

# University of North Texas System College of Pharmacy Course Syllabus

## PHAR 7312 – Section 001

### Special Topics Course – Advanced Compounding; Human and Veterinary Opportunities

Semester: Spring 2020

Department: Pharmacotherapy

#### Course Description:

This course is a 3 credit hour one semester course that will cover advanced compounding of human and veterinary preparations. The course structure will include distance learning activities and product preparation. New compounding techniques along with product preparation, packaging, dispensing, drug monograph, and patient counseling will be included throughout the course. This course will use a mixture of distance learning modules, lab time, discussion threads, assignments, and a planned field trip.

Credits: 3 credit hours.

Prerequisite: Successful completion of PY1 school year.

#### Course Goals:

The goal of the course is to introduce students to various types of compounded prescriptions that are in the marketplace and explore opportunities to provide specialty compounds to human and veterinary patients. Students will learn different compounding techniques, formulations, uses, and prepare them in the lab. Students will participate in product preparation, packaging, dispensing, developing a drug monograph, and patient counseling.

The goal of PHAR 7312 is to contribute to preparing you to achieve professional competencies and outcomes expected for a pharmacist as outlined by the Accreditation Council for Pharmacy Education (ACPE) and Center for the Advancement of Pharmacy Education (CAPE) 2013 Educational Outcomes. Described below are some examples where your command of the subject material of this course will contribute to preparing you to achieve these competencies in the three general areas as defined by ACPE.

#### **Domain #1: Foundational Knowledge**

**1.1. Learner (Learner)** – Develop, integrate, and apply knowledge from the foundational sciences (i.e., pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient-centered care.

1.1.1. Develop and demonstrate depth and breadth of knowledge in pharmaceutical, social/behavioral/administrative and clinical outcomes.

1.1.3. Integrate knowledge from foundational sciences to explain how specific drugs or drug classes work and evaluate their potential value in individual and populations.

1.1.4. Apply knowledge in foundational sciences to solve therapeutic problems and advance patient-centered care.

#### **Domain #2: Essentials for Practice and Care**

**2.1. Patient-centered care (Caregiver)** – Provide patient-centered care as the medication expert (collects, and interprets evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).

2.1.2. Interpret evidence and patient data.

2.1.4. Formulate evidence-based care plans, assessments, and recommendations.

**2.3. Health and wellness (Promoter)** – Design prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness.

2.3.2. Provide prevention, intervention, and educational strategies for individuals and communities to improve health and wellness.

### **Domain #3: Approach to Practice and Care**

**3.1. Problem Solving (Problem Solver)** – Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.

3.1.1. Identify and define the primary problem.

3.1.2. Define goals and alternative goals.

**3.3. Patient Advocacy (Advocate)** – Assure that patients’ best interests are represented.

3.3.1. Empower patients to take responsibility for, and control of, their health.

3.3.3. Ensure patients obtain the resources and care required in an efficient and cost-effective manner (e.g., triage to social and/or other healthcare services).

### **Domain #4: Personal and Professional Development**

**4.1. Self-awareness (Self-aware)** – Examine and reflect on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth.

4.1.1. Use metacognition to regulate one’s own thinking and learning.

4.1.2. Maintain motivation, attention, and interest (e.g., habits of mind) during learning and work-related activities.

4.1.4. Approach tasks with a desire to learn.

4.1.5. Demonstrate persistence and flexibility in all situations; engaging in help seeking behavior when appropriate.

4.1.9. Display positive self-esteem and confidence when working with others.

**4.4. Professionalism (Professional)** – Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society.

4.4.1. Demonstrate altruism, integrity, trustworthiness, flexibility, and respect in all interactions.

4.4.2. Display preparation, initiative, and accountability consistent with a commitment to excellence.

4.4.3. Deliver patient-centered care in a manner that is legal, ethical, and compassionate.

4.4.4. Recognize that one’s profession is constantly evaluated by others.

### **Course Learning Outcomes**

1. Distinguish various drug classes used in compounding formulations
2. Evaluate patients and opportunities for which compounds could be a suitable option
3. Examine prescription practices utilized in the zoo environment
4. Formulate creative ways to deliver medicine to patients
5. Consider legal and regulatory aspects of compounding including insurance billing
6. Recognize the clinical presentation of a patient who might require hormone replacement therapy
7. Utilize references that will be useful when considering the veterinary patient
8. Compose and calculate formulations
9. Construct drug monographs
10. Educate patients or pet owners on how to properly use the compounded medication, and provide education about side effects, precautions, administration, and storage.
11. Summarize patient monitoring of symptoms, improvement, helpful lifestyle changes, and follow up with physician
12. Recognize properties and uses of APIs and inactive ingredients used in compounding prescriptions.
13. Compound quality products.
14. Establish beyond use date for compounds based on stability data and regulatory guidelines.

### **Course Format and Policies:**

The course is a one semester 3 credit hour course that will meet for 2 hour lab sessions and include weekly distance learning modules, quizzes, and a discussion thread. Class sessions will have a variety of formats that will vary with the subject material and individual instructor. However, in all cases, the role of the class session instructor is not to serve as the primary source of information but as a facilitator of your understanding of the text material.

**Section 1 lab sessions will be held in the RES 102 Skills Lab on Mondays and select Fridays.**

The primary learning resource for this course is the following textbook:

- Plumb's Veterinary Drug Handbook, Eighth Edition 2015 Donald C. Plumb, PharmD, Wiley-Blackwell
  - **Available during lab sessions. Excellent reference for veterinary values and monographs.**
- The Art, Science, and Technology of Pharmaceutical Compounding, 4th Edition – Available as an e-book from APhA Pharmacy Library through UNTHSC Library (<http://www.pharmacylibrary.com.proxy.hsc.unt.edu/>) – **Required – Previously required for basic compounding course.**
- Ansel HC. Pharmaceutical Calculations. 15<sup>th</sup> Ed., Wolters Kluwer, 2013  
**Required – Previously required for basic compounding course.**

Classroom active learning activities will include, but are not limited to:

- Lectures
- Distance Learning Modules
- Quizzes
- Discussion Thread on Canvas, 5 students per group.
- Lab Assignments – approximately 3 products per each lab session
- Product preparation
- Drug Monographs
- Other projects

Lab attendance is expected. *The College cannot take outside employment or activities into account when scheduling classes, laboratories, small group activities, examinations, reviews, individual course functions, or special projects.*

### **Assessments:**

**Exams:** During the semester, there will be two examinations of 100 points each.

**Quizzes or Assignments:** Activities related to the distance learning portion of the course will be accessed through Canvas.

Quiz makeup: for a person with an excused absence, quizzes are not made up, but the missed quiz does not count against the student. The total number of points for the course will be reduced for that student by the number of points on the quiz.

Quiz makeup: for a person with an unexcused absence, a zero is entered for the quiz grade. The total number of points for the course will NOT be reduced.

The course will be graded as follows:

Module Quizzes	12 X 10 points each	120 points
Discussion Thread	12 X 10 points each	120 points
Product Preparation and Lab Activity, 10 points each:	25X10	250 points
Mid-term Exam over Human Compounding,		100 points
Final Exam over Veterinary Compounding,		<u>60 points</u>
<b>Total Available Points:</b>		<b>650 points</b>

Final letter grades are computed to the nearest 0.1 point.

A grade of 89.4 will be rounded to 89; a grade of 89.5 will be rounded to 90.

Letter grades will be awarded on the following scale: A, 90% and above; B, 80 to 89%; C, 70 to 79%; F, below 70%.

**Course Faculty:**

Name	Office	Phone	E-mail
Jennifer Fix, PharmD	RES435C	817-735-0639	Jennifer.Fix@unthsc.edu
Theresa Day, CPhT, RPhT, PRS	RES110	817-735-0175	Theresa.Day@unthsc.edu
Guest Lecturer			

Course Roadmap for **Section .001**

**Spring 2020 Mondays 8-10am and select Fridays 1-3pm**

WK	Date Day	Session	Topic 10 points Each completed preparation.		Chapter Modules – Canvas Quiz <b>Due on Thursdays</b> 10 points each	Discussion Thread <b>Due on Sundays</b> 10 points each	Recorded Lecture Available
1	Jan 6	<b>1</b>	<b>Lab 1</b> Safety Garb Safety Signature  Aloe Vera Lip Balm Capsule QA	10 10	Due on Thursday 1/09  Intro Lab Safety Chapter 9 Flavors, Sweeteners, And Color.	Due on Sunday 1/12  TSBP Rules	No
2	Jan 13	<b>2</b>	<b>Lab 2</b> PEG Troches Estrogen Stock Cream	10 10	Due on Thursday 1/16  Chapter 14 Lozenges and	Due on Sunday 1/19  USP 795	No

					Troches		
3	MLK Holiday		No Lab		Due on Thursday 1/23  Chapter 21 Ointments, Creams, And Pastes	Due on Sunday 1/26  USP 800  USP 795/800 Article	
4	Jan 27	3	<b>Lab 3</b> Tri-Est in Topi-Click LCD in Petrolatum LCD in Aquaphor Capsules	10 10 10 10	Due on Thursday 1/30  Chapter 12 Capsules	Due on Sunday 2/02  PLO and Progesterone Article	No
5	Feb 7 Friday	4	<b>Lab 4 – Friday</b>  Flip of Lab 3				No
6	Feb 10	5	<b>Lab 5</b> Tamiflu Suspension Erythromycin Healing Ointment	10 10	Due on Thursday 2/13  Chapter 22 Gels	Due on Sunday 2/16  Male Hormone Consultation Packet  Menopause Guidelines	No

7	Feb 17		No Lab		Due on Thursday 2/20	Due on Sunday 2/23	No
					Chapter 18 Suspensions	Website Search And Product Ideas	
8	Feb 24	<b>6</b>	<b>Lab 6</b>		Due on Thursday 2/27	Due on Sunday 3/01	No
			Ketorprofen in Topi-Pump Tablet Triturates	10	Chapters 6 & 8 Stability and QA	PCAB Accreditation Review	
			Review of Bases	10			
				10			
	Feb 28 Friday	<b>7</b>	<b>Lab 7 – Friday</b>		Due on Thursday 3/05	Due on Sunday 3/08	No
			<b>Guest Speaker Compounder</b>		Topic TBA	Topic TBA	
			Nasal Spray	10			
			Miracle Mouthwash	10			
			Gelatin Troches	10			
9	Mar 6	<b>8</b>	<b>Lab 8 EXAM</b>				
10	Mar 9 - 13		No Class: Spring Break				

11	Mar 16		No Lab				
12	Mar 23		No Lab		Due on Thursday 3/26 Chapter 26 Veterinary	Due on Sunday 3/29 Introduce your pet	
13	Mar 30	9	<b>Lab 9</b> <b>Guest Speaker</b> <b>Dr. Louisa</b>  Doggie Treats Methimazole PLO Ear Gel	10 10	Due on Thursday 4/02  Animal Disease States Ingredients to avoid Veterinary SIG	Due on Sunday 4/05  Zoo Animals	No
	Apr 3 Friday	10	<b>Lab 10 – Friday</b> <b>Possible Guest Speaker</b> <b>Dr. Misty Jordan</b>  Flea Bite Gel KBr Solution Metronidazole Benzoate Suspension	10 10 10			
14	Apr 10 Friday	11	<b>Lab 11</b> <b>Guest Speaker</b> <b>Dr. E. Daniels</b>  Tablets into Suspension –Oil Tablets in Suspension - Water	10 10	Due on Thursday 4/09  Equine Case Study	Due on Sunday 4/12  Literature Search	No

15	April 13	12	<b>Lab 12</b> KBr Capsules Oral Paste	10 10	Due on Thursday 4/16  Articles on Cats and Dogs	Due on Sunday 4/19  Product Review Course Evaluation Pros and Cons and how to improve the course.	No
16	April 20	13	<b>Lab 13</b> Final Exam				No
17	April 28 Tuesday	14	<b>Lab 14</b> Fort Worth Zoo Field Trip (Time TBD)				No



## **Student Responsibilities:**

### **Academic Integrity/Honor Code**

Enrollment is considered implicit acceptance of the rules, regulations, and guidelines governing student behavior at UNT Health Science Center. It is the responsibility of the student to be familiar with all policies governing academic conduct which can be found in the UNTHSC Student Catalog, Student Policy Handbook and the Student Code of Conduct and Discipline which are located on the UNTHSC Internet at <http://www.hsc.unt.edu/Sites/DivisionofStudentAffairs/>

### **Academic Assistance**

Students may schedule one-on-one academic assistance with faculty through in-person appointments, telephone calls or e-mail communication. Academic assistance is also available through the UNTHSC Center for Academic Performance (CAP).

<http://www.hsc.unt.edu/CAP>

### **Attendance and Drop Procedure**

Course instructors and the School's administration expect students to attend class. It is the responsibility of the student to consult with the instructor *prior* to an absence, if possible. Withdrawal from a course is a formal procedure that must be initiated by the student. Students who stop attending class and do not withdraw will receive a failing grade. Students should consult with the instructors prior to withdrawing. In some cases a perceived problem may be resolved, allowing the student to continue in the course. It is the student's responsibility to be familiar with the policies and procedures as stated in the Student Handbook and the UNTHSC Catalog located on the UNTHSC Internet at <http://www.hsc.unt.edu/departments/studentaffairs/>.

### **Americans with Disabilities Act**

The University of North Texas Health Science Center does not discriminate on the basis of an individual's disability and complies with Section 504 and Public Law 101-336 (American with Disabilities Act) in its admissions, accessibility, treatment and employment of individuals in its programs and activities. UNTHSC provides academic adjustments and auxiliary aids to individuals with disabilities, as defined under the law, who are otherwise qualified to meet the institution's academic and employment requirements. For assistance contact the Assistant Director, Disability Accommodations within the Center for Academic Performance at the Health Science Center. Reference Policy 7.105 Americans with Disabilities Act Protocol in the Student Policies.

### **Course and Instructor Evaluation**

It is a requirement of all students that they are responsible for evaluating each of their courses and instructors as defined in UNTHSC Policy 7.120 Student Evaluation of Courses and Instruction. Please adhere to all guidelines established in the policy.

### **Course Assessment**

In some instances, courses will have a course assessment that will provide immediate feedback to the course director regarding progress of the course identifying potential problems and determining if student learning objectives are being achieved. (Provide all pertinent information regarding the specifics of the groups in the syllabus as defined in UNTHSC Policy 7.120 Student Evaluation of Courses and Instruction.)

### **Syllabus Revision**

The syllabus is a guide for this class but is subject to change. Students will be informed of any change content or exam/assignment dates.

### Turnitin and the Family Education Rights and Privacy Act (FERPA) – If applicable

NOTE: UNTHSC has contracted with Turnitin.com for plagiarism detection services. Use of Turnitin.com is entirely in the discretion of the instructor, but use of such a service requires that you provide notice (via syllabus) to your students that you are using such services. In addition, instructors who use the Turnitin should be sure to remove student identifiable information from the work before sending to Turnitin or receive written permission from the student. There are two methods for using Turnitin for written assignments. Please refer to the wording guidelines and consent form located on the Faculty Affairs website at <http://www.hsc.unt.edu/Sites/OfficeofFacultyAffairs/index.cfm?pageName=Turnitin>.

### Zero Tolerance for Sexual Violence and Harassment

All students should be able to study in an atmosphere free of harassment, sexual violence and gender discrimination. Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources on the UNT Health Science Center's website: [http://web.unthsc.edu/info/200304/student\\_affairs/355/title\\_ix\\_reporting](http://web.unthsc.edu/info/200304/student_affairs/355/title_ix_reporting)