PHAR 7192: Non-Sterile Compounding

Spring Semester 2024

Course Description
Introduction to the science and practice of non-sterile pharmaceutical compounding.

Additional Course Description
This practical laboratory course offers an insight into the interrelationships between the physical and chemical aspects of compounding. Students will develop compounding skills that are used for the most common types of non-sterile preparations, employing standards of good compounding practices.

Course Credit
1 credit hour

Pre-Requisites
PHAR 7201: Pharmaceutical Calculations

Co-Requisites
Completion or current enrollment in PHAR 7402 (Pharmaceutics)

Class Meeting Days, Time & Location (Two components)

- All students in PHAR 7192 will meet every Friday from 8 am to 9 am in rooms 236 for recitation.
- Please see below the schedule for lab (This practical compounding part will take place in room 211 from 9 am to 12 pm on Friday).

Course Coordinator
Farah Deba, Ph.D.
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Office hours: T & W 9:00 am – 10:00 am or by appointment
Preferred method of contact: Email

Fisch College of Pharmacy (FCOP) and UT Tyler Policies
This is part 1 of the syllabus. Part 2 contains UT Tyler and the FCOP course policies and procedures. These are available as a PDF at https://www.uttyler.edu/pharmacy/academic-affairs/ . For experiential courses (i.e., IPPE and/or APPE), the Experiential Manual contains additional policies and instructions that supplement the Syllabus Part 1 and 2. Please note, the experiential manual may contain policies with different deadlines and/or instructions. The manual should be followed in these cases.

Required Materials
1. The Art, Science, and Technology of Pharmaceutical Compounding. 5th ed. Loyd V. Allen. (20.9916). e-ISBN: 1-58212-263-6. American Pharmacists Association. (Electronic copies are available through the Robert R. Muntz Library)

2. Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems. 9th ed. Allen LV, Popovich NG, Ansel HC, et.al. Lippincott Williams & Wilkins. (20.9910) ISBN: 978-0-78-177934-0. (Reserved copies are available at the Robert R. Muntz Library)

3. Other required materials will be posted on the classes' Canvas site. The site address is uttyler.edu/canvas.

Recommended Materials

1. Pharmaceutical Calculations, 15th ed. Howard C. Ansel. 20.9917. ISBN: 978-1-4963-0071-3. Walters Kluwer. (Electronic copies are available through the Robert R. Muntz Library)

Course Format

The course may include, but are not limited to, the following activities:

1. Recitation (Pre-lab and review of calculations)
2. Extemporaneous compounding of pharmaceutical preparations.

Course Learning Outcomes (CLOs)

CLOs	Related PLO(s)	Assessment Methods	Grading Method	JCPP Skill(s) Assessed	ACPE Std. 11 & 12
1. Demonstrate skills in extemporaneous compounding of selected liquid, semisolid, and solid pharmaceutical preparations.	1	1, 2	RUB	NA	NA
2. Demonstrate skills in solving numerical problems related to nonsterile compounding	1	2	ES, Paper-based	NA	NA

Course Assessment Methods

	Assessment Method	Description
1	Each product compounded by the students will be evaluated.	Rubric (RUB) – presented below
2	Multiple Choice or Multiple Selection or fill in the blank Question(s), paper-based calculations.	Standard MCQ, Select All that apply questions, and fill in the blank question(s) in ExamSoft (ES), paper-based exam.

Grading Policy & Grade Calculation

Recitation (50% of the grade)	
Quiz	10%
Midterm	15%
Final (Cumulative)	25%
Lab work **	50%

Students must pass recitation and lab work separately, i.e. the student must receive a score of 70% or higher in the recitation and a 70% or higher in the lab to pass this course. If a student receives less than 70% in either the recitation or the lab, they will receive a D or F in the course. For example, if a student receives 80% in laboratory and 64% in recitation, they will receive a final grade of F. If the student receives 80% in the laboratory and 66% in the recitation, the student will receive a final grade of D.

**Each product compounded by the students will be graded based on the accuracy of calculations, methods, product's quality, printed/written label, and cleanliness of the workstation as:

Each completed prescription is worth 100 points:

- Calculations: 40 points (No partial credit)
- Methods: 15 points
- Product quality/elegance: 15 points
- Label: 30 points

A	90 - 100 %
B	80 - 89.999̄ %
C	70 - 79.999̄ %
D	65.0 - 69.999̄ %
F	< 65.0 %

Listed below are errors and their point values (Students may lose a maximum of 100 points in a lab)

ERROR	**POINTS LOST**
Dispensing functions	
❖ Wrong patient, drug, or directions	100
❖ Lack of "pharmaceutical elegance (e.g., wrinkled label)	15

- ❖ Improperly compounded prescription 15
- ❖ Failure to detect an error on the written prescription 15
- ❖ Harmful drug interaction, if any (check patient profiles) 15

Dosage form Preparation

- ❖ Please check the "Grading Sheet" in each preparation 15

Labeling

Missing or incorrect label information:

- ❖ Name, address, and phone number of the pharmacy 15
- ❖ Prescription number if applicable 15
- ❖ Date prepared (lab date) 15
- ❖ Beyond Use Date (BUD) 15
- ❖ Patient's name, and/or species if applicable 15
- ❖ Prescriber's name 15
- ❖ Directions to the patient, and cautionary statements 15
- ❖ Initials of the pharmacist filling the prescription 15
- ❖ Number of refill(s) 15
- ❖ Name of the preparation and strength 15
- ❖ Quantity dispensed of the product 15
- ❖ Transfer statement if a Schedule II, III, or IV drug 15
- ❖ All state labeling requirements 15

GMP Practice and Documentation

Points will be deducted for the following:

- ❖ Missing initials 15
- ❖ Failure to follow GMP practice 15

Counseling (if needed)

- ❖ Failure to counsel (if needed) 15
- ❖ Misinformation 15
- ❖ General lack of knowledge 15
- ❖ Inability to answer patient's questions 15
- ❖ Failure to provide obvious warnings 15
- ❖ Failure to instruct on proper use 15

Laboratory conduct

- ❖ Unprofessional attitude/conduct 100
- ❖ Leaving own workstation dirty 30
- ❖ Disposing of insoluble materials in the sink 30
- ❖ Failure to complete the work by 12 pm 30
- ❖ Leaving common work areas (e.g., sink) dirty 15 (every student in that section will lose points.)

PHAR 7192: Non-Sterile Compounding Schedule Spring 2024						
Week	**Date**	**Day (Mondays = Recitations)**	**Topic**	**Instructor**	**CLO**	**WSOP Category**
1	01/19	F (Room, 236) 8 am to 9 am	-Introduction, policy & procedure -Recitation	Dr. Deba	1	S20.99
	01/19	F (9 am – 12 pm)	-Simple Syrup, NF -Oral Suspension			
2	01/26	F (Room, 236) 8 am to 9 am	Recitation	Dr. Deba	1	S20.99
	01/26	F (9 am – 12 pm)	-Benzyl Peroxide Ointment			
3	02/02	F (Room, 236) 8 am to 9 am	-Recitation **QUIZ 1**	Dr. Deba	1	S20.99
	02/02	F (9 am – 12 pm)	Review Quiz 1			
4	02/09	F (Room, 236) 8 am to 9 am	-Recitation	Dr. Deba	1	S20.99
	02/09	F (9 am – 12 pm)	- Cold Cream			
5	02/16	F (Room, 236) 8 am to 9 am	-Recitation			
	02/16	F (9 am – 12 pm)	- Camphor-Menthol Lip Balms	Dr. Deba	1	S20.99
6	02/23	F (Room, 236) 8 am to 9 am	Recitation	Dr. Deba	1	S20.99
	02/23	F (9 am – 12 pm)	- Promethazine Topical Gel			
7	03/01	F (Room, 236) 8 am to 9 am	- Midterm	Dr. Deba	1	S20.99
	03/01	F (9 am – 12 pm)	Review			
8	03/08	F (Room, 236) 8 am to 9 am	-Recitation	Dr. Deba	1	S20.99
	03/08	F (9 am – 12 pm)	- Sorbitol Base Lollipop			
9	03/15		**Spring Break**			
10	03/22	F (Room, 236) 8 am to 9 am	-Recitation	Dr. Deba	1	S20.99

	03/22	F (9 am – 12 pm)	- Acetaminophen Suppository	Dr. Deba	1	S20.99
11	03/29	F (Room, 236) 8 am to 9 am	-Recitation	Dr. Deba	1	S20.99
	03/29	F (9 am – 12 pm)	- Acetaminophen Capsules			
12	04/05	F (Room, 236) 8 am to 9 am	-Recitation **QUIZ 2**	Dr. Deba	1	S20.99
	04/05	F 9 am – 12 pm)	Review Quiz 2			
13	04/12	F (Room, 236) 8 am to 9 am	-Recitation	Dr. Deba	1	S20.99
	04/12	F (9 am – 12 pm)	- Hair Moisturizer for Horses and Other Animals. - Gelatin base Animal Chewable treat			
14	04/19	F (Room, 236) 8 am to 9 am	-Recitation	Dr. Deba	1	S20.99
	04/19	F (9 am – 12 pm)	- Boric Acid-Sodium Borate Buffer			
15	04/22	M (Room, 236) 8 am to 9:50 am	Final Exam (Comprehensive)	Dr. Deba	1	S20.99

Please note that dates, topics, and assignments are subject to change. In the event of a change, you will be given ample notification of the change.