

Principles of Pharmacology PHCL 7620 (6 credits)9:00-11:00 am, Mon-Wed-Fri
RC1-North Room P18-1304 (1st Floor)**Spring Semester 2008**Course Director: William Sather (x43130)
Administrative Assistant: Matt Berta (x43619)

Date	Title			Instructor
Week 1	January 23	Wed	Introduction (<i>Ch. 1</i>)	Sather
	January 25	Fri	Receptor theory revisited I (<i>Ch. 2</i>)	Zahniser
Week 2	January 28	Mon	Receptor theory revisited II (<i>problem set #1</i>)	Zahniser
	January 30	Wed	Structure and activity of drugs and their targets I (<i>problem set #2</i>)	Murphy
	February 1	Fri	Structure and activity of drugs and their targets II (<i>papers</i>)	Murphy
Week 3	February 4	Mon	Drug metabolism I: fundamentals (<i>problem set #3</i>) (<i>Ch. 4</i>)	Sorkin
	February 6	Wed	Drug metabolism II: biotransformations & chemistry	Sorkin
	February 8	Fri	Pharmacokinetics I (<i>problem set #4</i>) (<i>Ch. 3</i>)	Deitrich
Week 4	February 11	Mon	Pharmacokinetics II	Deitrich
	February 13	Wed	---	
	February 15	Fri	EXAM 1 (material through February 13)	
Week 5	February 18	Mon	—President's Day Holiday—	
	February 20	Wed	Neurons, neurotransmitters and excitability (<i>problem set #5</i>) (<i>Ch. 6,7</i>)	Sather
	February 22	Fri	Ion channels in pharmacology (<i>problem set #6</i>)	Sather
Week 6	February 25	Mon	Somatic and autonomic nervous system overview; neuromuscular junction (<i>Ch. 8</i>)	Zahniser
	February 27	Wed	Mechanism of local anesthetic action & ion channel structure-function (<i>paper</i>) (<i>Ch. 10</i>)	Sather
	February 29	Fri	Adrenergic and muscarinic cholinergic transmission & G protein-coupled receptor signaling I (<i>Ch. 8,9</i>)	Dell'Acqua
Week 7	March 3	Mon	Adrenergic and muscarinic cholinergic transmission & G protein-coupled receptor signaling II (<i>papers</i>)	Dell'Acqua
	March 5	Wed	G protein-coupled receptor trafficking: opioid receptors	Sorkin
	March 7	Fri	Molecular machinery of neurotransmitter release: synaptic vesicle filling, fusion and recycling	Sorkin
Week 8	March 10	Mon	Regulation of neurotransmitter action: transporter structure, mechanisms and regulation	Sorkin
	March 12	Wed	Fast excitatory transmission in the CNS, glutamate receptors & synaptic plasticity (<i>Ch. 11</i>)	Dell'Acqua
	March 14	Fri	Fast inhibitory transmission in the CNS, GABA, anxiolytics & sedatives (<i>Ch. 11</i>)	Tabakoff

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Week 9	March 17-21		—Spring Break—	
Week 10	March 24	Mon	Stress pathways in the CNS (<i>papers</i>) (Ch. 25,27)	Tabakoff
	March 26	Wed	Drugs of addiction I: EtOH (Ch. 17)	Tabakoff
	March 28	Fri	Drugs of addiction II: stimulants, opiates, hallucinogens, nicotine (Ch. 17)	Tabakoff
Week 11	March 31	Mon	Mock NIH Site Visit: preparation	
	April 2	Wed	Mock NIH Site Visit: grant review (<i>student presentations</i>)	Dell'Acqua
	April 4	Fri	---	
Week 12	April 7	Mon	EXAM 2 (material from February 20 - April 4)	
	April 9	Wed	Cardiac action potentials, ion channels & antiarrhythmic drug action (<i>problem set #7</i>) (Ch. 18)	Sather
Sather	April 11	Fri	Arrhythmias, ion channelopathies, and long QT syndrome (<i>papers</i>) (800 word <i>commentary</i> is due)	Sather
Week 13	April 14	Mon	Cardiac excitation-contraction coupling & cardiovascular system physiology (<i>problem set #8</i>)	Port
	April 16	Wed	Pharmacology of congestive heart failure & ischemic heart disease (Ch. 19,24)	Port
	April 18	Fri	Mouse models of cardiovascular disease (<i>papers</i>)	Port
Week 14	April 21	Mon	Pharmacogenomics, cardiovascular drug development & the FDA (Ch. 48-50,52)	Port
	April 23	Wed	Kidney function & diuretic drugs (Ch. 20)	Hoffman
	April 25	Fri	Vascular physiology & control of peripheral vascular resistance (Ch. 21)	Nemenoff
Week 15	April 28	Mon	Nitric oxide biology & endothelial function (Ch. 21)	Weiser
	April 30	Wed	Vasoactive eicosanoids (Ch. 22,40,41)	Murphy
	May 2	Fri	Pharmacological targets: anti-cancer drugs (Ch. 37-39)	Thorburn
Week 16	May 5	Mon	Identification of drug targets & rational drug design	Thorburn
	May 7	Wed	Pharmacological targets: antibiotics (Ch. 31-33)	Churchill
	May 9	Fri	Drug Company Debate (<i>student presentation</i>)	Churchill/Thorburn
Week 17	May 11	Mon	EXAM 4 (material from April 9 – May 9)	