

OAKLAND UNIVERISTY
SCHOOL OF HEALTH SCIENCES

Instructor: Bonita J. Leavell, Ph.D.

DESCRIPTION:

Pharmacology is the study of all aspects of the properties and effects of drugs, including their sources and their preparation into medications. This course will explain the principles of drug therapy and the actions of the basic classes of drugs in a manner that will aid students in their understanding of the basic concepts of pharmacology and facilitate the transition of this information to clinical application.

OBJECTIVES FOR PHARMACOLOGY

Upon completion of this course, the student will be able to: Define commonly used terms related to pharmacology in rehabilitation including pharmacology, pharmacokinetics, pharmacodynamics, toxicology, pharmacotherapeutics, generic and brand or trade drugs.

1. Describe nomenclature commonly used in pharmacology and explain the process of development and approval of therapeutic agents in the United States.
2. Examine and use the current therapeutic decision making process in rehabilitation pharmacology.
3. Differentiate and detect adverse drug reaction, appraise pharmacovigilance, and compare the effects of disease on drug actions.
4. Construct models of biological variability, integrate drug dosage versus drug effect, formulate margins of safety in drug usage.

TEXTBOOKS:

Principles of Pharmacology, 3rd Edition

by Golan, Tashijan, Armstrong, Armstrong, Lippincott Publishers, 2016.

GRADING:

FOR HS 431

Exam 1: 20%
Exam 2: 25%
Exam 3: 25%
Exam 4: 30%

FOR HS 531

Exam 1: 20%
Exam 2: 25%
Exam 3: 25%
Exam 4: 20% Term Paper: 10%

Grading Scale

| Grading Scale | | | | | | | | | | | |
|----------------------|------|-----|----------|-----|-----|----------|-----|------|----------|------|-----|
| A | 100% | 4.0 | B | 89% | 3.5 | C | 79% | 2.9 | D | 69% | 1.9 |
| | 99% | 4.0 | | 88% | 3.5 | | 78% | 2.8 | | 68% | 1.8 |
| | 98% | 4.0 | | 87% | 3.4 | | 77% | 2.7 | | 67% | 1.7 |
| | 97% | 3.9 | | 86% | 3.4 | | 76% | 2.6 | | 66% | 1.6 |
| | 96% | 3.9 | | 85% | 3.3 | | 75% | *2.5 | | 65% | 1.5 |
| | 95% | 3.8 | | 84% | 3.3 | | 74% | 2.4 | | 64% | 1.4 |
| | 94% | 3.8 | | 83% | 3.2 | | 73% | 2.3 | | 63% | 1.3 |
| | 93% | 3.7 | | 82% | 3.2 | | 72% | 2.2 | | 62% | 1.2 |
| | 92% | 3.7 | | 81% | 3.1 | | 71% | 2.1 | | 61% | 1.1 |
| | 91% | 3.6 | | 80% | 3.0 | | 70% | 2.0 | | 60% | 1.0 |
| | 90% | 3.6 | | | | | | | | | |
| | | | | | | | | | F | ≤59% | 0.0 |

PARTICIPATION:

Regular class attendance and active participation in class discussions will be important. Exchange of ideas and relating them to professional experiences will be encouraged.

ADMINISTRATION and EXAM PROCEDURES:

You must completely fill-out your scantron on both sides, specifically your name. It is important that you know your G number, use a number two pencil, completely fill-in the circles, and make a selection for each question. If the scantron is not properly filled- out you will lose **two** points on that exam.

Class Session Thursday: 5:30 - 7:17 p.m.

IMPORTANT DATES:

January 15, 2018: Martin Luther King Jr. Holiday

January 17, 2018: Last day to add a class

February 7, 2018: Last day to officially withdrawal

February 17, 2018 recess begins 10:30 pm and ends **February 27, 2017** 7:30 am

March 14, 2018: Last day of official withdrawal

April 17, 2018: Winter classes end 10 pm

FACULTY OFFICE HOURS:

To be arranged
Phone: 313-729-4743

E-mail: leavell@oakland.edu
ab4799@gmail.com

| WINTER 2018 | CLASS SCHEDULE | CHAPTER |
|--------------------|--|----------------|
| 01/04/18 | I. Fundamental Principles of Pharmacology | |
| | A. Drug-Receptor Interactions | > 1 |
| | B. Pharmacodynamics | > 2 |
| | C. Pharmacokinetics | > 3 |
| | D. Drug Metabolism | > 4 |
| 01/25/18 | EXAM I (20%) | |
| 02/01/18 | II. Drugs in Health and Disease (1) | |
| | A. Drug Metabolism | > 5 |
| | B. Pharmacogenomics | > 6 |
| | C. Systemic Detection of Adverse Drug Effects | > 51 |
| | D. Clinical Drug Evaluation & Approval | > 50 |
| 02/15/18 | EXAM II (25%) | |
| 03/01/18 | III. Drugs in Health and Disease (2) | |
| | A. Principles of Cellularity Excitability | > 7 |
| | B. Principles of Nervous System Physiology | > 8 |
| | C. Cholinergic Pharmacology | > 9 |
| | D. Adrenergic Pharmacology | > 10 |
| | E. GABAergic and Glutaminergic Neurotransmission | > 12 |
| | F. Dopaminergic Neurotransmission | > 13 |
| 03/22/18 | EXAM III (25%) | |
| 03/29/18 | IV. Drugs in Health and Health (3) | |
| | A. Pharmacology of Analgesia | > 17 |
| | B. Pharmacology of Drugs of Abuse | > 18 |

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|--|------|
| C. Pharmacology of Serotonin | > 14 |
| D. Pharmacology of Volume Regulation | > 20 |
| E. Pharmacology of the Pancreas & Glucose Metabolism | > 30 |
| F. Principles of Immune System | > 41 |

04/19/18

FINAL EXAM: CUMULATIVE (30%)

7 – 10 pm