

**PHARM 151 Course Outline as of Spring 2002****CATALOG INFORMATION**

Dept and Nbr: PHARM 151 Title: PHARM FUNDAMENTALS

Full Title: Pharmaceutical Fundamentals

Last Reviewed: 9/24/2018

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	17.5	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 157.50

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:**

An introduction to pharmacological principles as they are related to and support an understanding of rational drug usage. Course includes a discussion of the profound influence of drug laws, standards, and regulations in the state of California.

**Prerequisites/Corequisites:**

Course Completion or Current Enrollment in PHARM 150 OR Course Completion of HLC 299.39

**Recommended Preparation:**

Eligibility for ENGL 100 or ESL 100.

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

Description: Introduction to pharmacological principles relating to and supporting an understanding of rational drug use, including a discussion of the profound influence of drug laws, standards, and regulations within California. (Grade Only)

Prerequisites/Corequisites: Course Completion or Current Enrollment in PHARM 150 OR Course Completion of HLC 299.39

Recommended: Eligibility for ENGL 100 or ESL 100.

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:**

Certificate Applicable Course

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon successful completion of this course the student will be able to:

1. Differentiate among drugs that are natural products, semi-synthetic, or synthetic.
2. Pharmacologically classify a drug after having been presented with its generic name, brand (trade) name and chemical name.
3. Classify whether a drug is used as a preventative, curative, restorative, or disease process limiting agent.
4. Interpret the graphical presentation of the dose-response relationship, potency, and efficacy.
5. Explain the dynamics involved in the process of absorption, distribution, biotransformation, and elimination of drugs from the body.
6. Explain the term 'adverse effects'.
7. Give examples of various drug interactions, and effectively use a drug interactions chart.
8. Evaluate the potential for risk versus the benefit of a drug that is being used as a therapeutic agent.
9. Identify differences in physiological states that can affect drug response, including patient age, weight, disease states, and genetic factors.
10. Describe the five pregnancy risk categories.
11. Interpret current federal and state legislation and name the agencies regulating the practice of pharmacy.
12. Describe methods of record keeping, dispensing, and inventory of controlled substances.
13. Apply all schedules of controlled substances.
14. Explain methods of transferring controlled substances between

registrants.

15. Verify a DEA number.
16. Explain the roles of acute and non-acute care systems in delivering pharmaceutical care.
17. Define Investigational drugs and Orphan drugs and discuss laws pertaining to each.

## **Topics and Scope:**

### **I. What is a drug?**

- A. Definition
- B. Sources of drugs: natural, semi-synthetic, synthetic
- C. Nomenclature: brand name, generic name, chemical name, organic name, official name, synonyms, acronyms, and combination drugs
- D. Uses of drugs: therapeutic, palliative, diagnostic, prophylactic, replacement therapy, pre-surgery

### **II. Drug biotransformation**

- A. Absorption
- B. Availability and distribution
- C. Elimination
- D. Dose-response relation
- E. Potency and Efficacy

### **III. Drug description Terminology**

- A. Therapeutic effect
- B. Pregnancy risk category
- C. Indications and Contra-indications
- D. Adverse effects
- E. Hypersensitivity and Idiosyncrasies
- F. Dependence
- G. Dosage
- H. Administration
- I. Patient education
- J. Precautions
- K. Toxic effect
- L. Drug interactions and use of the drug interaction chart

### **IV. Assessment of therapeutic use versus risks in drug therapy**

### **V. Factors altering the usual effects of a drug**

- A. Weight, age, gender
- B. Normal physiologic state-diurnal rhythm
- C. Pathological state
- D. Genetics
- E. Allergy and environment
- F. Psychology-placebo effect

### **VI. Five Rights of Medication**

### **VII. Legislation regarding pharmacy practices**

- A. Federal laws and agencies
  1. Federal Food Drug and Cosmetic Act
  2. Controlled Substances Act
  3. Hazardous Substances Labeling Act
  4. Poison Prevention Packaging Act
  5. Drug Enforcement Agency

6. JCAHO
- B. State laws and regulations
  1. California Pharmacy Law with Regulations
  2. Uniform Controlled Substances Act
  3. Sherman Food Drug and Cosmetic Law
  4. California Hazardous Substances Act
  5. California State Board of Pharmacy
  6. Department of Consumer Affairs
- C. Controlled Substances
  1. Schedule I, II, III, IV, and V- general requirements and types of drugs.
  2. Filling Schedule II prescriptions
  3. Filling Schedule III, IV, and V prescriptions
  4. Methods of transfer of Schedule II drugs among registrants
  5. Execution of Form 222
  6. Transfer of Schedule III, IV, and V drugs among registrants
  7. DEA number and confirmation of authenticity using formula
  8. OTC drugs and Legend drugs including receiving, storage, inventory and sale
  9. The Orphan Drug Law
  10. Definition of illicit drugs

### Assignment:

1. Develop case studies.
2. Develop scenarios and analyze in class.
3. Answer designated questions at the end of each chapter.

### 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.

Written homework

Writing  
40 - 50%

**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.

None

Skill Demonstrations  
0 - 0%

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

Multiple choice	Exams 50 - 60%
<b>Other:</b> Includes any assessment tools that do not logically fit into the above categories.	
None	Other Category 0 - 0%

**Representative Textbooks and Materials:**  
California Pharmacists Association. Pharmacy Certified Technician (Training Manual, Calculations Workbook, and California Law Supplement), Lansing: Michigan Pharmacists Association, 1994.