

Subjects Covered by Unit

PHRM 836 Biochemistry for Pharmaceutical Sciences II Fall Semester 2016

<u>Subjects</u>	<u>Text Chapters</u>	<u>Hours</u>
Advanced Protein Structure-Function	9	2
Advanced enzyme catalysis, kinetics, inhibition, regulation, and applications	10	4
Cytochrome P450 and Nitric Oxidases	11	1
Exam I		1
Nucleic Acid Structure: Stability, pitch, deformation, supercoiling, topoisomerases, compaction, melting/annealing, helicases	2	2
Protein-DNA interactions: Transcription Regulatory Factors	8.8-8.9	1
Membrane transporters	12.6-12.11	1
Signal transduction	13	2
DNA replication: Initial melting, regulation, drugs, genes	4	1
Exam II		1
Transcription and post transcription: Initial melting and regulation by DNA binding proteins in eukaryotes, DNA structure, and novel mechanism; alternative splicing; RNA interference	5 and 8	2
Translation: Ribosome structure, function, and translation inhibitors Post-translation: Protein targeting, modification, and targeted degradation	6	0.5
Advanced biotechnology	7	1
Clinically relevant aspects of carbohydrate metabolism and bioenergetics	14,15,16	0.5
Advanced Lipid metabolism I: FA and TG absorption, distribution, and regulation of metabolisms and diseases	17	2
Advanced Lipid metabolism II: Cholesterol transport, metabolism, and excretion	18	1
Advanced Amino Acid metabolism: One carbon metabolism, relation to certain vitamin deficiencies, basic clinical elements (N balance, essential AAs, diseases, creatine and creatinine)	19.1 – 19.6	2
Heme metabolism and iron	19.7 – 19.8 and 26.10	1
Nucleotide metabolism	20	1
Metabolic Interrelationships and hormonal regulation; macro-nutrition; obesity and diabetes	21 and 27	2
Exam 3 (during final exam week)		1