PHARM 151 Course Outline as of Fall 2019

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	6	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 relate to and support an understanding of the rationale behind drug prescribing and usage impacted by the United States Pharmacopeia and federal and state regulations.

Prerequisites/Corequisites:
Course Completion or Current Enrollment in PHARM 150

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100

Limits on Enrollment:

Schedule of Classes Information:
Description: An introduction to pharmacological principles as they relate to and support an understanding of the rationale behind drug prescribing and usage impacted by the United States Pharmacopeia and federal and state regulations. (Grade Only)
Prerequisites/Corequisites: Course Completion or Current Enrollment in PHARM 150
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:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

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. Demonstrate knowledge of the pharmacologic drug classification after having been presented with the drug's generic name, brand (trade) name, chemical name, regularly prescribed dosages, and potential risks.
2. Interpret terms, definitions and language associated with current federal and state legislation and name the agencies regulating the practice of pharmacy.
3. Evaluate the potential for risk versus the benefit of a drug that is being used as a therapeutic agent and identify differences in physiological stats that can affect drug response, including patient age, weight, disease states and genetic factors.

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. Classify whether a drug is used as a preventative, curative, restorative or disease process limiting agent.
3. Interpret the graphical presentation of the dose-response relationship, potency and efficacy.
4. Explain the dynamics involved in the process of absorption, distribution, biotransformation and elimination of drugs from the body.
5. Explain the term "adverse effects."
6. Give examples of various drug interactions, and effectively use a drug interactions chart.
7. Describe the five pregnancy risk categories.
8. Describe methods of record keeping, dispensing and inventory of controlled substances.
9. Apply all schedules of controlled substances.
10. Explain methods of transferring controlled substances between registrants.
11. Verify a Drug Enforcement Agency (DEA) number.
12. Explain the roles of acute and non-acute care systems in delivering pharmaceutical care.

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. Toxicity
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 (DEA)
6. Joint Commission on the Accreditation of Healthcare Organizations
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. Over-the-Counter drugs and Legend drugs including receiving, storage, inventory and sale
9. The Orphan Drug Law
10. Definition of illicit drugs

Assignment:

1. Weekly reading assignments of 25-30 pages
2. Research and write up weekly case summaries (2 pages each) and role playing/communication activity in class
3. Conduct research on specific drugs each week as these topics are introduced to the class
4. Two-page fictitious drug paper and a presentation
5. Develop a direct-to-consumer advertisement and a direct-to-physician magazine advertisement for fictitious drug
6. Develop package insert for fictitious drug by applying information learned in class lecture and text about indications, usage, dosing, contraindications, adverse reactions and patient assessment
7. Review and answer designated questions at the end of each chapter
8. Two to fourteen quizzes, midterm and final exam

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.

Case summaries; two page paper; advertisement; package insert; chapter questions	Writing 30 - 35%

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.

Quizzes, midterm, final	Exams 50 - 60%

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

Presentation, role play participation of case studies	Other Category 5 - 15%

Representative Textbooks and Materials:
Pharmacy Practice for Technicians. 6th ed. Ballington, Don and Anderson, Robert. Paradigm Publishing. 2017