



Biochemistry Summer Undergraduate Course

BIOC 400S, Summer 2015

Course Basics

Lectures will be held from 9:00 am to 11:00 am according to the **SCHEDULE ON THE NEXT PAGE**,
Classroom: Center City Campus, New College Building, Room 10301

Required Textbook: **Lehninger Principles of Biochemistry, Sixth Edition**

For access to free online resources for Lehninger Principles of Biochemistry, Sixth Edition:

http://bcs.whfreeman.com/lehninger6e/#t_824263

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Week	Date	Topic	Lecturer	Reading Assignment
1	MO June 15	A Biochemist's View of Cell Structure; Thermodynamics; Water Structure and Buffers	Jameson	Chapter 1 Chapter 2
	TU June 16	Amino Acids and Protein Primary Structure	Davis	Chapter 3 (3.1/2/3, 3.4:p96-97, p104-108)
	WE June 17	Protein Three-Dimensional Structure, Globular Proteins	Jameson	Chapter 4/5
	TH June 18	Enzyme Catalysis	Jorns	Chapter 6 (6.1/2)
	FR June 19	Enzyme Kinetics and Regulation	Jorns	Chapter 6 (6.3/4/5)
2	MO June 22	Carbohydrates	Loll	Chapter 7
	TU June 23	DNA and RNA Structure, The Flow of Genetic Information	Clifford	Chapter 8
	WE June 24	Lipid Structures and Membranes	White	Chapter 10
	TH June 25	Channels, Pumps, and Signal Transduction	White	Chapter 11/12
	FR June 26	Macromolecules: Review	Jameson/ Jorns/White	
3	MO June 29	EXAM 1		
	TU June 30	Exam 1 review (9:00-9:30 by Dr. Jameson)	Jameson	
		Introduction to Metabolism/Glycolytic Pathway and Its Regulation (9:30-11:00)	Jameson	Chapter 13 Chapter 14 (14.1/2/3)
	WE Jul 1	Gluconeogenesis and the Pentose Phosphate Pathway	Loll	Chapter 14 (14.4/5)
	TH Jul 2	Glycogen Metabolism and Its Regulation	Loll	Chapter 15
	FR Jul 3	HOLIDAY NO CLASS		
4	MO Jul 6	Pyruvate Dehydrogenase Complex/Citric Acid Cycle	Cocklin	Chapter 16
	TU Jul 7	Oxidative Phosphorylation/Electron Transport	Cocklin	Chapter 19
	WE Jul 8	Lipid Metabolism, part 1	Jameson	Chapter 17/21
	TH Jul 9	Lipid Metabolism, part 2	Jameson	Chapter 17/21
	FR Jul 10	Amino Acid Metabolism, Urea Cycle	Strochlic	Chapter 18 Chapter 22 (22.1)
5	MO Jul 13	Integration lecture (Glycolysis to Amino Acids)	Ferrier	
	TU Jul 14	Metabolisms: Review	Jameson/Loll	
	WE Jul 15	EXAM 2		
	TH Jul 16	Exam 2 Review (9:00-9:30 by Dr. Jameson)	Loll	
		Chromosomes/DNA Replication (9:30-11:00)	Noguchi	Chapter 22 (22.4) Chapter 25 (25.1)
	FR Jul 17	DNA Repair	Mazin	Chapter 25 (25.2/3)
6	MO Jul 20	Transcription	Clifford	Chapter 26
	TU Jul 21	Protein Synthesis	Bouchard	Chapter 27 (27.1/2)
	WE Jul 22	Protein Synthesis and Trafficking	Bouchard	Chapter 27 (27.3)
	TH Jul 23	Control of Gene Expression	Reginato	Chapter 28
	FR Jul 24	Recombinant DNA Technology	Noguchi	Chapter 9
7	MO Jul 27	Molecular Biology: Review	Clifford/ Bouchard/ Noguchi	
	TU Jul 28	EXAM 3		
	WE Jul 29	Backup date		