review the academic achievement of each candidate and forward a recommendation to the Rawls College of Business and HOM program. Students should delay completing the Rawls College of Business applications until a determination of an SOP recommendation has been made. If the Committee does not recommend a student apply to the MBA

program, the SOP program coordinator will counsel the student. The Rawls College of Business and the School of Pharmacy may limit the number of pharmacy students that are allowed to enroll in the MBA.

#### **Texas Tech University Health Sciences Center School of Pharmacy Notice of Intent**

1. P-0 students desiring to enroll in the PharmD-MBA program must sign an acknowledgement or disclosure form, signifying an understanding of special curricular requirements for enrolling in the program.
2. Complete a PharmD-MBA application

**PharmD-MBA P0 Acknowledgement Form** <http://www.ttuhsoc.edu/sop/mba/>

**PharmD-MBA Application Form** <http://www.ttuhsoc.edu/sop/mba/>

Please send completed forms to: Dr. Roland Patry at [roland.patry@ttuhsc.edu](mailto:roland.patry@ttuhsc.edu) or

Fax to (806) 356-4018

#### **Rawls College of Business Application**

The following applications are due by **April 1** of the year of admission. The admission process for the Rawls College of Business MBA program (HOM) is comprised of three separate applications.

##### *Graduate School Application*

1. Paper or electronic application at: <http://www.depts.ttu.edu/gradschool/admissions/>
2. Requires a \$50.00 fee (\$60.00 for international students)
3. Official transcripts for all schools attended
4. GMAT scores: WAIVED FOR PHARM-D-MBA APPLICANTS

##### *Rawls Business School Application*

1. Complete on-line application at: [http://grad.ba.ttu.edu/Rawls\\_Application/Application\\_Online.asp](http://grad.ba.ttu.edu/Rawls_Application/Application_Online.asp)
2. Submit current resume as an attachment to [mba@ttu.edu](mailto:mba@ttu.edu)
3. Two letters of recommendation that can be the same letters used for the PharmD application

##### *Health Organization Management (HOM) Program Application*

- **MBA-HOM Application**

## **ONCE ADMITTED...**

### **Financial Aid**

Texas Tech University Health Sciences Center believes the primary responsibility for financing education lies first with the student and his/her family. When the total resources they can provide do not meet expenses, it is the objective of the financial aid program at TTUHSC to provide financial assistance to students who, without such assistance, would not be able to pursue advanced education.

Financial Aid at TTUHSC comes from many sources. Although qualifications for each funding program might differ, no student shall be excluded from participating in or be denied the benefits of any financial aid program regardless of race, gender, lifestyle, sexual orientation, disability or national origin.

**TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER  
SCHOOL OF PHARMACY  
STUDENT HEALTH RECORD POLICY**

**BACKGROUND**

Students involved in patient-care activities are at higher risk than the general population for acquiring communicable diseases such as measles, mumps, rubella, chicken pox, and tuberculosis. A pharmacy student who has one of these diseases may, in turn, infect other personnel and patients. Such infections established in any health care facility are serious in their potential for medical and possible legal complications. Therefore Texas Tech University Health Sciences Center has a policy of immunization that all pharmacy students must follow. This policy conforms with the Texas Statute Title 25 Health Services, SS97.61-97.77 of the Texas Administrative Code that requires all students to be fully immunized during their patient care experiences.

**PROCEDURE**

Prior to enrollment in the School of Pharmacy, Candidates are required to obtain a history of their immunizations and vaccinations. Documentation of immunizations and vaccinations must be provided by written documentation of a health care provider (physician, nurse, or pharmacist), and must include the type of immunization/vaccination received, the date, and the signature of the health care provider who administered the immunization/vaccination. High school transcripts with medical record, baby records from parents, Visa documents and similar documents are acceptable for documentation.

In order to protect the health of our students and the health of the patients with whom they come in contact, TTUHSC requires all entering students to provide documentation of several immunizations as well as the results of serological titers to determine whether or not they are actually immune to certain diseases. Immunization requirements are based on regulations, guidelines and recommendations available as of October, 2009 from the Texas Administrative Code (TAC), Texas department of State Health Services (DSHS), the U. S. Centers for Disease and Control and Prevention (CDC), and the U. S. Advisory Committee for Immunization Practices (ACIP).

Copies of lab reports, immunization and/or health records must be provided to the School of Pharmacy. **Attachment B** is a list of required vaccinations required for all students enrolled in healthcare fields.

**NEW STUDENTS**

All new students accepted to the program are required to be current on the following immunizations before you will be allowed to begin your first year of pharmacy school. A form is provided in **Attachment C** that the student may use to list the dates of the various shots they have had. It is required that supporting documentation must be attached to the form upon submission to the Office of Student Affairs.

**Hepatitis B**--3 doses, generally 1<sup>st</sup> & 2<sup>nd</sup> doses one month apart, the 3<sup>rd</sup> dose four to six months after the first dose, *or* **quantitative** titer demonstrating immunity. The hepatitis B third dose may be received during the first semester of pharmacy school due to the length of time required to obtain the full 3-doses.  
**MMR-- (Measles, 2 doses one month apart, *or* serological titer demonstrating immunity to Mumps & Rubella).** Measles, Mumps & Rubella – *the titer must demonstrate immunity to all three diseases.*  
**Varicella**--2 doses one month apart, *or* serological titer demonstrating immunity  
**Tdap (Tetanus, 1 adult dose is required with Diphtheria & acellular Pertussis).** **Must have been received within the last five years.**

**Tb Skin Testing** Testing within the past twelve months. The CDC **DOES NOT** recognize a previous history of **BCG** as reason to not take a yearly Tb skin test. Therefore, unless you have had a **POSITIVE** Tb skin test, a Tb skin test within the past 12 months is required. If you had a **POSITIVE** Tb skin test in the past, a report, indicating a negative chest x-ray taken within the previous twelve months is **required**. If you have previously had a positive TB skin test or if you were exposed to a suspected or confirmed +TB patient, you are requested to view and answer the questions on the TB Questionnaire - **Attachment A**.

**Meningococcal** - One booster dose of Meningococcal vaccine (MCV) – Adult.

**CPR**—All new students must obtain an American Heart Association Basic Life Support for Healthcare Providers certification. Only the American Heart Association CPR is accepted.

## **CONTINUING STUDENTS**

All continuing students must remain current throughout their pharmacy career. **Attachment B** is a list of required vaccinations required for all students enrolled in healthcare fields.

**FLU VACCINE**--At the current time, the flu vaccine is provided by the Institutional Office of Student Services. This vaccine is provided in October each year at no cost to the student. The students will be notified when the vaccine is available and must obtain the vaccine and provide a copy of the documentation to the Office of Student Affairs in Amarillo or Abilene. Any student who is allergic or has some other medical condition which prevents you from having this vaccine must provide a doctor's statement declaring the medical condition which prevents the injection. If at any time a student enters a clerkship rotation and the rotation site requires the flu vaccine before the vaccine is available through the Institutional Office of Student Services, the student is required to obtain any and all required shots before the rotation begins and the cost of the vaccine is born by the student.

**Enrollment requirements**—Students involved in patient-care related activities are required to maintain current student health records and CPR certification. Prior to each enrollment period, a review will be made of the students health records by the TTUHSC School of Pharmacy, Office of Student Affairs and the student will be notified of impending requirements. If a student has any immunizations, screenings, shots or CPR certification that may fall due (with the exception of the flu vaccine) during the next enrollment period, the student will be required to update their health record **at least one week prior to the start of the semester**. Any student who is not current with immunizations on the first day of the semester shall not be permitted to participate in any patient-related activities. The student will be automatically dropped on the first day of the semester from any patient-related courses, rotations, and or activities and will not be allowed to complete any patient-care related courses during the entire semester. Students may enroll in patient care courses for the following semester if all immunizations, CPR, flu vaccine, if applicable, and TB screening are completed by the first day of the following semester. Patient-related activities are provided throughout all four-years of pharmacy school.

Immunization records are maintained for each student on the School of Pharmacy web site, Academic Information, Student Health Records. To view your personal records, the student must have an eraider account.

**CPR**—It is the responsibility of the student to maintain CPR certification. The CPR certification is a requirement for all students in patient-care related activities. Your CPR certification must remain current at all times.

**Tuberculosis Screening**—All students shall participate in annual TB screenings.

All new students shall have an initial TB screening pre-matriculation (prior to enrollment in the School of Pharmacy).

Continuing Students without a previous positive reaction previously to a PPD skin test must have a follow-up PPD skin test each year. Those who have had a positive reaction must complete a TB Questionnaire annually and chest films will be ordered as needed, based on TB Questionnaire results.

**Enrollment requirements**--Students involved in patient-care related activities are required to maintain current student health records and CPR certification. Prior to each enrollment period, a review will be made of the students health records by Student Services. If a student has any immunizations, screenings, shots or CPR certification that may fall due during the next enrollment period, the student will be required to update their health record **at least one week prior to the start of the semester**. Any student who is not current with immunizations on the first day of the semester shall not be permitted to participate in any patient-related activities. The student will be automatically dropped on the first day of the semester from any patient-related course, rotation, and or activity and will not be allowed to complete any patient-care related courses during the entire semester. Students may enroll in patient care courses for the following semester if all immunizations, CPR, flu vaccine, if applicable, and TB screening are completed by the first day of the following semester. Patient-related activities are provided throughout all four-years of pharmacy school.

Immunization records are maintained for each student on the Pharmacy web site, Student Page, Student Health Records. To view your personal records, the student must have an eraider account.

#### Student Health Insurance

Students are not required to have health insurance coverage, but it is highly recommended. Health care services are provided by the Center for Family Medicine. All questions concerning coverage can best be answered by calling the Center for Family Medicine directly at 212-3500.

#### Criminal Background Checks

Once a student has been offered admissions, the University will conduct a criminal background check on the applicant before finalizing admission. The background check is only conducted on an applicant who signs a consent form, but those applicants who are fully admitted must have documented records of no felony convictions or a deferred adjudication for a felony before admission is final. You will be provided a printed copy of the University policy detailing your rights and responsibilities during the on-campus interview. Please contact the office of student services if you have any questions.

#### Drug Screen

Many of the facilities that accept students for professional practice experiences require a clean drug screen prior to the first day on service. Students will be informed if a drug screen is required and given a list of certified laboratories in each community where the screen may be performed. If you are required to have a clean drug screen, you will be given further directions, including a description of your rights and responsibilities. The cost of a drug screen is paid by the student, who must submit the report to the clerkship office prior to the first scheduled day, as described in the clerkship manual.

### *THE PROFESSIONAL PROGRAM*

#### Grading

Courses are graded on a numerical scale with a grade of 75% considered as a satisfactory score and 70% as minimal acceptable score for a single course. Students must maintain a cumulative average grade of 75% to progress. No letter grades will be recorded on official transcripts.

The Dean's List will be calculated on an overall GPA of 95% or above each semester.

It is the policy of Texas Tech University Health Sciences Center School of pharmacy to issue grades of “I” (Incomplete) when a course requirement such as an exam or a report has not been completed. The student has the responsibility of contacting the faculty member about an exam or a report that has not been completed to determine the validity of an incomplete grade being given. The faculty member may allow up to a maximum of one year for a student to complete the course. If it is not completed within this time, the “I” will be changed to a “0%.” The student is responsible for completing the work that will remove the “I.”

The following grading symbols are used in common by all TTU Health Sciences Center Schools:

Grade	Description	Grade Points Per Semester Hour
“I”	Incomplete	N/A*
“W”	Withdrawal	N/A*
“WF”	Withdraw Failing	0.00
“DW”	Dropped	N/A*
“PR”	In Progress	N/A*

- Not included in the calculation of grade point average.

### Student Success Initiative

The Student Success Initiative (SSI) is a program that identifies students who are at academic risk based on previous academic performance. The criteria used to select students for this program are:

- Cumulative GPA less than 80%
- Overall course grade less than 70% during the previous semester
- Overall course grade less than 75% in 2 or more courses during the previous semester
- Second chance exam during the previous semester
- Annual Outcomes Assessment grade less than 70%
- Referred to program by a team leader for a course currently enrolled in due to poor performance on assessment(s)/assignments(s)

Each student in this program is required to meet with a faculty member on the Student Success Initiative Committee. The student receives a Student Success Action Plan Form and they are asked to reflect on their previous academic performance and they are given guidelines to develop an action plan for improvement. The faculty member offers guidance, suggestions, and support to the student as they review the SSI Action Plan together.

### Progressions

At the end of each semester, any student who has not successfully completed one or more courses will be placed

on academic probation. First academic probation is defined as a student's failure in a course or courses in a single semester, when that student has not failed any previous courses while enrolled in the School of Pharmacy. Second academic probation is defined as a student's failure in a course or courses in a single semester, when that student has failed a course or courses in only a single prior semester while enrolled in the School of Pharmacy. Second academic probation prohibits enrollment in new required classes until all deficiencies/failures are removed. Third academic probation is defined as a student's failure in a course or courses in a single semester, when that student has failed a course or courses in two prior semesters while enrolled in the School of Pharmacy and on academic probation. Third academic probation will result in disqualification from the School of Pharmacy. Additionally, any student who does not successfully complete each course each semester may be required by the Credentialing Subcommittee to remediate any deficiencies identified.

The Student Credentialing Subcommittee will review every student's academic performance, as measured by grades in courses attempted and achievement on the Annual Assessment of Progress (Outcomes Assessment Test) in mastering defined curricular outcome expectations. These performance measures will serve as the basis for annual progression recommendations. The Student Credentialing Subcommittee may recommend to the Dean full progression, remediation activities in areas where the student has documented deficiencies, academic probation, or dismissal. This progression will serve as the determination of a student's class standing for purposes of course pre-requisites, e.g. P2 standing.

#### Course Failures Resulting from Sanctions Secondary to Academic or Professional Misconduct

A first course failure resulting from sanctions enforced due to academic or professional misconduct will result in the student being placed on academic probation. If the student is in good standing at the time, then the student will be placed on first probation. If the student is already on academic probation, then the failure will raise the student's probation by 1 level (ie 1<sup>st</sup> to 2<sup>nd</sup> or 2<sup>nd</sup> to Dismissal).

A second course failure resulting from sanctions due to academic or professional misconduct, regardless of semester, will result in student dismissal from the school.

#### Honor Council

The purpose of the Texas Tech Health Sciences Center School of Pharmacy Honor Council is to serve as the student and faculty representatives who foster and uphold the School of Pharmacy Code of Professional and Academic Conduct. The Honor Council also serves to promote integrity as well as develop a culture of honesty and student accountability within the school and their respective classes. The Honor Council will convene and provide rulings over student violations of the Code of Professional and Academic Conduct, and to promote integrity and accountability. The Honor Council will provide recommended sanctions when a rules violation has been committed and submit summary reports directly to the Dean of the School of Pharmacy as well as report back to their classes.

[http://www.ttuhscc.edu/sop/administration/policies/documents/SOP\\_OP\\_77.P.27\\_School\\_of\\_Pharmacy\\_Honor\\_Council.pdf](http://www.ttuhscc.edu/sop/administration/policies/documents/SOP_OP_77.P.27_School_of_Pharmacy_Honor_Council.pdf)

#### Campus Assignment Policy

To access the SOP's policy on campus reassignment, please link to the School's website.

### Withdrawal (from courses) Policy

For semester-long courses. In order to be assured of an official withdrawal from a professional school course, the student must have completed and submitted a course withdrawal request to the Office of Student Services before the beginning of the 12th day of the term.

For 8-week courses. In order to be assured of an official withdrawal from a professional school 8-week course, the student must have completed and submitted a course withdrawal request to the Office of Student Services before the beginning of the 6th weekday following the first day of class.

For rotations. In order to be assured of an official withdrawal from a professional school rotation, the student must have completed and submitted a course withdrawal request to the Office of Student Services before the end of the 4th weekday following the first day of the rotation.

For 6-week courses. In order to be assured of an official withdrawal from a professional school 6-week course, the student must have completed and submitted a course withdrawal request to the Office of Student Services before the end of the 4th weekday following the first day of class.

For 4-week courses. In order to be assured of an official withdrawal from a professional school 4-week course, the student must have completed and submitted a course withdrawal request to the Office of Student Services before the end of the 3rd weekday following the first day of class.

For 2-week courses. In order to be assured of an official withdrawal from a professional school 2-week course, the student must have completed and submitted a course withdrawal request to the Office of Student Services before the end of the 2nd weekday following the first day of class.

Students who do not complete a course and who do not officially withdraw from that course will receive the grade calculated for their performance had they remained in the course.

### Second Chance Policy

The Second Chance Policy applies to all courses except case studies and clerkships. A doctor of pharmacy student, if eligible, may take a single comprehensive examination to demonstrate competency in that course providing that:

- 1) The student has passed 50% or more of the major assessments in that course,
- 2) The student has earned a final grade of 66-69% in the course, and
- 3) The student has not exceeded the number of second chance attempts as outlined below.

A student may invoke the Second Chance Policy in a maximum of two courses per semester, and no more than four times total in his/her career at the School. No student may invoke the second chance exam for the same course twice. The second chance assessment shall occur in a timely fashion, the timing at the discretion of the course team.

### Prerequisites

The curriculum is designed to follow a logical and academically sound sequence of courses. P-2 courses may not be taken without the permission of the Subcommittee on Credentialing or until the student is formally advanced to P-2 standing. P-3 courses may not be taken without the permission of the Subcommittee on Credentialing or until the student is formally advanced to P-3 standing. P-4 rotations may not be taken until all previous P-1 through P-3 course work is satisfactorily completed.

### Enrollment Without Credit - Course Audit

Persons who wish to audit a course for no grade must obtain written permission from the dean of the pharmacy school. Those who audit a course do so for the purpose of hearing or seeing only; they do not have the privilege of participating in class discussions or laboratory or field work, of turning in papers, or of receiving a grade or credit in the course. Students who audit a course will not be listed on the class roll, and no notation of the audit will be made on the student's transcript.

Students who are enrolled for 12 semester hours or more may audit a course without paying an additional fee. Persons who are enrolled for fewer than 12 hours must pay a \$10 fee for auditing a course.

### Code of Professional Conduct

You are expected to subscribe to the Code of Ethics of the American Pharmaceutical Association and the School of Pharmacy Code of Student Conduct. Students who have been found to be in violation of this code of ethics will be disciplined. The Code of Ethics and Code of Student Conduct is printed in the *Texas Tech University Health Sciences Center Student Affairs Handbook*, which can be found at the Texas Tech University Health Sciences Center web site.

### Attendance

Regular attendance is necessary for satisfactory achievement. Therefore, it is the responsibility of the student to attend class in accordance with the requirements of the course as established by the faculty of Texas Tech University Health Sciences Center School of Pharmacy

### Computer Literacy

Pharmacy is an information intensive profession and its practice relies heavily on tools such as the computer. These are the minimal computing skills required while in the School of Pharmacy:

- loading and running an application software package such as word processing;
- typing a document into a word processing program;
- saving and printing a document.
- navigating the internet (e.g., email, accessing web pages).

### Academic Support Services

You are encouraged to seek assistance from the faculty. This assistance is free and faculty are a valuable resource. In addition, the Office of Student Services can be contacted by students demonstrating any indication of academic difficulty and explore possible areas of appropriate counseling or referral for resolution. Academic difficulty resulting from personal problems may be resolved through a variety of available resources, including professional counseling services provided as part of student health services.

## Curriculum Competencies and Assessment

The faculty has identified the set of competencies that you must possess to graduate with the Doctor of Pharmacy degree. Overall curricular competencies are further defined as to level of mastery expected upon the completion of each course within the curriculum.

Annually, your progress in developing mastery will be assessed in a school-wide assessment program. The purposes of the program are to help you evaluate your personal and professional development, help you identify areas of needed remediation, and help the faculty monitor the overall performance of the curriculum in achieving the expected outcomes. In cases where individual students have not successfully remediated their deficiencies after repeated attempts, the results of the annual assessment may serve as documentation in support of academic probation.

The academic program is designed to provide PharmD candidates with opportunities to develop the knowledge, skills, and behaviors required of a competent and ethical practicing pharmacist. The program's fourth academic year is designed to provide candidates with opportunities to: 1) practice acquired skills, 2) use learned pharmacy knowledge, and 3) exhibit professional behaviors. Basic drug knowledge is considered essential to candidate success during these experiences and opportunities. To ensure that each candidate is equipped with the basic drug knowledge to succeed in the fourth year of the program, all candidates enrolled within the third year of the academic program (P3 candidate) will be assessed for basic drug knowledge (starting 2011). This High Risk Drug Knowledge Assessment (HRDKA) will be administered each year during the School's Annual Assessment program. Each P3 candidate must provide proof of drug knowledge competency through achievement of 75% or greater score upon the HRDKA. P3 candidates failing to meet or exceed the HRDKA's criterion will be required to successfully complete remediation exercises and to pass the HRDKA prior to enrollment within the program's Advanced Pharmacy Practice Experiences (P4 clerkships). The cost of the remediation will be borne by the student. The Office of Continuing Education may provide a process for remediation. The course is estimated to be \$900.00.

The HRDKA will cover the following domains:

- Drug name identification (brand and generic)
- Normal dosing
- Indication
- Contraindications
- Mechanism of action
- Drug interactions
- Side effects
- Lab assessment
- Pharmacokinetics/Pharmacodynamics

The HRDKA will be approximately 180 items in length, with the 9 domains assessed in equal proportions. Assessed will be the top 200 name brand and generic medications, and the top 100 medications dispensed within representative Health-Systems found on the Abilene, Amarillo, Dallas, and Lubbock campuses. A listing of these medications will be made available to the candidates each year prior to the Annual Assessment date.

## **TTUHSC Terminal Objectives**

**The following are the categories defining the seven basic abilities of TTUHSC Candidates:**

- Communication
- Use of Basic Science in the Practice of Pharmacy
- Problem Prevention and Solving
- Dispensing Pharmaceuticals
- Providing Patient Specific and Population Based Pharmaceutical Care
- Professionalism
- Social and Administrative Science

For a complete description of each ability, please use the hyperlink to access.

<http://www.ttuhs.edu/sop/current/studentServices/documents/default.aspx>

### PATIENT-CENTERED CARE

1. Design, implement, evaluate, monitor, adjust, and document patient-specific and evidence-based pharmacotherapeutic plans in order to identify, prevent, and resolve health issues and drug-related problems.
2. Prospectively review medication orders and patient health records to evaluate a drug regimen's efficacy, appropriateness, potential toxicity, and cost-effectiveness.

### MEDICATION USE SYSTEMS

3. Prepare, dispense, and administer safe and rational medication regimens.
4. Evaluate pharmacy business models and pharmacy services with respect to financial, human, and technological resources and strategies.

### PUBLIC HEALTH/POPULATION-BASED OUTCOMES

5. Evaluate population-based data utilizing principles of outcomes research, quality improvement, and informatics in order to assess healthcare outcomes and disparities amongst various populations.
6. Devise and implement strategies to improve population-based outcomes, through engagement in activities that promote public health, risk assessment, and disease prevention.

### CORE ABILITIES

7. Retrieve, analyze, and interpret lay and scientific literature to provide drug information to patients, caregivers, and other healthcare providers.
8. Communicate and collaborate with patients, caregivers, healthcare providers, and other stakeholders using an interdisciplinary team approach to solve healthcare problems.
9. Demonstrate professional attitudes and behaviors in all activities through performance of duties according to institutional policy, applicable laws, and ethical and social guidelines.
10. Demonstrate the skills needed to engage in continuous professional development activities used in maintaining professional competence.

### Graduation

Students are eligible for graduation upon successful completion of all academic and clinical (Professional Practice Experiences) requirements and documented competency in the P4 annual assessment. The student will earn a minimum of 169 credit hours, a minimum grade point average of 75, and is responsible for knowing and satisfying degree and graduation requirements. Students must be enrolled in the term in which they plan to graduate.

### Program of Study

#### Year 1

Students will be taught basic biomedical and pharmaceutical sciences. Pharmaceutical sciences include the study of physical, chemical and biological aspects of drug dosage forms; drug action; and pharmacotherapy. Students also begin developing their pharmacy practice and patient care knowledge and skills through several courses and the first of a longitudinal Professional Practice Experience clerkship that will continue through the second year.

#### Year 2

The focus is on studies of disease states and pharmacotherapy. Students learn special skills in therapeutically dosing and monitoring patients with potentially toxic therapeutic agents. Clinical practice knowledge and skills are developed through studying the use and potential problems with commonly prescribed medications. Basic physical assessment skills for therapeutic drug monitoring are introduced. Students continue the development of their practice knowledge and skills through the longitudinal Introductory Professional Practice Experience clerkship in community pharmacy practice.

#### Year 3

This year continues studies of disease states and pharmacotherapy. Drug distribution and control skills within community and institutional practices are a major focus in Professional Practice clerkships. Skills for managing drug therapy and providing case management are provided through clerkships in patient care facilities. The third year may be based at any of the Texas Tech University Health Sciences Center campuses at Amarillo, Abilene, Dallas, Lubbock. Relocation travel, and living expenses are the student's responsibility.

## Year 4

Devotes 48 weeks to full-time clinical pharmacy experiences in various patient care sites. These rotations are as follows: six weeks adult medicine, six weeks pediatrics, six weeks geriatrics, six weeks general primary care, six weeks rural practice, and two electives of six weeks duration each; and one six week selective rotation in community or institutional pharmacy practice, depending on the student's practice interests. The fourth year may be based at any of the Texas Tech University Health Sciences Center campuses at Amarillo, Dallas, Abilene, and Lubbock. Relocation travel, and living expenses are the student's responsibility.

### **2011-2012 Curriculum Planner**

#### **P1 Fall Semester**

<b>Credit Hours</b>	<b>Course Name and Number</b>
1	Phar 1102 Pharmacy Practice, Education and the Sciences
5	Phar 1512 Biochemistry
4	Phar 1414 Anatomy and Cell Biology
3	Phar 1321 Drug Delivery Systems I
3	Phar 1320 Immunology
1	Phar 1171 Early Experiences in Drug Information
0	Phar 1101 Introduction to Pharmacy Practice I (Longitudinal Course – Enrollment in Spring only)
1	Phar 1131 Clinical Immunizations & Administration
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#### **P1 Spring Semester**

5	Phar 2513 Physiology
3	Phar 2325 Principles of Drug Action
4	Phar 1401 Pharmacotherapy: Non-Prescription Medicine
1	Phar 1101 Introductory Professional Practical Experiences
3	Phar 2322 Drug Delivery Systems II
0	Phar 2322 Drug Delivery System Laboratory
2	Phar 1221 Principles of Disease
2	Phar 2223 Drug Delivery Systems III
1	Phar 3159 Pharmacotherapy: Integumentary
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21	

#### **P2 Fall Semester**

3	Phar 2340 Clinical Pharmacokinetics
4	Phar 2451 Pharmacotherapy: Infectious Disorders
2	Phar 2203 Pharmaceutical Care Laboratory
0	Phar 2101 Introductory Professional Practical Experiences (Longitudinal Course – Enrollment in Spring only)
2	Phar 2202 Pharmaceutical Care II
2	Phar 1231 Pharmaceutical Care Systems

1	Phar 2153 Pharmacotherapy: Blood & Reticuloendothelial
1	Phar 4161 Pharmacotherapy: Bone & Joint
2	Phar 3257 Pharmacotherapy: Endocrine
2	Phar 3256 Pharmacotherapy: Respiratory
2	Phar 1241 Clinical Research & Drug Literature Evaluation

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### P2 Spring Semester

<u>Credit Hours</u>	<u>Course Name and Number</u>
1	Phar 2104 Parenterals (with lab)
3	Phar 2352 Pharmacotherapy: Cardiovascular
3	Phar 3361 Case Studies I
2	Phar 3240 Patient Assessment (with lab)
1	Phar 2101 Introduction to Pharmacy Practice II (Longitudinal Course – Enrollment in Spring only)
2	Phar 3233 Practice Management: Leadership & Ethics in Management
1	Phar 3158 Pharmacotherapy: Reproductive
1	Phar 3101 Pharmacotherapy: Therapeutic Dosing
1	Phar 4166 Pharmacotherapy: Pharmacogenetics
2	Phar 4233 Practice Management: Financial Management
2	Phar 2231 Practice Management: Law
2	Phar 3254 Pharmacotherapy: Renal

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### P3 Fall Semester

4	Phar 3462 Case Studies II
3	Phar 3355 Pharmacotherapy: Gastrointestinal, Hepatic and Nutrition
4	Phar 3461 Pharmacotherapy: Neurosensory and Psychiatry

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11 – Varies based on number of elective hours and rotation hours taken. See below:

6	Six hours of electives required over the fall and spring semesters. Elective offerings will vary based on faculty availability. Each elective course contains two credit hours. Rotations may be taken in the fall or spring semester
2	Phar 4270 Community Pharmacy Practice Clerkship
2	Phar 4274 Institutional Pharmacy Practice Clerkship
2	Phar 4275 Ambulatory Clinical Skills Clerkship
2	Phar 4276 Inpatient Clinical Skills Clerkship

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### P3 Spring Semester

4	Phar 4463 Case Studies III
2	Phar 4264 Pharmacotherapy: Oncology
2	Phar 4235 Practice Management: Community Pharmacy Operations
	<b>OR</b>
2	Phar 4234 Practice Management: Institutional Pharmacy Operations
2	Phar 4267 Pharmacotherapy: Clinical Toxicology
1	Phar 4165 Pharmacotherapy: Special Populations

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11 – Varies based on number of elective hours and rotation hours taken. See below:

<u>Credit Hours</u>	<u>Course Name and Number</u>
6	Six hours of electives required over the fall and spring semesters. Elective offerings will vary based on faculty availability. Each elective course contains two credit hours. Rotations may be taken in the fall or spring semester
2	Phar 4270 Community Pharmacy Practice Clerkship
2	Phar 4274 Institutional Pharmacy Practice Clerkship
2	Phar 4275 Ambulatory Clinical Skills Clerkship
2	Phar 4276 Inpatient Clinical Skills Clerkship

P4 Fall Semester

2	Phar 4241 Grand Rounds (Fall)
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P4 Spring Semester

2	Phar 4242 Grand Rounds (Spring)
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P4 Summer, Fall or Spring Semesters

Required rotations that can be taken in any of the semesters as assigned by the Experiential Office based on availability.

6	Phar 4675 Adult Medicine Clerkship
6	Phar 4676 Adult Primary Care Clerkship
6	Phar 4677 Pediatric Primary Care Clerkship
6	Phar 4678 Geriatric Primary Care Clerkship
6	Phar 4681 Rural Pharmacy Practice Clerkship
6	Phar 4673 Advanced Community Pharmacy Clerkship
OR	Phar 4674 Advanced Hospital Pharmacy Clerkship
12	All students are required to do two elective rotations (Six credit hours each). Electives are selected based upon availability and assigned by the Experiential Office.

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**52 semester hours during the P4 year**

Total hours required for graduation = 169 credit hours.

**PharmD-MBA Dual Degree Program**  
**for students classified as P0-P1 for 2010-2011**

**P0 Summer Sessions: 17 credit hours**

<u>MGT 5391</u>	<u>3 SCH</u>	<u>Strategic and Global Mgt</u>
<u>ISQS 5345</u>	<u>3 SCH</u>	<u>Statistical Concepts for Business Mgt</u>
<u>ISQS 5360</u>	<u>3 SCH</u>	<u>Marketing Concepts and Strategies</u>
<u>HOM 5371</u>	<u>3 SCH</u>	<u>Managing OB and OD</u>
<u>ACCT 5301</u>	<u>3 SCH</u>	<u>Financial and Managerial</u>

Accounting  
Financial Mgt Tools (substituted for

FIN 5219 2 SCH  
PHAR 4233)

Plus: 10 orientation units  
All classes held in residence in Lubbock

**P1 Fall Semester - 18 SCH**

2 weeks before semester - Phar 1102 - 1 SCH Pharmacy Practice, Education and the Sciences

<u>Phar 1414 - 4 SCH</u>	<u>Phar 1512 - 5 SCH</u>	<u>Biochemistry</u>
<u>Phar 1321 - 3 SCH</u>		<u>Anatomy &amp; Cell Biology</u>
<u>Phar 1320 - 3 SCH</u>		<u>Drug Delivery Systems I</u>
<u>Phar 1170 - 1 SCH</u>		<u>Immunology</u>
<u>Phar 1101 - 0 SCH</u>		<u>Drug Information Clerkship</u>
		<u>IPPE 1 Clerkship (No Credit This Semester - Clerkship</u>
		<u>Runs All Year)</u>

	<u>1st 8-Weeks</u>	<u>2nd 8-Weeks</u>
<u>Open</u>	<u>Phar 1131 - 1 SCH</u>	<u>Clinical Immunizations &amp; Admin</u>

**P1 Spring Semester - 21 SCH**

	<u>Phar 2513 - 5 SCH</u>	<u>Physiology</u>
<u>Phar 2325 - 3 SCH</u>		<u>Principles of Drug Action</u>
<u>Phar 1401 - 4 SCH</u>		<u>P'therapy: Non Prescription Medications</u>
<u>Phar 2322 - 0 SCH</u>		<u>Drug Delivery System Laboratory (SCH's assigned to</u>
		<u>Course)</u>
<u>Phar 1101 - 1 SCH</u>		<u>IPPE 1 Clerkship (SCH This Semester - Clerkship</u>
		<u>Runs All Year)</u>

	<u>1st 8-Weeks</u>	<u>2nd 8-Weeks</u>
<u>Phar 2322 - 3 SCH</u>	<u>Drug Delivery Sys II</u>	<u>Phar 2223 - 2 SCH</u>
<u>Phar 1221 - 2 SCH</u>	<u>Principles of Disease</u>	<u>Phar 3159 - 1 SCH</u>
		<u>P' Therapy: Integumentary</u>

**P1-P2 Summer Sessions: 13-16 credits**

	<u>PHAR (HOM) 5307</u>	<u>3 SCH</u>	<u>Healthcare, Network, Sys. &amp; Org.</u>
			<u>Ops</u>
<u>FIN 5320</u>	<u>3 SCH</u>		<u>Financial &amp; Managerial Concepts</u>
<u>ISOS 5231</u>	<u>2 SCH</u>		<u>IT for Managers: Healthcare App</u>
	<u>ISOS 5343</u>	<u>3 SCH</u>	<u>Operations Mgt and Mgt Sciences</u>
<u>ISOS 5230</u>	<u>2 SCH</u>		<u>Decision Theory: Hlth Sys. Managers</u>
<u>BA 7000</u>	<u>3 SCH {a}</u>		<u>Domestic/Global Bus. Cond. Hlth</u>
			<u>Care</u>

{a} BA 7000 can be taken in the Summer, Fall or Spring on-line

{b} MGT 5372, Leadership and Ethics currently in discussion using PHAR 3232 as substitute

{c} All courses for remaining MBA program to be delivered either by distance live class or on-line

**P2 Fall Semester - 22 SCH**

	<u>Phar 2340 - 3 SCH</u>	<u>Pharmacokinetics</u>
<u>Phar 2451 - 4 SCH</u>		<u>P'therapy: Infectious Disorders</u>
<u>Phar 2203 - 2 SCH</u>		<u>Pharmaceutical Care Laboratory</u>
<u>Phar 2104 - 1 SCH</u>		<u>Parenterals with Laboratory</u>
<u>Phar 2101 - 0 SCH</u>		<u>IPPE 2 Clerkship (No Credit This Semester - Clerkship</u>
		<u>Runs All Year)</u>

	<u>1st 8-Weeks</u>	<u>2nd 8-Weeks</u>
<u>Phar 1241 - 2 SCH</u>	<u>Clinical Research &amp; Lit</u>	<u>Phar 3257 - 2 SCH</u>
<u>Phar 1231 - 2 SCH</u>	<u>Pharm Care Systems-(substitute for HOM 5306)</u>	<u>Phar 2202 - 2 SCH</u>
<u>Phar 2153 - 1 SCH</u>	<u>P'Therapy: Blood &amp; Ret</u>	<u>Phar 3256 - 2 SCH</u>
<u>Phar 4161 - 1 SCH</u>		<u>P'Therapy: Bone &amp; Joint</u>

**P2 Spring Semester - 18 SCH**

	<u>Phar 2352 - 3 SCH</u>	<u>P'Therapy: Cardiovascular</u>
<u>Phar 3361 - 3 SCH</u>		<u>Case Studies 1</u>
<u>Phar 3240 - 2 SCH</u>		<u>Patient Assessment Laboratory</u>
<u>Phar 2101 - 1 SCH</u>		<u>IPPE 2 Clerkship (Credit This Semester - Clerkship</u>
		<u>Runs All Year)</u>

	<u>1st 8-Weeks</u>	<u>2nd 8-Weeks</u>
<u>Phar 3232 - 2 SCH</u>	<u>Practice Mgt: Leadership and Ethics (see above</u>	<u>Phar 4233 - 2 SCH</u>
<u>Phar 3158 - 1 SCH</u>	<u>Summer 2)</u>	<u>Phar 2231 - 2</u>
<u>Phar 3101 - 1</u>	<u>P'Therapy: Reproduction</u>	<u>Practice Mgt: Law (substitute for BA</u>
	<u>P'Therapy: Therapeutic Dosing</u>	<u>(substituted by FIN 5219)</u>



The fourth digit refers to the sequence of the course within the discipline.	
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## Course Descriptions

### Pharm D. and MBA Program

#### **PHAR 1001 - Annual Assessment**

The School's Annual Assessment program is a method of assessing student progression toward degree attainment and providing curricular quality assurance. The 4-year, longitudinal program is designed to assess student knowledge, skills, and behaviors necessary for successful performance of the School's 10 terminal outcomes. The program consists of course embedded assessments and a day-long assessment held on a Saturday in January. The day-long assessment consists of one or more Objective Structured Clinical Exams (OSCEs) and a 150 to 300 item multiple-choice test. OSCEs are performance tests targeted at assessing student competency with pharmacist skills such as patient counseling, medical chart review, performance of pharmacokinetic calculations, and other skills students will gain while progressing within the pharmacy program. All assessment rubrics and a table of specifications for the multiple choice test are made available to the students approximately 1 month prior assessment dates. Please note, fourth year students must pass the Annual Assessment during their final year to be eligible for graduation.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

#### **PHAR 1101 - INTRODUCTION TO PHARMACY PRACTICE I**

Basic concepts and development of patient care skills for pharmacy practice; exposure to the role of the pharmacist in patient care settings; development of leadership skills for pharmacy practice; effective patient education and presentation skills; care of patients in pharmacy drug distribution and control systems; ethical practices of pharmacists. Discussions, observation and patient care experiences longitudinally throughout both semesters in the first professional year; credit will be awarded in the SPRING semester.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 1102 - Pharmacy Practice, Education, and the Sciences**

This course is designed to develop foundational skills and behaviors necessary for success within the curriculum. This course introduces the topics of professional responsibility and team work. The concepts of professionalism, patient care, ethical dilemmas, team building, and

conflict resolution will be introduced and students given opportunities for application of these concepts during numerous discussion and laboratory sessions.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### **[PHAR 1131 - CLINICAL IMMUNIZATION & ADMINISTRATION](#)**

Fundamentals, epidemiology and prevention of vaccine preventable diseases. Develops knowledge and skills to administer vaccines, provide informed consent and maintain appropriate immunization record management. PREREQ: CPR certification and qualify for intern licensure at end of first year.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#), No Credit Lab

Pharmacy Department

### **[PHAR 1171 - Early Experiences in Drug Information](#)**

Introduction to basic drug information skills. Practical experience in retrieving medical literature (with emphasis on secondary literature sources) and providing oral and written responses to drug information inquiries.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#), No Credit Lab

[All Sections for this Course](#)

Pharmacy Department

### **[PHAR 1221 - PRINCIPLES OF DISEASE](#)**

Concepts and mechanisms of the basic processes underlying diseases. Pathophysiology and clinical presentation of common immune disorders; chemistry, pharmacology and toxicology of common therapeutic agents used to treat inflammatory diseases; therapeutic management of patients. PREREQ: PHAR 2513 (concurrently).

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### **[PHAR 1231 - PHARMACEUTICAL CARE SYSTEMS](#)**

Introduction to health and pharmaceutical care delivery within a framework of the medication-use system; social and behavioral aspects of health care; health informatics; public health and health promotion; pharmacy ethics; organization and economics of health care.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### PHAR 1241 - CLINICAL RESEARCH AND DRUG LITERATURE EVALUATION

The fundamentals of experimental design, implementation and data analysis pertinent to pharmaceutical clinical investigations. PREREQ: Statistics.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### PHAR 1320 - IMMUNOLOGY

The structural components of the human immune system; the cellular and molecular basis of immunological function; diagnostic tests using immunological reagents; mechanisms of resistance against microbial and neoplastic diseases; transplantation immunology; pathology of immune-mediated diseases; prevention of disease by vaccines; pharmacotherapeutic intervention in immunological processes; contemporary topics in immunology.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### PHAR 1321 - DRUG DELIVERY SYSTEMS I

Pharmaceutical principles of dosage forms and pharmacy calculations based on different routes of administration: Physical-chemical properties; biopharmaceutics; stability; packaging; and formulation of various dosage forms. PREREQ: PHAR 1300.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### PHAR 1401 - Non-Prescription Medicines

The pharmacology and clinical use of common non-prescription medications, herbals, and medical devices used in ambulatory pharmacy practice to treat minor medical problems. Emphasis placed on the pharmacist's professional role in patient consultation, assessment, communication, and monitoring as well as the effectiveness, safety, drug interactions, adverse effects, and legal/professional issues regarding the use of non-prescription drugs and herbal products.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### PHAR 1414 - ANATOMY AND CELL BIOLOGY

General systemic anatomy with emphasis on microscopic and gross structures following the human organ systems. One three-hour laboratory each week. Five day-long laboratory sessions require cadaver prosections held in Lubbock.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#), [No Credit Lab](#)  
[All Sections for this Course](#)

Pharmacy Department

### **[PHAR 1512 - BIOCHEMISTRY](#)**

Chemical and molecular aspects of biological processes, including the chemistry of biomolecules, enzymology, bioenergy, biochemical control mechanisms, and molecular genetics. Discussions of metabolic diseases and fundamentals of human nutrition.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### **[PHAR 2101 - INTRODUCTION TO PHARMACY PRACTICE II](#)**

Continuation of Pharm 1101. Basic practice concepts and skills for all areas of pharmacy practice; professional service learning and effective patient education and presentation skills; care of patients in drug distribution and control; ethical practices of pharmacists. Discussion; observation; service learning; group presentations; and patient care experiences longitudinally throughout both semesters in the second professional year; credit will be awarded in the spring semester. PREREQ: 2nd professional year standing

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### **[PHAR 2104 - PARENTERALS](#)**

This course consists of one 50-minute lecture session and one 2-hour laboratory session per week. Sessions will focus on the performance of aseptic technique, preparation of small and large volume parenterals, safe handling of chemotherapy agents, Regulatory Issues (USP 797 & NIOSH), parental calculations, and quality assurance and documentation. This course is designed to culminate in the Candidate being proficient in compounding of sterile products.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#), [No Credit Lab](#)

[All Sections for this Course](#)

Pharmacy Department

### **[PHAR 2153 - PHARMACOTHERAPY III - BLOOD & RETICULOENDOTHELIAL](#)**

Pathophysiology and clinical presentation of common diseases of the blood and reticuloendothelial systems; chemistry, pharmacology and toxicology of common therapeutic agents used to treat blood and reticuloendothelial diseases; therapeutic management of patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### **PHAR 2202 - PHARMACEUTICAL CARE II**

Integration of skills and knowledge necessary for providing pharmaceutical care; emphasis on the development of interviewing and counseling skills, patient data base assessment, clinical laboratory medicine, and creation of pharmaceutical care plans and dispensing of common prescription drug products. PREREQ: PHAR 1301 and P-2 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### **PHAR 2203 - PHARMACEUTICAL CARE LABORATORY**

Laboratory exercises in interviewing and counseling; prospective drug reviews; prescription dispensing; and physical assessment. Two laboratories of 3-hours each week.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Laboratory](#), [No Credit Lab](#)

[All Sections for this Course](#)

Pharmacy Department

### **PHAR 2223 - DRUG DELIVERY SYSTEMS III**

Continuation of PHAR 1321 and 2322. PREREQ: PHAR 2322.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### **PHAR 2231 - PRACTICE MANAGEMENT - LAW**

The study of federal and Texas statutes and rules, which regulate the practice of pharmacy and drug distribution.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

### **PHAR 2322 - DRUG DELIVERY SYSTEMS II**

Continuation of PHAR 1321. One 3-hour laboratory each week. PREREQ: PHAR 1321.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#), [No Credit Lab](#)

Pharmacy Department

### **PHAR 2325 - PRINCIPLES OF DRUG ACTION**

Basic principles of pharmacokinetics, pharmacodynamics and toxicology. This introductory course is designed to facilitate understanding of fundamental concepts relating to the drug action in relation to these general topics.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 2340 - CLINICAL PHARMACOKINETICS**

The application of pharmacokinetic principles to the rational design of individualized drug dosage regimens. PREREQ: PHAR 2325.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 2352 - PHARMACOTHERAPY II - CARDIOVASCULAR**

Pathophysiology and clinical presentation of common diseases of the cardiovascular system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat cardiovascular diseases; therapeutic management of patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 2451 - Infectious Diseases**

Pathophysiology and clinical presentation of common infectious diseases; chemistry, pharmacology, and toxicology of common anti-infective agents; therapeutic management of patients with common infectious diseases.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 2513 - PHYSIOLOGY**

Functions and mechanisms of human organ systems. This course explores the integration of multiple physical and chemical events at various levels of biological organization; events that are required for biological systems to function. The material covers all levels of organization from the functioning of individual molecules to the interplay of widely separated organs in the body. PREREQ: PHAR 1514.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 3101 - Therapeutic Dosing**

The application of pharmacokinetic and pharmacodynamic principles to the rational design of individualized drug dosing regimens incorporating patient-specific, disease-specific, and drug-specific factors.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 3158 - PHARMACOTHERAPY VIII - REPRODUCTIVE**

Concepts of preventing conception; pathophysiology and clinical presentation of common diseases of the reproductive system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat reproductive system diseases; therapeutic management of patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 3159 - PHARMACOTHERAPY IX - INTEGUMENTARY**

Pathophysiology and clinical presentation of common diseases of the integumentary system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat integumentary diseases; therapeutic management of patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 3233 - Leadership and Ethics in Management**

Leadership and ethical principles as applied to management in all pharmacy environments.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 3240 - PATIENT ASSESSMENT**

Basic physical assessment is designed to provide the student essential foundation of knowledge about assessing the client at any given period of time along the health care continuum.

Students will be instructed to recognize the normal and abnormal anatomical and physiological systems of the human body through various assessment techniques. One one-hour lecture and one 3-hour laboratory each week. PREREQ: P-2 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture, No Credit Lab

Pharmacy Department

#### **PHAR 3254 - PHARMACOTHERAPY IV - RENAL**

Pathophysiology and clinical presentation of common diseases of the renal system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat renal diseases; therapeutic management of patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 3255 - PHARMACOTHERAPY V - GI & HEPATIC**

Pathophysiology, clinical presentation and therapeutic management of common diseases of the gastrointestinal tract and liver; chemistry, pharmacology and toxicology of common therapeutic agents to treat these disorders. PREREQ: P-2 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 3256 - PHARMACOTHERAPY VI - RESPIRATORY**

Pathophysiology and clinical presentation of common diseases of the respiratory system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat respiratory diseases; therapeutic management of patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 3257 - PHARMACOTHERAPY VII - ENDOCRINE**

Pathophysiology and clinical presentation of common diseases of the endocrine system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat endocrine diseases; therapeutic management of patients. PREREQ: P-2 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 3355 - Gastrointestinal, Hepatic, and Nutrition**

Pathophysiology, clinical presentation and therapeutic management of gastrointestinal, liver, and nutrition disorders with a focus on the chemistry, pharmacology, and toxicology of common therapeutic agents used to support and treat these disorders.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 3361 - CASE STUDIES I**

Emphasizes the scientific foundation of pharmacy practice. Application of principles of pathophysiology and therapeutics to drug therapy issues through student-centered, problem-based instructional processes. PREREQ: PHAR 2340 and PHAR 2202.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 3461 - Neurosensory and Psychiatry**

Pathophysiology and clinical presentation of common diseases are discussed and neurological system, sensory organs, and common psychiatric diseases are discussed and the chemistry, pharmacology and toxicology of common therapeutic agents used to treat neurological and psychiatric diseases are covered as well as therapeutic management of patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 3462 - CASE STUDIES II**

Emphasizes provision of pharmaceutical care to individual patients. Application of principles of pathophysiology and therapeutics to drug therapy issues through student-centered, problem-based instructional processes. PREREQ: P-3 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 4161 - PHARMACOTHERAPY X - BONE AND JOINT**

Pathophysiology and clinical presentation of common diseases of the musculoskeletal system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat musculoskeletal diseases; therapeutic management of patients. PREREQ: P-2 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

### **PHAR 4163 - PHARMACOTHERAPY XIII - NUTRITION**

Principles of nutrition; pathophysiology and clinical presentation of common nutritional diseases and nutritional support; chemistry, pharmacology and toxicology issues of nutritional diseases and support; therapeutic management of patients. PREREQ: P-3 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4165 - PHARMACOTHERAPY XV - SPECIAL POPULATIONS**

Unique therapeutic problems and clinical management of pregnant, nursing, pediatric and geriatric patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4166 - PHARMACOTHERAPY XVI - PHARMACOGENETICS**

Identifying the role of genetics in patient response to therapeutic agents; Possible means to improve the efficacy and safety of pharmacotherapy.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4201 - SPECIAL PROJECTS II**

Second semester of independent research for advanced students in administrative, behavioral, clinical, or pharmaceutical sciences. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4202 - ADVANCED PEDIATRICS**

Become familiar with the pharmacotherapy of select pediatric disease states. Also, will develop an understanding of the issues faced daily in a multidisciplinary, team-centered approach to pediatric pharmacotherapy, which will improve the knowledge of interdisciplinary care. Includes perspective from physicians, pharmacists, nurses, respiratory therapists, dietitians, physical and occupational therapists, and social workers, and discharge planners. Develop and improve upon skills such as self-directed learning, clinical and interpersonal skills, and professional values and behaviors. PREREQ: P-3 standing. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

#### **PHAR 4204 - DRUG REVIEW**

A fast-paced review of drug information associated with each drug class. This course will seek to provide the student with specific clinical knowledge and pearls and more confidence as they enter their 4th year rotations. PREREQ: P-3 standing. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

#### **PHAR 4205 - HISTORY OF PHARMACY**

The history of pharmaceutical practice, science, and technology, and the evolving role of the pharmacist in Western Europe and the United States from classical antiquity until the present. Sequential development period will be presented by means of lectures, audiovisual materials, case studies, biographical sketches, and objects from the Texas Pharmacy Museum collection. PREREQ: P-3 standing. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

#### **PHAR 4206 - VETERINARIAN PHARMACY**

Study of the pharmacist's professional role regarding veterinarian products and medical devices common to veterinarian pharmacy practice; emphasis on diseases of animals and the effectiveness, safety, limitations and composition of therapeutic entities used in the treatment of animal diseases. PREREQ: P-3 standing. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

#### **PHAR 4207 - DRUG ABUSE**

Detailed study of the pharmacodynamic and societal aspects of drugs of abuse; the pharmacist's professional role in drugs of abuse education and counseling. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

#### **PHAR 4208 - SPANISH FOR HEALTH PROFESSIONALS**

Verbal and written communication skills in Spanish important for patient counseling. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

#### **PHAR 4210 - Current Topics in Pharmacy Practice**

Student led discussions of current professional issues in pharmacy practice. One hour of recitation once each week. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

### **PHAR 4211 - ADVANCED INFECTIOUS DISEASES**

In-depth, primary literature based perspective of infectious diseases including a focus on resistant pathogens and the importance of appropriate pharmacodynamics in the treatment of infections. This course will also provide information on novel and innovative topics such as the pharmacist's role in emergency preparedness, antimicrobial management techniques, and home IV antibiotic therapy to provide candidates with a broader knowledge of infectious diseases pharmacotherapy.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

### **PHAR 4212 - SPANISH FOR HEALTH PROFESSIONALS II**

Students will expand the language knowledge for healthcare professions who will be interacting with non-English speaking patients whose only spoken language is Spanish. PREREQ: PHAR 4208.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

### **PHAR 4213 - Current Topics in Pharmacy Practice: Advanced Cardiology**

The advanced Cardiology Elective is designed to expose students to advanced therapeutic topics within Cardiovascular Pharmacotherapy. A contemporary focus on late-breaking cardiovascular topics important for pharmacists along with the chemistry, pharmacology, and toxicology of novel therapeutic agents used to treat cardiovascular diseases is provided.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

### **PHAR 4214 - Special Topics in Advanced Patient Management in Ambulatory Care**

The Advanced Ambulatory Care Elective is designed to expose students to advanced topics within the Ambulatory Care practice setting. The elective is intended to build upon the core disease state knowledge learned in the pharmacotherapy sequence and introduce or expand upon topics either not covered or only briefly discussed by the respective pharmacotherapy course. This elective will focus on the assessment and outpatient management of core ambulatory care topics including (but not necessarily limited to) diabetes, hypertension, hyperlipidemia, anticoagulation and heart failure. Students will review therapeutic management strategies, national clinical guidelines and clinical trial data to make clinical decisions in both simple and complex patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

#### **PHAR 4215 - Advanced Geriatrics Elective**

This course will involve advanced discussion of the pathophysiology/pharmacotherapy for commonly seen geriatric disease states. The course will also provide the opportunity to explore issues related to drug therapy in the elderly population across various practice settings.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

#### **PHAR 4224 - Pharmaceutical Sciences Journal Club**

Student directed presentations of scientific literature.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

#### **PHAR 4226 - SPECIAL TOPICS**

Advanced studies in administrative, behavioral, clinical, or pharmaceutical sciences. May be taken for a total of 4 credit hours; must take two courses. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

#### **PHAR 4227 - SPECIAL PROJECTS**

Independent research for advanced students in administrative, behavioral, clinical, or pharmaceutical sciences. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

#### **PHAR 4233 - PRACTICE MANAGEMENT - FINANCIAL MANAGEMENT**

Financial management concepts for pharmacy practice in all environments.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4234 - PRACTICE MANAGEMENT - INSTITUTIONAL PHARMACY OPERATIONS**

Management and operational aspects of institutional pharmacy practices. PREREQ: PHAR 2231 and PHAR 4233. SELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4235 - PRACTICE MANAGEMENT - COMMUNITY PHARMACY OPERATIONS**

Management and operational aspects of community pharmacy practices. PREREQ: PHAR 2231 and PHAR 4233. SELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4241 - GRAND ROUNDS (FALL)**

As pharmacists, Texas Tech School of Pharmacy graduates will be called upon to present continuing education programs to healthcare professionals. The objective of the Grand Rounds Course is to ensure that the Texas Tech graduate has prepared and presented two ACPE-quality continuing education programs. The student will complete all the steps required for a formal ACPE-approved program up to the point of actually obtaining an ACPE provider number. Thus, although not formally approved by ACPE, the program should fulfill all ACPE provider requirements. COREQ: P4 standing; fall semester.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4242 - GRAND ROUNDS (SPRING)**

As pharmacistS, Texas Tech School of Pharmacy graduates will be called upon to present continuing education programs to healthcare professionals. The objective of the Grand Rounds Course is to ensure that the Texas Tech graduate has prepared and presented two ACPE-quality continuing education programs. The student will complete all the steps required for a formal ACPE-approved program up to the point of actually obtaining an ACPE provider number. Thus, although not formally approved by ACPE, the program should fulfill all ACPE provider requirements. COREQ: P4 standing; spring semester.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4261 - PHARMACOTHERAPY XI - NEUROSENSORY**

Pathophysiology and clinical presentation of common diseases of the neurological system and sensory organs; chemistry, pharmacology and toxicology of common therapeutic agents used to treat neurological and sensory organ diseases; therapeutic management of patients. PREREQ: P-3 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

**PHAR 4262 - PHARMACOTHERAPY XII - PSYCHIATRY**

Pathophysiology and clinical presentation of common psychiatric diseases; chemistry, pharmacology and toxicology of common therapeutic agents used to treat psychiatric diseases; therapeutic management of patients. PREREQ: P-3 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

**PHAR 4264 - PHARMACOTHERAPY XIV - ONCOLOGY**

Pathophysiology, clinical presentation and therapeutic management of common cancers; chemistry, pharmacology and toxicology of therapeutic agents used to treat these disorders.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

**PHAR 4267 - PHARMACOTHERAPY XVII - CLINICAL TOXICOLOGY**

Toxicology and clinical treatment of overdoses of common therapeutic agents.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

**PHAR 4270 - COMMUNITY PHARMACY PRACTICE CLERKSHIP**

Pharmaceutical care in various community pharmacies. Four mornings each week for 6 weeks (128 contact hours) PREREQ: P-3 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4271 - Intermediate Community Pharmacy Clerkship**

Reinforce and build upon the basic knowledge and experience gained in rotations. The focus will be on integrating patient care activities with pharmacy operations, conducted in a chain or independent community pharmacy. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4274 - INSTITUTIONAL PHARMACY PRACTICE CLERKSHIP**

Practical experiences in unit dose drug distribution systems and preparation of sterile products. Four mornings each week for 6 weeks (128 contact hours). PREREQ: P-3 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

#### **PHAR 4275 - AMBULATORY CLINICAL SKILLS CLERKSHIP**

Students on this clerkship will use their content knowledge and communication abilities obtained in the classroom and laboratory to learn and or improve their basic clinical skills provided in the outpatient health care setting. The clerkship is designed to enhance the student's understanding of the unique characteristics of patients, communication skills, physical assessment skills, and pharmacotherapy management of chronic or acute diseases states in the Ambulatory Care setting to improve the student's necessary abilities to provide direct patient pharmaceutical care and disease management.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

#### **PHAR 4276 - INPATIENT CLINICAL SKILLS CLERKSHIP**

Pharmaceutical care in the inpatient setting. Development of basic clinical skills in the care of inpatients. Rotations may be completed in any inpatient care environment. Four mornings each week for 6 weeks (128 contact hours). PREREQ: P-3 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

#### **PHAR 4463 - CASE STUDIES III**

Emphasizes provision of pharmaceutical care to large patient populations. Application of principles of pathophysiology and therapeutics to drug therapy issues through student-centered, problem-based instructional processes. PREREQ: P-3 standing.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 4665 - CONSULTING PHARMACY CLERKSHIP**

Student directed activities with special patient populations.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

#### **PHAR 4666 - PEDIATRIC INTENSIVE CARE CLERKSHIP**

An advanced clerkship with a focus in pediatric critical care for the student with a special interest in pediatric pharmacotherapy. Each student will be responsible for the drug and non-drug therapy of critically ill children (under supervision of preceptor). PREREQ: P-4 standing and PHAR 4677. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

#### **PHAR 4667 - DISEASE STATE/FORMULARY MANAGEMENT CLERKSHIP**

Course will incorporate policy development, formulary management, and disease state management utilizing TDCJ healthcare facilities. PREREQ: P-4 standing. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

#### **PHAR 4668 - PEDIATRIC CAMP & AMBULATORY CARE CLERKSHIP**

Pharmaceutical care opportunities in a pediatric summer camp environment. Each student will be responsible for the care of 6-8 children under the supervision of a licensed health-care professional. PREREQ: P-4 standing. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

#### **PHAR 4669 - GEROPSYCHIATRY CLERKSHIP**

A formative clerkship to develop the clinical skills related to geriatric patients with psychiatric disorders. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

#### **PHAR 4670 - SPECIAL TOPICS CLERKSHIP II**

Advanced pharmaceutical care experiences with pediatric patients. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Clerkship](#)

Pharmacy Department

#### **PHAR 4671 - RESEARCH CLERKSHIP I**

Research experience in pharmaceutical sciences, social and administrative sciences, or pharmacy practice. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

**PHAR 4672 - RESEARCH CLERKSHIP II**

Research experience in pharmaceutical sciences, social and administrative sciences, or pharmacy practice (second 6-week experience). ELECTIVE. PREREQ: PHAR 4671

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Elective](#)

Pharmacy Department

**PHAR 4673 - ADVANCED COMMUNITY PHARMACY CLERKSHIP**

Advanced pharmaceutical care experiences with community pharmacy patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Clerkship](#)

Pharmacy Department

**PHAR 4674 - ADVANCED HOSPITAL PHARMACY CLERKSHIP**

Pharmaceutical care experiences with institutionalized patients. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Clerkship](#)

Pharmacy Department

**PHAR 4675 - ADULT MEDICINE CLERKSHIP**

The Adult Medicine Rotation is an advanced pharmacy practice experience that is required of all P4 students. It is an extension of the P3 inpatient clinical skills clerkship (PHAR 4276), allowing for more intense and advanced experience. Students will be exposed to adult inpatients with a variety of disease states during the rotation. Students will continue to refine their critical thinking skills that they have developed during their prior rotations and coursework, and will begin to apply all of the knowledge they have gained up to this point. Students will be asked to be actively involved with the following patients, interacting with health care professionals, and in presenting/researching various disease states/drug therapy that is specific to their given rotation (see core disease states).

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Clerkship](#)

Pharmacy Department

**PHAR 4676 - ADULT PRIMARY CARE CLERKSHIP**

Pharmaceutical care experiences with ambulatory medicine adult patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Clerkship](#)

Pharmacy Department

**PHAR 4677 - PEDIATRIC PRIMARY CARE CLERKSHIP**

Pharmaceutical care experiences with ambulatory and inpatient pediatric patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4678 - GERIATRIC PRIMARY CARE CLERKSHIP**

Pharmaceutical care experiences with ambulatory and inpatient geriatric patients.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4679 - PAIN MANAGEMENT CLERKSHIP**

Pharmaceutical care experiences with an ambulatory patient population in need of chronic pain management. ELECTIVE.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4680 - PALLIATIVE CARE CLERKSHIP**

Pharmaceutical care experiences with palliative patients. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

**PHAR 4681 - RURAL PHARMACY PRACTICE CLERKSHIP**

Pharmaceutical care experiences with ambulatory and/or institutionalized patients in a rural community.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4682 - AMBULATORY CARE CLERKSHIP**

Pharmaceutical care experiences with ambulatory patients. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4683 - CARDIOLOGY CLERKSHIP**

Pharmaceutical care experiences with patients with cardiovascular diseases. PREREQUISITE: P-4 standing. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4684 - ADVANCED DRUG INFORMATION CLERKSHIP**

Pharmaceutical care experiences in a drug information service. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4685 - PULMONARY CLERKSHIP**

Pharmaceutical care experiences with patients having respiratory diseases. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

**PHAR 4686 - HOME CARE CLERKSHIP**

Pharmaceutical care experiences with home care patients. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4688 - INFECTIOUS DISEASES CLERKSHIP**

Pharmaceutical care experiences with patients having infectious diseases. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4689 - NUTRITIONAL CARE CLERKSHIP**

Pharmaceutical care experiences with nutritional care patients. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4690 - ONCOLOGY CLERKSHIP**

Pharmaceutical care experiences with patients having oncological diseases. PREREQ: P-4 standing. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4691 - PHARMACOKINETICS CLERKSHIP**

Pharmaceutical care experiences in pharmacokinetic dosing program. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

**PHAR 4692 - PSYCHIATRY CLERKSHIP**

Pharmaceutical care experiences with patients having psychiatric diseases. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4693 - SURGERY CLERKSHIP**

Pharmaceutical care experiences with surgical patients. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Elective

Pharmacy Department

**PHAR 4694 - NEONATOLOGY CLERKSHIP**

Pharmaceutical care experiences with neonates. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4695 - CRITICAL CARE CLERKSHIP**

Pharmaceutical care experiences with critically ill adult patients in the intensive care unit. PREREQ: P-4 standing. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4696 - NUCLEAR PHARMACY CLERKSHIP**

Practical experiences in the preparation of radiopharmaceutical products and their use in medical practice. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4697 - POISON CENTER CLERKSHIP**

Pharmaceutical care experiences with patients or caregivers in the poison control center. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4698 - ADMINISTRATIVE PHARMACY PRACTICE CLERKSHIP**

Practical experiences in financial, operations, personnel and marketing management of a pharmacy practice environment. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 4699 - SPECIAL TOPICS**

Student directed activities with special patient populations. ELECTIVE

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Clerkship

Pharmacy Department

**PHAR 5199 - MBA/HOM Capstone**

Students will have developed a set of exercisable behavioral skills that enable an individual to function effectively in a top level/responsible management position. This list of skills includes effective interpersonal communication, active listening, giving and receiving feedback, presentations, interviewing, team building and trust building, conflict management, resolution of ethical issues, situational team leadership and group facilitation.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

**PHAR 5307 - Healthcare Network, System and Organizational Operations**

The course presents selected concepts and methods from management practices that are useful in healthcare settings. Topics concerning policy, organizational structure, finance, budgeting, managerial epidemiology, human resources, negotiation, and others are presented.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 5308 - Healthcare Quality: Design and Implementation**

The course presents selected concepts and methods from a best demonstrated management practices that are targeted to healthcare settings. Topics concerning consumer centric approaches to improving patient safety, quality, and others are presented.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

#### **PHAR 5309 - Introduction to Compliance & Performance Management in Healthcare Operations**

This course presents concepts concerning management and compliance in healthcare settings. Topics concerning personnel management, improving service to patients as consumers of healthcare, financial management, and others are presented.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** Lecture

Pharmacy Department

#### **PHAR 5372 - Advanced Leadership and Ethics**

Leadership and ethics principles applied to management.

**Levels:** Pharmacy-Doctoral

**Schedule Types:** [Lecture](#)

Pharmacy Department

## **FACULTY**

Abbruscato, Thomas J., Associate Dean, Graduate School of Biomedical Sciences and Associate Professor of Pharmaceutical Sciences; B.S. Molecular & Cellular Biology, University of Arizona, 1992; Ph.D. Pharmacology & Toxicology, University of Arizona, 1997.

Ahsan, Fakhrul, Associate Professor of Pharmaceutical Sciences; B.S. Pharmacy, University of Dhaka, Bangladesh, 1990; M.S. Pharmacy, University of Dhaka, Bangladesh, 1992; Ph.D. Pharmaceutics, University of Madrid, Spain, 1999.

Alvarez, Carlos, Assistant Professor of Pharmacy Practice; Pharm.D., Texas Tech University Health Sciences Center, 2004.

Basse, Ranee, Associate Professor of Pharmacy Practice and Chief, Managed Health Care Pharmacy Services; Pharm.D., School of Pharmacy and Allied Health Professionals, Creighton University, 1994.

Bickel, Ulrich, Professor of Pharmaceutical Sciences; Doctor of Medicine, University of Ulm, Germany, 1985.

Blaszczyk, Amie, Assistant Professor of Pharmacy Practice; Pharm.D., Duquesne University, 2003.

Brinn, Lisa S., Instructor of Biomedical Sciences; B.S. Biology, Universidade Santa Ursula, Rio de Janeiro, RJ, Brazil, 1993; M.S. Science Universidade de Sao Paulo, Ribeirao Preto, SP, Brazil, 1996; Ph.D. Science; Universidade de Sao Paulo, Ribeirao Preto, SP, Brazil, 1999.

Canales, Ann, Assistant Professor of Pharmacy Practice; Pharm.D., Southwestern Oklahoma, State University, 2001.

Chastain, Lisa, Assistant Professor of Pharmacy Practice; Pharm.D., University of Houston, College of Pharmacy, 2005.

Cheng Jiang, Associate Professor, MD- MD, Medicine, Beijing Medical University, China (PRC), 1986; MS, Space Physiology, Institute for Space Medical Engineering, Beijing, China (PRC), 1989

Coomer, Tiffany, Clinical Instructor Pharmacy Practice; Pharm.D., Texas Tech University Health Sciences Center, School of Pharmacy, 2009.

Cox, Craig, Associate Professor of Pharmacy Practice and Vice Chair of Experiential Programs; Pharm.D., Washington State University, 1999.

Craddock, Deetra, Assistant Professor of Pharmacy Practice; Pharm.D., Auburn University, 2001.

Edwards, Krystal, Assistant Professor of Pharmacy Practice; B.S. Pharmacy, Medical University of South Carolina, 1998; Pharm.D., Medical University of South Carolina, 2000.

Epps, Joel M., Academic Instructor; B.A. West Texas State University, 1979; M.B.A., Texas Women's

University, 1982.

Eveleth, Jessica, Assistant Professor of Pharmacy Practice; Pharm.D., University of Iowa, College of Pharmacy, 2008.

Fox, Carol, Assistant Professor of Pharmacy Practice; Pharm.D., University of Connecticut, College of Pharmacy, 2006.

Frost, Jill, Assistant Professor of Pharmacy Practice; Pharm.D., University of Texas at Austin, College of Pharmacy, 2004.

Fruge, Kristian, Assistant Professor of Pharmacy Practice; Pharm.D., University of Louisiana, Monroe, 2010.

Greene, Shane, Associate Professor of Pharmacy Practice; Pharm.D., The University of Texas at Austin College of Pharmacy and The University of Texas Health Science Center -San Antonio, 1999.

Gunaje, Jayarama B., Associate Professor of Pharmaceutical Sciences; B.S., Biology, Mysore University, 1980; M.S., Biosciences, Mangalore University, 1982; Ph.D., Biochemistry, Indiana Institute of Science, Bangalore, 1989.

Haase, Krystal, Associate Professor of Pharmacy Practice; Pharm.D., The University of Texas at Austin College of Pharmacy, and The University of Texas Health Science Center -San Antonio, 1997.

Haase, Mark, Associate Professor of Pharmacy Practice and Head of Pediatrics Division; B.S. Pharmacy, University of Minnesota, 1996; Pharm.D., University of Minnesota, 1997.

Habeger, Butch (Harold E.), Associate Professor of Pharmacy Practice, Practice Management Division Director Pharmacy Operations; B.S. Pharmacy, South Dakota State University, 1970; M.B.A. Management, University of Puget Sound, 1981.

Hall, Ronald, Assistant Professor of Pharmacy Practice; B.S. Pharmacy, Saint Louis College of Pharmacy, 1999; Pharm.D., Saint Louis College of Pharmacy, 2000; MSCS, University of Texas Southwestern, 2009.

Hix, Meri, Associate Professor of Pharmacy Practice; Pharm.D., Southwestern Oklahoma State University College of Pharmacy, 2002.

Horton, Niambi, Assistant Professor of Pharmacy Practice; Pharm.D., Auburn University, Tennessee, 2005.

Irons, Brian, Assistant Professor of Pharmacy Practice and Head of Primary Care Division; B.S., Pharmacy, University of Wisconsin, 1997; Pharm.D., University of Wisconsin, 1998.

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