TEXAS TECH UNIVERSITY
HEALTH SCIENCES CENTER™
School *of* Pharmacy

Texas Tech University Health Sciences Center
School of Pharmacy

Doctor of Pharmacy Program

2016-2017

SCHOOL OF PHARMACY CAMPUSES

Abilene	**Amarillo**	**Dallas/Ft. Worth**	**Lubbock**
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Academic Year Bulletin

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

TTUHSC 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 TTUHSC.

TTUHSC 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 SOP found in the bulletin and to TTUHSC, found in the TTUHSC Institutional Student Handbook.

This bulletin is published by TTUHSC SOP, Amarillo, Texas 79106.

Aug 1, 2013

TEXAS TECH UNIVERSITY HEALTH SCIENCES CENTER SYSTEM

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MISSION STATEMENT OF TTUHSC

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 TTUHSC

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

SCHOOL OF PHARMACY ADMINISTRATION

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Thomas J. Thekkumkara, Ph.D., Regional Dean, Amarillo
Cynthia L. Raehl, Pharm.D., Regional Dean, Abilene
Roland A. Patry, R.Ph., Dr.P.H, Regional Dean, Dallas
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Jon Weidanz, M.P.H.,Ph.D., Chair, Immunotherapeutics
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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, 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 University Health Sciences Center 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.

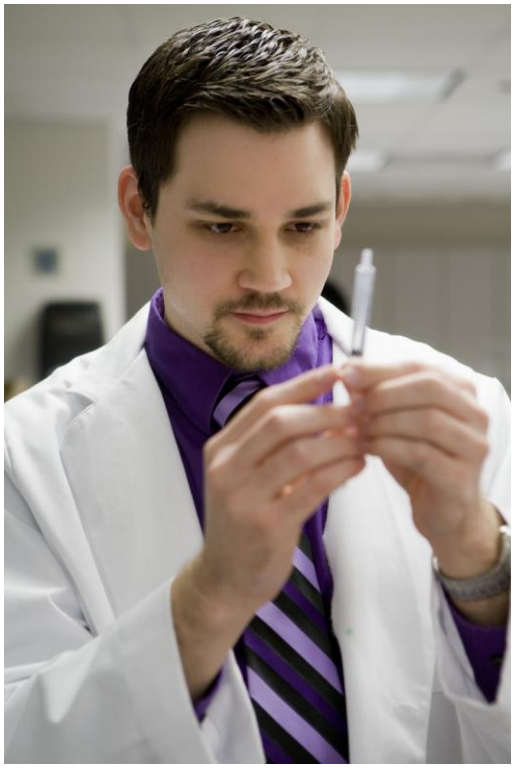
SCHOOL OF PHARMACY PHILOSOPHY

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. TTUHSC SOP 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 SOP'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 health care by developing models and excellence in patient-centered care and collaborative drug therapy management through an innovative educational curriculum, while advancing health care 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 health care.
- Community involvement and serving the health care 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 TTUHSC SOP 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 as well as academic and health care 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 TTUHSC is fully accredited by the Accreditation Council for Pharmacy Education (ACPE). Questions about the accreditation status of the Texas Tech University Health Sciences Center Doctor of Pharmacy Program may be directed to the Accreditation Council for Pharmacy Education at 135 S. LaSalle Street, Suite 4100, Chicago, Illinois 60603 (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 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 INFORMATION

History

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 SOP accepted its first class of 64 full-time students into the professional program beginning Fall, 1996. Currently, 155 students are 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, with some possible clerkship experiences at regional campuses. The SOP has more than 620 students enrolled in professional and postgraduate programs. The SOP employs approximately 94 full-time equivalent faculty, 45 post-doctoral pharmacy residents and 37 graduate teaching and research assistants; approximately 67 staff serve the students and programs of the School.

Amarillo

The SOP's Amarillo program is based in two buildings: The pharmacy building, a 102,000 sq. ft. building (built in 1996) on the Amarillo campus of the Texas Tech University Health Sciences Center and the adjacent Pharmacy Academic Center, a 23,000 sq. ft. building (built in 2009). The original pharmacy building was provided through funds donated by the people of Amarillo. The Pharmacy building features a 240-seat lecture center and four classrooms offering interactive video conferencing capabilities and network capabilities. In addition, the Pharmacy Academic Center features two 120-seat classrooms. 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 Simulation Center, multiple small group conference/study rooms, the Texas Pharmacy Museum, teaching laboratories (drug formulation, sterile products) and student lounges.

The SOP is located directly across Coulter Drive from Northwest Texas Hospital. The campus is comprised of the School of Pharmacy, Medicine, Allied Health, Nursing and the Graduate School of Biomedical Sciences. Other entities include the Texas Tech Physicians Clinic, the Amarillo Research Building, the Laura Bush Institute for Women's Health and the TTUHSC Regional Library.

Abilene

The Abilene campus is housed in a 35,000 sq. ft. 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, a teaching laboratory for compounding and dispensing drugs, a patient counseling practice room, a physical assessment laboratory, a student lounge and study areas and a 4,600 sq. ft. research laboratory.

Dallas / Fort Worth

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 campuses, 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.

Lubbock
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 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

TTUHSC SOP faculty and students provide patient care in the following hospitals:

AMARILLO

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 health care 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 and 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

Hendrick Medical Center
For more than 85 years, the Hendrick name has been the first name in health care in Abilene, Texas and the Texas Midwest. As the first health care network to establish a true system of services, the Hendrick name reigns over a 522-bed medical center, a women’s center, rehabilitation hospital, cancer center and numerous other innovative services.

Abilene Regional Medical Center
A 231-bed facility with inpatient, outpatient, medical, surgical and emergency care as well as an Accredited Chest Pain Center with PCI and the area's only Neonatal Intensive Care Unit.

DALLAS/FORT WORTH

VA North Texas Health Care System
The VA North Texas Health Care System (VANTHCS) hospital is the primary teaching site of Texas Tech Health Sciences Center School of Pharmacy (Dallas/Ft. Worth Regional Center). 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 SOP. 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 Health care 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 TTUHSC SOP students.

Methodist Health Systems
Methodist Health System offers health and hope to more than 300,000 people a year at its hospitals and family health centers in North Texas. From education and health screenings to multi-organ transplants and advanced cancer treatment and care, it serves the community with some of the latest in preventive, diagnostic and treatment technology. Every program and treatment is part of their resolve to be an active and compassionate partner in the good health of the entire community. SOP 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 health care 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 SOP students.

Cook Children's Health Care System
Cook Children's Hospital is a private, not-for-profit institution. It is the only Fort Worth health care 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 SOP students.

LUBBOCK

Covenant Health System
Covenant Health System is the largest health care 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 Health care 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 110-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 devoted to mild, moderate and severe dementia. The remaining beds are devoted to medical care with 39-beds licensed at the skilled nursing facility level. The Garrison Center is also equipped with a therapy gym and office and classroom to accommodate student learners.

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 SOP offers the Doctor of Pharmacy (Pharm.D.) as its primary professional degree. The 4-year professional program requires at least two years of pre-professional studies that may be completed at any accredited college or university. A combined Pharm.D./MBA degree is also offered. Through the SOP's affiliation with the TTUHSC Graduate School of Biomedical Sciences, MS and Ph.D. degrees are also awarded.

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

Inside the Amarillo 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.

OUR HISTORY – OUR IMAGE

As as chronicle our own history and experiences with life in the SOP, 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 SOP sell a personal image.

ACADEMIC CALENDAR / EXECUTIVE SUMMARY

Please visit this link for the 2016-2017 SOP academic calendar:
http://www.ttuhsc.edu/sop/academicinfo/docs/2016-2017_Academic_Events_Calendar.pdf

PHARMACY LICENSURE

Graduates from the TTUHSC SOP 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 (512) 305-8000
333 Guadalupe
Tower 3, Suite 110
Austin, Texas 78701

TEXAS RESIDENCY

TTUHSC SOP 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.

TTUHSC STUDENT SERVICES

Contact the Office of Student Affairs in the SOP 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.

TTUHSC 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 TTUHSC to pay a Medical Services Fee per semester. With this fee, you can access health care 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.

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/studentservices.

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.

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.

Student Affairs in Amarillo (806) 414-9393
Students needing assistance with campus issues, application, academic issues and personal counseling should seek help here.

Student Affairs in the School of Pharmacy (806) 414-9393 Amarillo office

Extracurricular Events
Information about tickets to cultural events in the community is available through the Office of Student Services.

Recreation Center
Each campus has information regarding the facilities at each location.

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 SOP 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 SOP, Office of Student Affairs.

Amarillo TTUHSC Student Senate
The Office of Professional Affairs serves as sponsor and provider of staff support to SOP Senators to the Amarillo TTUHSC Student Senate, which was established to foster better relationships between the students in all three schools.

The following are contact numbers for additional offices with the SOP:

- **Amarillo**
  Dean's Office (806) 414-9300
  Department of Pharmacy Practice (806) 414-9310
  Department of Pharmaceutical Sciences (806) 414-9289
  Office of Technology (806) 414-9232
  Financial Administration (806) 414-9279
  Managed Health Care (806) 414-9344
- **Abilene**
  Regional Dean's Office (325) 696-0404
- **Lubbock**
  Regional Dean's Office (806) 743-4200 x235
- **Dallas/Ft. Worth**
  Regional Dean's Office (214) 654-9404
  Dallas VA (214) 358-9036

You are urged to contact the SOP, Office of Student Affairs at (806) 414-9393 with questions pertaining to any of these areas.

HEALTH SCIENCES CENTER STUDENT HEALTH SERVICES

General information about student health services on any SOP campus can be accessed through the SOP's office of Student Services on the Amarillo campus or through the TTUHSC-wide office of Student Services on the Lubbock campus. Campus specific information can also be accessed through Student Services or Regional Dean's office representatives at each of the four campus locations.

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.*

Student Health Services Dallas:
Southwestern Medical Center Student Health Services
Aston Building
8th Floor, Room 409
5303 Harry Hines Blvd.
Dallas TX 75390
214-645-8690
http://www.ttuhsc.edu/studentservices/documents/Southwestern_2011_for_catalog_and_web.pdf

Student Health Services Abilene:
http://www.ttuhsc.edu/studentservices/documents/DrJexpresscare.pdf

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
TTUHSC 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 SOP are based on academic achievement, leadership, extra-curricular activities and financial need. Scholarship recipients are selected by the SOP 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 20th. 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 May 15th.

For additional information, contact the Office of Student Affairs at: 806-414-9393 or linda.goldstein@ttuhsc.edu.

Scholarships awarded by TTUHSC SOP include:

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 Dr. Gerald Holman Memorial Gary C. Collins James A. "Buddy" Davidson Norman J. Dozier Memorial Eckerd Student Academic Recruitment Joshua Carnes Memorial Jean C. Stockton HEB Lonnie and Nancy Hollingsworth	Katelyn Jill Turner Memorial MedcoHealth Solutions Michael Patry Memorial Pharmacists Mutual Purdu Pharma Student Academic Recruitment Reinhaus Family Foundation Reverend Arthur Nelson, Sr. and Anne Nelson Memorial Roberta High Memorial TTUHSC School of Pharmacy Academic Excellence TTUHSC School of Pharmacy Alumni Pioneers TTUHSC School of Pharmacy Financial Need Sybil B. Harrington Foundation Tarrant County Pharmacy Association Tom Thumb/Randalls/Safeway United Supermarkets Walgreens WalMart Weinstein Family West Texas Pharmacy Association

Academic Year 2016-2017 Estimated Tuition

Tuition		
State Tuition	TX Resident	Non-TX Resident
39 credit hours @$150/credit hour (Texas Resident)	$5,850.00	
39 credit hours @$440/credit hour; (Non-Resident)		$17,160.00
Institutional Tuition		
39 credit hours @$199/credit hour	$7,761.00	
39 credit hours @$199/credit hour (Non Resident)		$7,761.00
Total Tuition	**$13,611.00**	**$24,921.00**
ESTIMATED FEES		
Malpractice Insurance (each fall semester/per year)	$17.00	$17.00
Medical Services Fee ($70.00/semester)	$140.00	$140.00
Screening and Immunization Fee ($50/per semester)	$100.00	$100.00
Student Services Fee ($11.00/cr hr, max $132	$264.00	$264.00
Course Fees	$600.00	$600.00
Drug Information Center (fall only)	$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 ($10.00/semester)	$20.00	$20.00
Outcomes Assessment Fee (spring only)	$175.00	$175.00
Orientation fee P1 fall only	$50.00	$50.00
Parking Fee	$76.50	$76.50
International Education fee 4.00 per semester	$8.00	$8.00
Clinical Simulation Center Fees for P1 Year	$500.00	$500.00
Total Fees for First Year	**$2,560.50**	**$2,560.50**
Total of Tuition, Fees & Expenses for First Year	**$16,171.50**	**$27,481.50**
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)	$2,000.00	$2,000.00
Estimated Total for Outside Expenses for First Year	**$2,545.00**	**$2,545.00**
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

International Student Fee ($50.00/per semester)	$100.00	$100.00
Graduation Fee	$45.00	$45.00
Clincial Simulation Center Fees for P2 year	$300.00	$300.00
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
Installment Option Fee ($25/per semester)	$50.00	$50.00

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
Anytime 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 TTUHSC SOP 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, academics 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

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 preferred 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 2015 minus 7 = Fall 2008 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 * ***

Legend

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

**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 SOP. 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 SOP. It is highly recommended that you take the September test when applying to TTUHSC SOP. 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 online application.
http://www.pearsonvue.com/pcat/

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 online, 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 the Pharmacy College Application Service (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 online and verify that your application is complete. We recommend you first review the online 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 for an interview those with the highest probability of being academically successful.

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:

1. Dress Professionally. When you look professional, you act it....but be sure your clothes are comfortable and you feel good about the way you look.

2. 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.

3. 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.
4. Look people in the eye.

5. 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.

6. 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!

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

The interview will start with a 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 who 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 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 interviewees and asked to group problem solve 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 about which 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 TTUHSC 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 as 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:

- 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).

- Is the applicant fluent in Spanish and English language skills?

- Has the applicant distinguished themselves in extracurricular activities directed to health care or community service?

- 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.

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 who 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. Within 48 hours of the time we have completed all reviews, typically in early May, we will post your status on the SOP Admissions web page and within 7-10 working days, we will 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 to whom we offer admission who select other schools that are closer to 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.

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 and applications. The following admission documents must be submitted to the SOP 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

6. 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

7. Completed and clear Criminal Background Screen

8. Immunizations and CPR Certification

The pharmacy experience essay and the reference letters are used to evaluate the overall qualifications of the candidate. The SOP application is an online document that can be found on our web site at http://www.ttuhsc.edu/sop/. Please go to our website for the online application, PCAT information, course matrix information and Important Dates information. The Early Decision deadline can be found in "Important Dates." Early Decision instructions are available in the PharmCAS application instructions.

Technical Standards Required for All TTUHSC Pharmacy Students
To complete the required SOP 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 website. Download the word document for Admission to TTUHSC SOP in addition to completing the online application for the SOP. 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 November 1. A foreign transcript course by course evaluation is required for any course being considered as a prerequisite.

The SOP 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 TTUHSC SOP. 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 SOP, 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 TTUHSC SOP. 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 Pharm.D.-MBA program at TTUHSC is the 31st program in the country and one of the only programs to award the MBA by the time of completion of the Pharm.D. degree. The HOM program at the College of Business is one of the few accredited programs for health organization management in the country.

The TTUHSC SOP will require completion of a Pharm.D.-MBA Application form by December 1 of each year. A Pharm.D./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 Pharm.D.-MBA program, the SOP program coordinator will counsel the student. The Rawls College of Business and the SOP may limit the number of pharmacy students that are allowed to enroll in the Pharm.D.-MBA program. Applicants for the Pharm.D.-MBA Dual Degree program MUST have a prior baccalaureate or higher degree to be admitted into the program. Additional information regarding requiremnts for enrollment, applications, fees and program information can be found in the TTUHSC SOP Pharm.D./MBA catalogue.

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, TTUHSC 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 SOP, 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 SOP. This link will provides a list of vaccinations required for all students enrolled in health care fields: http://www.ttuhsc.edu/studentHealth/immunizations.aspx

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 at this link that the student may use to list the dates of the various shots they have had: http://www.ttuhsc.edu/studenthealth/documents/Offical_Immunization_2009.pdf. 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 1st and 2nd doses one month apart, the 3rd 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 and Rubella).** Measles, Mumps and 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 and 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, which can be found at this link under Resources and Links: http://www.ttuhsc.edu/sop/academicinfo/.

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

- **CPR**--All new students must obtain an American Heart Association Basic Life Support for Health care Providers Certification. Only the American Heart Association CPR is accepted.

CONTINUING STUDENTS

All continuing students must remain current on their vaccinations throughout their pharmacy career. This link provides a list of vaccinations required for all students enrolled in health care fields: http://www.ttuhsc.edu/studentHealth/immunizations.aspx.

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 student's health records by the TTUHSC SOP, 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 SOP website. To view their personal records, students must have an eraider account.

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 they 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 them 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.

CPR
It is the responsibility of the student to maintain CPR certufication. 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 SOP). 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.

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 806-212-3500.

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 TTUHSC SOP 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 grade of incomplete. 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 TTUHSC 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 the SSI program is required to meet with a faculty member on the Student Success Initiative Committee. The student receives a Student Success Action Plan Form. 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.

Progression
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 SOP. 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 SOP 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 SOP and on academic probation. Third academic probation will result in disqualification from the SOP. 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.

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, 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 (i.e., 1st to 2nd or 2nd 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 TTUHSC SOP Honor Council is to serve as student and faculty representatives who foster and uphold the SOP 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 SOP as well as report back to their classes.
http://www.ttuhsc.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:
http://www.ttuhsc.edu/sop/current/students/PolicyonCampusAssignment.pdf

Withdrawal Policy (from courses)
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.

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.

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.

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.

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.

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

- the student has passed 50% or more of the major assessments in that course,
- the student has earned a final grade of 66-69% in the course and
- 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. Students 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 Institutional Student Handbook*, which can be found at the TTUHSC 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 TTUHSC SOP.

Computer Literacy
Pharmacy is an information intensive profession and its practice relies heavily on tools such as the computer. Listed below are the minimal computing skills required while in the SOP:

- 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 to 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.

Curricular 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.

Your progress in developing mastery will be assessed annually 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. The SOP uses the Pharmacy Curriculum Outcomes Assessment (PCOA), developed and delivered by the National Association of Boards of Pharmacy, as their primary assessment tool. The PCOA assesses an individual student's overall performance in several key curricular areas based on how far along they are in our curriculum. It also provides the SOP with data on how our students are performing compared to other schools in the nation. 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 Pharm.D. 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. This High Risk Drug Knowledge Assessment (HRDKA) will be administered each year, typically early in the Spring semester. 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 may be borne by the student.

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

Medications included in the HRDKA are derived from the top 200 prescribed out-patient medications and those commonly used in Health Systems. A list of those medications being evaluated will be made available to the candidates each year prior to the HRDKA date.

TTUHSC "Tech's Top 10" Terminal Objectives

TO1 Design, implement, evaluate, monitor, adjust and document pharmacotherapeutic plans
TO2 Prospectively review orders and records to evaluate a drug regimen
TO3 Prepare, dispense and administer safe and rational medication regimens
TO4 Evaluate pharmacy business models and pharmacy services
TO5 Evaluate population based data
TO6 Devise and implement strategies to improve population based outcomes
TO7 Retrieve, analyze and interpret lay and scientific literature
TO8 Communicate and collaborate with patients, caregivers and other stakeholders
TO9 Demonstrate professional, legal and ethical attitudes and behaviors
TO10 Demonstrate the skills needed for continuous professional development

These 10 Program outcomes are linked to 57 Ability Statements that are cross linked to the 2014 Center for the Advancement of Pharmacy Education (CAPE) Outcomes. The following link provides access to the Terminal Outcomes and their associated Ability Statements:
http://www.ttuhsc.edu/sop/academicinfo/docs/Terminal_Outcomes_and_Ability_Statements.pdf

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 TTUHSC campuses at Amarillo, Abilene, Dallas and 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 community practice, six weeks hospital / health system practice and two electives of six weeks duration each, depending on the student's practice interests. The fourth year may be based at any of the TTUHSC campuses at Amarillo, Dallas, Abilene and Lubbock. Relocation travel and living expenses are the student's responsibility.

2016-2017 CURRICULUM PLANNER*

P1 Fall Semester

Credit Hours	Course Name and Number
1	PHAR 1102 Pharmacy Practice, Education and the Sciences
5	PHAR 1512 Biochemistry
4	PHAR 1415 Anatomy and Physiology I
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
18	

P1 Spring Semester

Credit Hours	Course Name and Number
3	PHAR 1316 Anatomy and Physiology II
5	PHAR 2515 Principles of Drug Action – Foundations of Medicinal Chemistry and Pharmacology
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
21	

P2 Fall Semester

Credit Hours	Course Name and Number
3	PHAR 2341 Basic Pharmacokinetics
4	PHAR 2451 Pharmacotherapy: Infectious Disorders
2	PHAR 2204 Pharmaceutical Care Laboratory
0	PHAR 2101 Introductory Professional Practical Experiences (Longitudinal Course – Enrollment in Spring only)
2	PHAR 2205 Pharmaceutical Care
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
21	

P2 Spring Semester

Credit Hours	Course Name and Number
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
21	

P3 Fall Semester

Credit Hours	Course Name and Number
4	PHAR 3462 Case Studies II
3	PHAR 3355 Pharmacotherapy: Gastrointestinal, Hepatic and Nutrition
4	PHAR 3461 Pharmacotherapy: Neurosensory and Psychiatry
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.

A total of 4 rotations are required, but rotations may be taken in the fall or spring semester; electives are taken when not enrolled in a clerkship rotation

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

P3 Spring Semester

Credit Hours	Course Name and Number
4	PHAR 4463 Case Studies III
2	PHAR 4264 Pharmacotherapy: Oncology
2	PHAR 4236 Institutional/Community Pharmacy Operations
2	PHAR 4267 Pharmacotherapy: Clinical Toxicology
1	PHAR 4165 Pharmacotherapy: Special Populations

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.

A total of 4 rotations are required, but rotations may be taken in the fall or spring semester; electives are taken when not enrolled in a clerkship rotation

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

Elective offerings for the 2016-2017 academic year:

PHAR 4206 Verterinary Pharmacy
PHAR 4213 Advanced Cardiology
PHAR 4214 Advanced Ambulatory Care
PHAR 4219 Advanced Healthcare Communications
PHAR 4220 Critical Care Therapeutics
PHAR 4211 Advanced Infectious Disease
PHAR 4207 Drugs of Abuse
PHAR 4216 Cultural Competency in Healthcare
PHAR 4202 Advanced Pediatrics
PHAR 4215 Advanced Geriatrics
PHAR 4218 Advanced Oncology

36 SCH for entire P3 year

P4 Fall Semester

Credit Hours	Course Name and Number
2	PHAR 4241 Grand Rounds (Fall)

P4 Spring Semester

Credit Hours	Course Name and Number
2	PHAR 4242 Grand Rounds (Spring)

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.

Credit Hours	Course Name and Number
6	PHAR 4675 Adult Medicine Clerkship
6	PHAR 4656 Adult Primary Care Clerkship
6	PHAR 4657 Pediatric Pharmacotherapy Clerkship
6	PHAR 4658 Geriatric Pharmacotherapy Clerkship
6	PHAR 4653 Advanced Rural Community Pharmacy Practice Clerkship
6	PHAR 4654 Advanced Hospital / Health System Practice 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.

52 semester hours for entire P4 year

Total hours required for graduation = 169 credit hours.*

*This curricular plan and associated SCH are for the Pharm.D. degree program. Additional courses/ SCH required for the combined Pharm.D./MBA program are maintained in a separate catalogue listing.

COURSE DESCRIPTIONS FOR THE DOCTOR OF PHARMACY PROGRAM

PHAR 1001 - ANNUAL ASSESSMENT (0:0:0)
The school continually assesses student progression toward degree attainment and provides evaluation of quality of our curriculum. This 4-year, longitudinal process is designed to assess student knowledge, skills and behaviors necessary for successful performance of the School's 10 terminal outcomes. The process consists of course-embedded assessments and other standardized testing. The school uses the Pharmacy Curriculum Outcomes Assessment (PCOA), developed by the National Association of Boards of Pharmacy, as its primary standardized assessment tool. The PCOA assesses an individual student's knowledge in four primary areas: 1) basic biomedical sciences, 2) pharmaceutical sciences, 3) Social, behavioral and administrative pharmacy sciences and 4) clinical sciences.
Levels: Pharmacy-Doctoral

FIRST YEAR COURSES

PHAR 1102 - PHARMACY PRACTICE, EDUCATION AND THE SCIENCES (1:16:0, F)
Informally referred to as "Base camp." This 1-week course introduces first year students to the program at the start of the Fall semester. The 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. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 1101 - INTRODUCTION TO PHARMACY PRACTICE I (1:0:1.25, F)
This introductory clerkship involves 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 and ethical practices of pharmacists. Discussions, observation and patient care experiences longitudinally throughout both Fall and Spring semesters in the first professional year. Credit will be awarded in the SPRING semester. Requirements: Texas State Board of Pharmacy Intern-Trainee Licensure. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 1512 – BIOCHEMISTRY (5:5:0, F)
Chemical and molecular aspects of biological processes, including the chemistry of biomolecules, enzymology, bioenergy, biochemical control mechanisms and molecular biology. Discussion of metabolic diseases and fundamentals of human nutrition. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 1415 - ANATOMY AND PHYSIOLOGY I (4:3:2 F, IVC)
The integration of general systematic human anatomy structure and organ system functions and mechanisms. Laboratory abilities in the identification of the structure and organ systems of the human body using either cadaver prosecutions and/or visual instructional strategies designed to link visualization of knowledge of human system structure and function. Pedagogy/Contact Time: Three lectures/week and 16 laboratory sessions. 16 week course. Syllabus available.
COREQ: Must be taken with PHAR 1512
Levels: Pharmacy-Doctoral

PHAR 1320 – IMMUNOLOGY (3:3:0 F, IVC)
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. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 1171 - EARLY EXPERIENCES IN DRUG INFORMATION (1:1:2 F)
Using a weekly pre-lab/lab format, this course is an introduction to basic drug information skills, providing practical experience in retrieving medical literature (with emphasis on secondary literature sources) and providing responses to drug information inquiries. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 1131 - CLINICAL IMMUNIZATION & ADMINISTRATION (1:1:2 F)
Using a weekly pre-lab/lab format, this course teaches fundamentals of epidemiology, pathophysiology and prevention of vaccine preventable diseases. The student will develop knowledge and skills to administer vaccines, provide informed consent and maintain appropriate immunization record management. **Requires CPR certification** and students must qualify for intern licensure at end of first year to begin performing/documenting supervised vaccines toward State Board CE requirements. 16 week course. Syllabus Available
Levels: Pharmacy-Doctoral

PHAR 1321 - DRUG DELIVERY SYSTEMS I (3:3:0 F, IVC)

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. 16 week course. Syllabus available.
PREREQ: PHAR 1102
Levels: Pharmacy-Doctoral

PHAR 1316 - ANATOMY AND PHYSIOLOGY II (3:3:0 F, IVC)
Continuation of PHAR 1415. The integration of general systematic human anatomy structure and organ system functions and mechanisms. 16 week course. Syllabus available.
PREREQ: PHAR 1415 and PHAR 1512
Levels: Pharmacy-Doctoral

PHAR 1221 - PRINCIPLES OF DISEASE (2:4:0 F, IVC)
Concepts and mechanisms of the basic processes underlying diseases in preparation for future pharmacotherapy training. Lectures will cover definitions of terminology, cells and tissues involved, morphological alterations, explanation of relevant biochemical pathways and disease pathogenesis and clinical presentation. 8 week course. Syllabus available.
PREREQ: PHAR 1512 COREQ: Must be taken with PHAR 1316
Levels: Pharmacy-Doctoral

PHAR 2515 - PRINCIPLES OF DRUG ACTION-FOUNDATIONS OF MEDICINAL CHEMISTRY AND PHARMACOLOGY (5:5:0 F, IVC)
Basic principles of pharmacology, toxicology and medicinal chemistry. This course is designed to facilitate understanding of fundamental concepts relating to drug action. 16 week course. Syllabus available.
PREREQ: PHAR 1512
Levels: Pharmacy-Doctoral

PHAR 2322 - DRUG DELIVERY SYSTEMS II LECTURE AND LAB (3:4:3 F, IVC)
Continuation of PHAR 1321. Lecture with prelab/laboratory each week. 8 week course. Syllabus available.
PREREQ: PHAR 1321
Levels: Pharmacy-Doctoral

PHAR 2223 - DRUG DELIVERY SYSTEMS III (2:4:0 F, IVC)
Continuation of PHAR 1321 and 2322. 8 week course. Syllabus Available.
PREREQ: PHAR 2322
Levels: Pharmacy-Doctoral

PHAR 1401 - NON-PRESCRIPTION MEDICINES - PHARMACOTHERAPY (4:4:0 F, IVC)
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 drug effectiveness, safety, drug interactions, adverse effects and legal/professional issues regarding the use of non-prescription drugs and herbal products. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3159 - PHARMACOTHERAPY IX – INTEGUMENTARY (1:2:0 F, IVC)
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. 8 week course. Syllabus available
Levels: Pharmacy-Doctoral

SECOND YEAR COURSES

Enrollment in second year courses requires completion of first year curriculum. 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.

PHAR 2101 - INTRODUCTION TO PHARMACY PRACTICE II (1:0:1.25 F)
Continuation of PHAR 1101. This introductory clerkship involves 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 and ethical practices of pharmacists. Discussion, observation, service learning, group presentations and patient care experiences longitudinally throughout both Fall and Spring semesters in the second professional year. Credit will be awarded in the SPRING semester. Syllabus available
Levels: Pharmacy-Doctoral

PHAR 2341 - BASIC PHARMACOKINETICS (3:3:0 F, IVC)
Introduces the basic principles of pharmacokinetics, including compartmental and physiological analysis of the time courses of drug absorption, distribution and elimination, with emphasis on the pharmacokinetic-based design of dosage regimen principles. 16 week course. Syllabus available.
PREREQ: PHAR 2515
Levels: Pharmacy-Doctoral

PHAR 1241 - CLINICAL RESEARCH AND DRUG LITERATURE EVALUATION (2:4:0 F, IVC)
The fundamentals of experimental design, implementation and data analysis pertinent to pharmaceutical clinical investigations. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 2205 - PHARMACEUTICAL CARE (2:4:0 F, IVC)
Emphasis on interpretation and application of clinical laboratory medicine and clinical diagnostic medicine, introduction to medical documentation, integration of skills and knowledge for obtaining patient specific information, identifying and assessing medication-related problems and developing pharmaceutical care plans. 8 week course. Syllabus available.
PREREQ: PHAR 1401 COREQ: Must be taken with PHAR 2204
Levels: Pharmacy-Doctoral

PHAR 2204 - PHARMACEUTICAL CARE LABORATORY (2:1:3 F)
Laboratory exercises in interviewing and counseling, prospective drug reviews, prescription dispensing and physical assessment. 16 week course. Syllabus available.
COREQ: Must be taken with PHAR 2205
Levels: Pharmacy-Doctoral

PHAR 1231 - PHARMACUETICAL CARE SYSTEMS (2:4:0 F, IVC)
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 and organization and economics of health care. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 2451 - INFECTIOUS DISEASES – PHARMACOTHERAPY (4:4:0 F, IVC)
Pathophysiology, microbiology and clinical presentation of infectious diseases; medicinal chemistry, pharmacology and toxicology of anti-infective agents; prevention and therapeutic management of patients with common infections. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 2153 - PHARMACOTHERAPY III - BLOOD AND RETICULOENDOTHELIAL (1:2:0 F, IVC)
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; and therapeutic management of patients. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3256 - PHARMACOTHERAPY VI – RESPIRATORY (2:4:0 F, IVC)
Pathophysiology and clinical presentation of common diseases of the respiratory system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat respiratory diseases; and therapeutic management of patients. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3257 - PHARMACOTHERAPY VII – ENDOCRINE (2:4:0 F, IVC)
Pathophysiology and clinical presentation of common diseases of the endocrine system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat endocrine diseases; and therapeutic management of patients. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4161 - PHARMACOTHERAPY X - BONE AND JOINT (1:2:0 F, IVC)
Pathophysiology and clinical presentation of common diseases of the musculoskeletal system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat musculoskeletal diseases; and therapeutic management of patients. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 2104 – PARENTERALS (1:1:2 F)
Using a weekly lecture/laboratory format, this course 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 student being proficient in compounding of sterile products. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3240 - PATIENT ASSESSMENT (2:1:3 F)
Basic physical assessment is designed to provide the student essential foundation of knowledge about assessing the patient at any given period of time along the health care continuum. This course includes exercises in physical assessment skills using a body system approach, patient interviewing, pharmaceutical care planning and documentation and setting therapeutic and monitoring goals in order to provide the student with a template on how to practice pharmacy with a patient-centered approach. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3361 - CASE STUDIES I (3:3:0 F)
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. 16 week course. Syllabus available.
PREREQ: PHAR 2341 and PHAR 2205
Levels: Pharmacy-Doctoral

PHAR 2352 - PHARMACOTHERAPY II – CARDIOVASCULAR (2:3:0 F, IVC)
Pathophysiology and clinical presentation of common diseases of the cardiovascular system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat cardiovascular diseases; and therapeutic management of patients. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3254 - PHARMACOTHERAPY IV – RENAL (2:4:0 F, IVC)
Pathophysiology and clinical presentation of common diseases of the renal system; chemistry, pharmacology and toxicology of common therapeutic agents used to treat renal diseases; and therapeutic management of patients. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3158 - PHARMACOTHERAPY VIII – REPRODUCTIVE (1:2:0 F, IVC)
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; and therapeutic management of patients. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3101 - THERAPEUTIC DOSING – PHARMACOTHERAPY (1:2:0 F, IVC)
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. 8 week course. Syllabus available.
PREREQ: PHAR 2341
Levels: Pharmacy-Doctoral

PHAR 4166 - PHARMACOTHERAPY XVI – PHARMACOGENETICS (1:2:0 F, IVC)
Identifying the role of genetics in patient response to therapeutic agents and possible means to improve the efficacy and safety of pharmacotherapy. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 2231 - PRACTICE MANAGEMENT – LAW (2:4:0 F, IVC)
The study of federal and Texas statutes and rules, which regulate the practice of pharmacy and drug distribution. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4233 - PRACTICE MANAGEMENT - FINANCIAL MANAGEMENT (2:4:0 F, IVC)
Financial management concepts for pharmacy practice in all environments. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3233 - LEADERSHIP AND ETHICS IN MANAGEMENT (2:4:0 F, IVC)
Leadership and ethical priniciples as applied to management in all pharmacy environments. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

THIRD YEAR COURSES

Enrollment in third year courses requires completion of second year curriculum. 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.

PHAR 3462 - CASE STUDIES II (4:4:0 F)
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. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3355 - GASTROINTESTINAL, HEPATIC AND NUTRITION – PHARMACOTHERAPY (3:3:0 F, IVC)
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. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 3461 - NEUROSENSORY AND PSYCHIATRY – PHARMACOTHERAPY (4:4:0 F, IVC)
Pathophysiology and clinical presentation of common diseases are discussed; 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. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4463 - CASE STUDIES III (4:4:0 F)
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. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4165 - PHARMACOTHERAPY XV - SPECIAL POPULATIONS (1:2:0 F, IVC)
Unique therapeutic problems and clinical management of pregnant, nursing, pediatric and geriatric patients. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4264 - PHARMACOTHERAPY XIV – ONCOLOGY (2:4:0 F, IVC)
Pathophysiology, clinical presentation and therapeutic management of common cancers; and chemistry, pharmacology and toxicology of therapeutic agents used to treat these disorders. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4267 - PHARMACOTHERAPY XVII - CLINICAL TOXICOLOGY (2:4:0 F, IVC)
Toxicology and clinical treatment of overdoses of common therapeutic agents. 8 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4236 - PRACTICE MANAGEMENT – INSTITUTIONAL/COMMUNITY PHARMACY OPERATIONS (2:0:1 F, IVC)
Management and operational aspects of community and institutional pharmacy practices. 16 week course. Syllabus available.
PREREQ: PHAR 2231 and PHAR 4233.
Levels: Pharmacy-Doctoral

PHAR 4270 - COMMUNITY PHARMACY PRACTICE CLERKSHIP (2:0:16 F)
As a P3 IPPE clerkship, this course exposes the learner to pharmaceutical care in various community pharmacies. Four hours, four mornings each week for 6 weeks. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4274 - INSTITUTIONAL PHARMACY PRACTICE CLERKSHIP (2:0:16 F)
As a P3 IPPE clerkship, this course exposes the learner to practical experiences in unit dose drug distribution systems and preparation of sterile products. Four hours, four mornings each week for 6 weeks. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4275 - AMBULATORY CLINICAL SKILLS CLERKSHIP (2:0:16 F)
On this P3 IPPE clerkship, students will use their content knowledge and communication abilites obtained in the classroom and laboratory to learn and or improve their basic clinical skills provided in the outpatient health care setting. This 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 disease states in the ambulatory care setting to improve the student's necessary abilities to provide direct patient pharmaceutical care and disease management. Four hours, four mornings each week for 6 weeks. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4276 - INPATIENT CLINICAL SKILLS CLERKSHIP (2:0:16 F)
As a P3 IPPE clerkship, this course exposes the learner to pharmaceutical care in the inpatient setting, including development of basic clinical skills in the care of inpatients. Rotations may be completed in any inpatient care environment. Four hours, four mornings each week for 6 weeks. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4202 - ADVANCED PEDIATRICS (2:5.3:0 F, IVC)
ELECTIVE COURSE. Through a series of lectures, discussions and a project, students become familiar with the pathophysiology, clinical presentation, epidemiology and therapeutic management of common and select pediatric disease states. The student will also develop and improve upon skills such as self-directed learning, clinical and interpersonal skills and professional values and behaviors. 6 week course. Syllabus available.
PREREQ: PHAR 4165
Levels: Pharmacy-Doctoral

PHAR 4206 - VETERINARIAN PHARMACY (2:5.3:0 F, IVC)
ELECTIVE COURSE. 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. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4207 – DRUGS OF ABUSE (2:5.3:0 F, IVC)
ELECTIVE COURSE. Detailed study of the pharmacodynamic and societal aspects of drugs of abuse and the pharmacist's professional role in drugs of abuse education and counseling. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4211 - ADVANCED INFECTIOUS DISEASES (2:5.3:0 F, IVC)
ELECTIVE COURSE. 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 antiobiotic therapy to provide students with a broader knowledge of infectious diseases in pharmacotherapy. 6 week course. Syllabus available.
PREREQ: PHAR 2451
Levels: Pharmacy-Doctoral

PHAR 4213 - CURRENT TOPICS IN PHARMACY PRACTICE: ADVANCED CARDIOLOGY (2:5.3:0 F, IVC)
ELECTIVE COURSE. 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. 6 week course. Syllabus available.
PREREQ: PHAR 2352
Levels: Pharmacy-Doctoral

PHAR 4214 - SPECIAL TOPICS IN ADVANCED PATIENT MANAGEMENT IN AMBULATORY CARE (2:5.3:0 F, IVC)
ELECTIVE COURSE. 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. 6 week course. Syllabus available.
PREREQS: PHAR 2352 and PHAR 3257
Levels: Pharmacy-Doctoral

PHAR 4215 - ADVANCED GERIATRICS ELECTIVE (2:5.3:0 F, IVC)
ELECTIVE COURSE. 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. 6 week course. Syllabus available.
PREREQ: PHAR 4165
Levels: Pharmacy-Doctoral

PHAR 4216 - CULTURAL COMPETENCY IN HEALTHCARE (2:5.3:0 F, IVC)
ELECTIVE COURSE. Many states are mandating that health care providers be trained in and implement, "cultural/diversity" awareness into their practices. This elective will be a journey for those enrolled to increase awareness and understanding of the unique cultural needs to enable them to provide optimal care for their patients. The course will not have traditional examination assessments, rather assessments will focus on cultural experience activities, which will increase the students' awareness of the flaws in many of our traditional communications and assumptions when caring for patients. The goal of this course is to enhance student awareness of differing beliefs and practices which influence everything from patient assessment to patient acceptance of and adherence to, their medical care plan. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4218 – ADVANCED ONCOLOGY (2:5.3:0 F, IVC)
ELECTIVE COURSE. This course will build on the foundations of knowledge in cancer physiology and pharmacotherapy to support the in-class discussions and understanding of cutting-edge and literature-based perspectives in medical oncology. This course will focus on major challenges in cancer therapy (drug resistance, host toxicity, cancer metastasis) and new anti-cancer drug discovery and development. 6 week course. Syllabus available.
PREREQ: PHAR 4264

Levels: Pharmacy-Doctoral
PHAR 4219 - ADVANCED PATIENT COMMUNICATIONS (2:5.3:0 F, IVC)
ELECTIVE COURSE. Advanced Patient Communications is a non-traditional, skills-based course with an emphasis on developing excellence in communication skills through the processes of "see one-do one" in the areas of patient counseling, patient interviewing and patient education. The course will provide an additional focus on communication during challenging patient encounters and environments. The course is limited to 30 participants. A brief outline of key topics includes: patient counseling/patient interviewing, patient education, reflective responses, improving listening skills under ideal and less than ideal patient care environments, recognizing barriers to effective patient communication, establishing the pharmacist and patient relationship and non-prescription medication consults. The instructional methods and assessments include classes that will begin with a short lecture and a faculty demonstration of the lecture topic. Student graded activities include a journal article presentation, evaluation of the student's CV and a simulated residency interview. No other traditional pen and paper assessments. Students who elect this course will develop communication skills needed to build an effective relationship with the patient insuring appropriate medication use and improved

patient outcomes. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4220 – CRITICAL CARE THERAPEUTICS (2:5.3:0 F, IVC)
ELECTIVE COURSE. The Critical Care Therapeutics elective course is designed to expose students to the pathophysiology and clinical presentation of common diseases, pharmacotherapy and decision making process for the treatment of patients who are critically ill. This 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 in the the respective P2 and P3 pharmacotherapy course. A focus of the content will pertain to the acute care assessment and management of core critical care related topics allowing the students to apply knowledge in therapeutic management strategies, national clinical guidelies and clinical trial data to make clinical decisions in both simple and complex patients. 6 week course. Syllabus available.
PREREQ: PHAR 3355 and PHAR 3461
Levels: Pharmacy-Doctoral

PHAR 4226 - SPECIAL TOPICS (2:0:16 F)
ELECTIVE COURSE. Advanced studies in administrative, behavioral, clinical, or pharmaceutical sciences. May be taken for a total of 4 credit hours. Must take two courses. 6 week course.
Levels: Pharmacy-Doctoral

PHAR 4227 - SPECIAL PROJECTS (2:0:16 F)
ELECTIVE COURSE. Independent research for advanced students in administrative, behavioral, clinical, or pharmaceutical sciences. 6 week course.
Levels: Pharmacy-Doctoral

PHAR 4201 - SPECIAL PROJECTS II (2:0:16 F)
ELECTIVE COURSE. Second semester of independent research for advanced students in administrative, behavioral, clinical, or pharmaceutical sciences. 6 week course.
Levels: Pharmacy-Doctoral

FOURTH YEAR COURSES

Enrollment in fourth year courses requires completion of third year curriculum. P-4 rotations may not be taken until all previous P-1 through P-3 course work is satisfactorily completed and the student has successfully passed the High Risk Drug Knowledge Assessment (HRDKA) exam.

PHAR 4241 - GRAND ROUNDS (FALL) (2:2:0 F)
As pharmacists, TTUHSC SOP graduates will be called upon to present continuing education programs to health care professionals. The objective of the Grand Rounds course is to ensure that the TTUHSC 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. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4242 - GRAND ROUNDS (SPRING) (2:2:0 F)
As pharmacists, TTUHSC SOP graduates will be called upon to present continuing education programs to health care professionals. The objective of the Grand Rounds course is to ensure that the

TTUHSC 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. 16 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4675 - ADULT MEDICINE CLERKSHIP (6:0:40 F)
REQUIRED P4 APPE. The Adult Medicine Clerkship is an advanced pharmacy practice experience that is required of all P4 students. This clerkship 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 following the 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). 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4656 - AMBULATORY CARE CLERKSHIP (6:0:40 F)
REQUIRED P4 APPE. The Advanced Ambulatory Care Clerkship is designed to expose students to advanced topics within the ambulatory care practice setting. This clerkship 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 clerkship will focus on the assessment and outpatient management of core ambulatory care topics including (but not necessarily limited to) diabetes, hypertension, hyperlipidemia, anticoagulation, heart failure and asthma/COPD. Students will review therapeutic management strategies, national clinical guidelines and clinical trial data to make clinical decisions in both simple and complex patients. Members of the teaching team are experienced clinicians actively practicing in the area of ambulatory care with personal experience running outpatient clinical pharmacist services including medication therapy management. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4657 - PEDIATRIC PHARMACOTHERAPY CLERKSHIP (6:0:40 F)
REQUIRED P4 APPE. Pharmaceutical care experiences with ambulatory and inpatient pediatric patients. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4658 - GERIATRIC PHARMACOTHERAPY CLERKSHIP (6:0:40 F)
REQUIRED P4 APPE. Pharmaceutical care experiences with ambulatory and inpatient geriatric patients. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4653 - RURAL COMMUNITY (6:0:40 F)
REQUIRED P4 APPE. An advanced Rural Community Pharmacy Practice Clerkship providing pharmaceutical care experiences with ambulatory and/or institutionalized patients in a rural community. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4654 - ADVANCED HOSPITAL/HEALTH SYSTEM ROTATION (6:0:40 F)
REQUIRED P4 APPE. Pharmaceutical care experiences with institutionalized patients. 6 week course. Syllabus available
Levels: Pharmacy-Doctoral

PHAR 4665 - CONSULTING PHARMACY CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Student directed activities with special patient populatiuons. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4666 - PEDIATRIC INTENSIVE CARE CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. 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). 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4668 - PEDIATRIC CAMP AND AMBULATORY CARE CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability 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. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4667 - DISEASE STATE/FORMULARY MANAGEMENT CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability Course will incorporate policy development, formulary management and disease state management utilizing TDCJ health care facilities. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4692 - PSYCHIATRY CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with patients having psychiatric diseases. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4669 - GEROPSYCHIATRY CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability A formative clerkship to develop the clinical skills related to geriatric patients with psychiatric disorders. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4699 - SPECIAL TOPICS (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Student directed activities with special patient populations. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4670 - SPECIAL TOPICS CLERKSHIP II (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability Advanced pharmaceutical care experiences with pediatric patients. 6 week course. Syllabus available.

Levels: Pharmacy-Doctoral

PHAR 4671 - RESEARCH CLERKSHIP I (6:0:40 F)

ELECTIVE P4 APPE - offered based upon preceptor availability Research experience in pharmaceutical sciences, social and administrative sciences, or pharmacy practice. 6 week course. Syllabus available.

Levels: Pharmacy-Doctoral

PHAR 4672 - RESEARCH CLERKSHIP II (6:0:40 F)

ELECTIVE P4 APPE - offered based upon preceptor availability. Research experience in pharmaceutical sciences, social and administrative sciences, or pharmacy practice. 6 week course. Syllabus available.

PREREQ: PHAR 4671

Levels: Pharmacy-Doctoral

PHAR 4271 - INTERMEDIATE COMMUNITY PHARMACY CLERKSHIP (6:0:40 F)

ELECTIVE P4 APPE - offered based upon preceptor availability**.** 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. 6 week course. Syllabus available.

Levels: Pharmacy-Doctoral

PHAR 4673 - ADVANCED COMMUNITY PHARMACY CLERKSHIP (6:0:40 F)

ELECTIVE P4 APPE - offered based upon preceptor availability. Advanced pharmaceutical care experiences with community pharmacy patients. 6 week course. Syllabus available.

Levels: Pharmacy-Doctoral

PHAR 4674 - ADVANCED HOSPITAL PHARMACY CLERKSHIP (6:0:40 F)

ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with institutionalized patients. 6 week course. Syllabus available.

Levels: Pharmacy-Doctoral

PHAR 4679 - PAIN MANAGEMENT CLERKSHIP (6:0:40 F)

ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with an ambulatory patient population in need of chronic pain management. 6 week course. Syllabus available.

Levels: Pharmacy-Doctoral

PHAR 4680 - PALLIATIVE CARE CLERKSHIP (6:0:40 F)

ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with palliative patients. 6 week course. Syllabus available.

Levels: Pharmacy-Doctoral

PHAR 4681 - RURAL PHARMACY PRACTICE CLERKSHIP (6:0:40 F)

ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with ambulatory and/or institutionalized patients in a rural community. 6 week course. Syllabus available.

Levels: Pharmacy-Doctoral

PHAR 4682 - AMBULATORY CARE CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with ambulatory patients. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4683 - CARDIOLOGY CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with patients with cardiovascular diseases. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4684 - ADVANCED DRUG INFORMATION CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences in a drug information service. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4685 - PULMONARY CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with patients having respiratory diseases. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4686 - HOME CARE CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with home care patients. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4688 - INFECTIOUS DISEASES CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with patients having infectious diseases. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4689 - NUTRITIONAL CARE CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with nutritional care patients. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4690 - ONCOLOGY CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with patients having oncological diseases. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4691 - PHARMACOKINETICS CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences in pharmacokinetic dosing program. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4693 - SURGERY CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with surgical patients. 6 week course. Syllabus available.

Levels: Pharmacy-Doctoral

PHAR 4694 - NEONATOLOGY CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with neonates. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4695 - CRITICAL CARE CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with critically ill adult patients in the intensive care unit. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4696 - NUCLEAR PHARMACY CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Practical experiences in the preparation of radiopharmaceutical products and their use in medical practice. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4697 - POISON CENTER CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Pharmaceutical care experiences with patients or caregivers in the poison control center. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

PHAR 4698 - ADMINISTRATIVE PHARMACY PRACTICE CLERKSHIP (6:0:40 F)
ELECTIVE P4 APPE - offered based upon preceptor availability. Practical experiences in financial, operations, personnel and marketing management of a pharmacy practice environment. 6 week course. Syllabus available.
Levels: Pharmacy-Doctoral

FACULTY

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