

**PHARM 156 Course Outline as of Fall 2019****CATALOG INFORMATION**

Dept and Nbr: PHARM 156 Title: DISPENSING &amp; COMPOUNDING

Full Title: Dispensing and Compounding

Last Reviewed: 12/10/2018

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.50	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	2.50	Lab Scheduled	2.00	8	Lab Scheduled	35.00
		Contact DHR	0		Contact DHR	0
		Contact Total	4.00		Contact Total	70.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 140.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

General preparation of topical, transdermal, rectal, ophthalmic, nasal, oral and otic pharmaceutical dosage forms. Practical experience in the manipulative and record keeping functions associated with the compounding and dispensing of prescriptions. Study of dosage forms, advantages and disadvantages, uses, storage and packing of pharmaceutical products.

**Prerequisites/Corequisites:**

Course Completion of PHT 150 ( or PHARM 150)

**Recommended Preparation:****Limits on Enrollment:****Schedule of Classes Information:**

Description: General preparation of topical, transdermal, rectal, ophthalmic, nasal, oral and otic pharmaceutical dosage forms. Practical experience in the manipulative and record keeping functions associated with the compounding and dispensing of prescriptions. Study of dosage forms, advantages and disadvantages, uses, storage and packing of pharmaceutical products. (Grade Only)

Prerequisites/Corequisites: Course Completion of PHT 150 ( or PHARM 150)

Recommended:

Limits on Enrollment:

Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	<b>Effective:</b>	<b>Inactive:</b>
<b>CSU GE:</b>	<b>Transfer Area</b>	<b>Effective:</b>	<b>Inactive:</b>
<b>IGETC:</b>	<b>Transfer Area</b>	<b>Effective:</b>	<b>Inactive:</b>
<b>CSU Transfer:</b>		<b>Effective:</b>	<b>Inactive:</b>
<b>UC Transfer:</b>		<b>Effective:</b>	<b>Inactive:</b>

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Student Learning Outcomes:**

At the conclusion of this course, the student should be able to:

1. Define topical, transdermal, rectal, ophthalmic, nasal, oral and otic dosage forms.
2. Identify the various devices used in pharmaceutical measuring, weighing and compounding devices.
3. List commonly prescribed drugs by generic name, trade names, common therapeutic use and usual dose.

### **Objectives:**

At the conclusion of this course, the student should be able to:

1. Accurately use the metric, apothecary, avoirdupois and household systems to count and measure.
2. Compare and contrast the advantages and disadvantages of various topical, transdermal, rectal, ophthalmic, nasal, oral and otic dosage forms.
3. Recognize specific uses for various topical, transdermal, rectal, ophthalmic, nasal, oral, and otic dosage forms.
4. Determine the different storage requirements and safety considerations of various classifications of pharmaceuticals.
5. Select proper containers for packaging of pharmaceutical preparations.
6. Describe and demonstrate proper compounding, labeling, and documentation for topical, transdermal, rectal, ophthalmic, nasal, oral, and otic dosage forms.

### **Topics and Scope:**

- I. Review of Common Pharmaceutical Measuring Systems and Equipment
- II. Topical Dosage Forms
  - A. Factors affecting absorption
  - B. Definitions, terminology and uses of

1. solutions
2. lotions
3. creams
4. ointments
5. pastes
6. liniments
7. tinctures
8. collodions
9. aerosols
10. inhalants
11. sprays
12. powders
13. transdermal drug delivery systems

### III. Rectal Dosage Forms

- A. Local vs. systemic use
- B. Ointments & Creams
- C. Lotions
- D. Suppositories

### IV. Ophthalmic Dosage Forms

- A. Sterile preparation
- B. Solutions
- C. Suspensions
- D. Semi-solids
- E. Storage

### V. Otic Dosage Forms

- A. Preparation
- B. Uses

### VI. Practical Dispensing

- A. Patient profile
- B. Product identification
- C. Label
- D. Auxiliary labels
- E. Packaging and containers

### VII. Storage Requirements and Safety Considerations

### VIII. Drug Classification

- A. Generic names
- B. Trade names
- C. Common therapeutic uses
- D. Usual doses

### Lab Exercises

- I. Demonstrate Use of Common Pharmaceutical Measuring Systems and Equipment
- II. Demonstration and Description of: Extemporaneous Compounding and Packaging of Solutions, Lotions, Creams, Ointments, Pastes and Powders, Drugs Administered by Suppository, As An Ointment, Instilled by Drops

### Assignment:

#### Lecture-Related Assignments:

1. Answer 4 - 5 critical thinking questions at the end of each chapter
2. Written patient projects (8)
3. Quizzes (4 - 6), midterm, and a final exam

4. Read relevant chapters on compounding before each lab (30 - 35 pages per week)

#### Lab-Related Assignments:

1. Watch online videos on compounding and packaging of pharmaceuticals (ungraded)
2. Lab Exercises:
  - A. Demonstrate use of common pharmaceutical measuring systems and equipment
  - B. Demonstrate and describe extemporaneous compounding and packaging of solutions, lotions, creams, ointments, pastes and powders, drugs administered by suppository, as an ointment, instilled by drops

#### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Critical thinking questions and written patient projects

Writing  
15 - 20%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None

Problem solving  
0 - 0%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Lab exercises

Skill Demonstrations  
30 - 35%

**Exams:** All forms of formal testing, other than skill performance exams.

Quizzes, midterm, and a final exam

Exams  
40 - 50%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation

Other Category  
5 - 10%

#### Representative Textbooks and Materials:

Davis's Drug Guide for Nurses. 16th ed. F.A. Davis Company. 2019

The Pharmacy Technician. 6th ed. Perspective Press. Morton Publishing. 2016

The Pharmacy Technician, Workbook & Certification Review. 6th ed. Perspective Press. Morton Publishing. 2016