Biochemistry Summer Undergraduate Course

BIOC 400S, Summer 2016

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 (reserved on 12/18/15)**

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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Course Schedule:

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