

KINE 359 – Medical Pharmacology (3 credits) Syllabus – Spring 2019

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Catalog description: This course will introduce students to the general principles of pharmacology and the common medications that they may encounter while working in a clinical setting. Emphasis will be on general classifications of drugs and their mechanisms of action as well as memorization of some of the most commonly prescribed medications.

Required textbook:

Acosta, W. R. (2013). *Pharmacology for health professionals*. Wolters Kluwer Health/Lippincott Williams & Wilkins. ISBN: 9781608315758

Course objectives - Upon successful completion of this course, the student will be able to:

1. Demonstrate an understanding of basic principles of pharmacology
2. Demonstrate an general understanding of drug development and administration
3. Recognize common drugs by both their generic and brand names
4. Describe the mechanism of action of lipid regulators
5. Describe the mechanism of action of common antidepressants drugs
6. Describe the mechanism of action of narcotic analgesics
7. Describe the mechanism of action of anti-hypertensive drugs including beta blockers, ACE inhibitors and anti-diuretics
8. Describe the mechanism of action of thyroid and anti-thyroid drugs
9. Describe the mechanism of action of common anti-diabetic drugs
10. Describe the mechanism of action of anti-coagulant and thrombolytic drugs
11. Describe the mechanism of action of anti-infective drugs including anti-bacterial and anti-viral drugs

Course Format: The course will consist primarily of lectures. Case studies will be used to help apply the knowledge from class using information from medical histories to understand the likely issues a patient is having based on their medications as well as considering what medications a patient may need.

Course Evaluation

The student's final grade will be determined as follows:

Exam #1	= 25%
Exam#2	= 25 %
Exam#3	= 25%
Final Exam	= 25%

Tentative Course Schedule/Topics

DAY	DATE	LECTURE	READING
Th	17-Jan	Introduction	Syllabus and Schedule
Tu	22-Jan	General Principles of Pharmacology	Unit 1 Section 1
	24-Jan	Drug Development	
Tu	29-Jan	Administration of Drugs	Unit 1 Section 2
Th	31-Feb	Overview of central nervous system disorders and depression	
Tu	5-Feb	Central Nervous System Stimulants	Unit 2 Section 2
Th	7-Feb	Cholinesterase Inhibitors	Unit 2 Section 6
Tu	12-Feb	Analgesics and Antagonists	Unit 2 Section 8
Th	14-Feb	Review	
Tu	19-Feb	EXAM 1	
Th	21-Feb	Overview of peripheral nervous system	
Tu	26-Feb	Adrenergic Drugs	Unit 3 Section 11/12
Th	28-Feb	Cholinergic Drugs	Unit 3 Section 13/14
Tu	5-Mar	SPRING BREAK	
Th	7-Mar	SPRING BREAK	
Tu	12-Mar	Overview of CVD, atherosclerosis and hypertension	
Th	14-Mar	Hypertension and Antihypertensive drugs	Unit 5 Section 21
Tu	19-Mar	ACE inhibitors and Anti-Diuretics	Unit 5 and 6 Section 21 and 26
Th	21-Mar	Anti-hyperlipidemic Drugs	Unit 5 Section 22
Tu	26-Mar	Anti-Coagulant and Thrombolytic Drugs	Unit 5 Section 23
Th	28-Mar	Review	
Tu	2-Apr	EXAM 2	
Th	4-Apr	Overview of metabolic diseases	
Tu	9-Apr	Anti-diabetic Drugs	Unit 8 Section 30
Th	11-Apr	Thyroid and Anti-thyroid Drugs	Unit 8 Section 32
Tu	16-Apr	Overview of infectious disease	
Th	18-Apr	Anti-bacterial Drugs	Unit 9 Section 35
Tu	23-Apr	Anti-viral, Anti-retroviral, and Anti-Fungal Drugs	Unit 9 Section 37
Th	25-Apr	Review	
	TBD	Final Exam	