Biochemistry 531 – General Biochemistry
Course Schedule: Spring 2019

Date	Day/Time	Lecture	Chapter	Topic	Instructor
January 2019					
1/7	M 10	1	2	Water, acid, base concepts	Gunther
1/7	M 11	2	2	Buffering physiological pH	Gunther
1/9	W 10	3	3	Amino acid properties	Gunther
1/9	W 11	4	2,3	Amino acid ionization and peptide bond	Gunther
1/14	M 10	5	3,4	Protein Primary/Secondary structure	Gunther
1/14	M 11	6	4	Protein Tertiary/Quaternary structure	Gunther
1/16	W 10	7	4	Fibrous Protein Collagen	Gunther
1/16	W 11	8	4	Myoglobin and Hemoglobin	Gunther
1/23	W 10	9	4	Hemoglobin, gas transport, buffering	Gunther
1/23	W 11	10	5	Enzyme catalysis and kinetics	Gunther
1/28	M 10	11	6	Mechanisms of enzyme catalysis	Gunther
1/28	M 11	12	6	Enzyme inhibitors	Gunther
1/30	W 10	13	5	Regulation of protein activity	Gunther
1/30	W 11	14	n/a	Blood coagulation 1	Gunther
February 2019					
2/1	**F 10**	**-**	**-**	**EXAM 1, Lectures 1-12**	**Gunther**
2/4	M 10	15	n/a	Blood coagulation 2	Gunther
2/4	M 11	CC1	n/a	Clinical Correlation 1: Hemostasis	Weaver
2/6	W 10	16	8	Carbohydrates and glycoconjugates	Shiemke
2/6	W 11	17	4,8	Therapeutic enzyme inhibitors I	Gunther
2/11	M 10	18	9	Lipids and membranes	Shiemke
2/11	M 11	19	9	Membrane transport	Shiemke
2/13	W 10	20	9	Transduction of extracellular signals	Shiemke
2/13	W 11	21	10	Introduction to metabolism and bioenergetics	Shiemke
2/18	M 10	22	11	Glycolysis	Shiemke
2/18	M 11	23	13	Acetyl Co-A and the TCA Cycle	Shiemke
2/20	W 10	24	14	Oxidative phosphorylation I: electron transport	Shiemke
2/20	W 11	25	14	Oxidative Phosphorylation II: ATP synthesis	Shiemke
2/22	**F 10**	**-**	**-**	**EXAM 2, Lectures 13-23 + CC1**	**Gunther/Shiemke**
2/25	M 10	26	13	Fates of pyruvate and lactic acidosis	Shiemke
2/25	M 11	27	11/13	Reactive Oxygen Species (ROS)	Shiemke
2/27	W 10	28	12	Pentose shunt and glycogen synthesis (Study questions)	Leonardi
2/27	W 11	29	16	Fatty acid and triacylglycerol synthesis (Study questions)	Leonardi
March 2019					
3/4	M 10	30	16	Fatty acid oxidation and ketone body metab. (Study questions)	Leonardi
3/4	M 11	31	12	Glycogen breakdown and gluconeogenesis (study questions)	Leonardi
3/6	W 10	32	17	Protein turnover and Urea cycle (study questions)	Leonardi
3/6	W 11	33	17	Amino acid catabolism and products (study questions)	Leonardi
3/11 - 3/15				**Spring Break**	
3/18	M 10	34	12/16	Regulation of Fed and Fasting state pathways (Study questions)	Leonardi
3/18	M 11	CC2	-	Clinical correlation 2: Obesity	Leonardi
3/20	W 10	35	11-14,16	Metabolism during exercise (Study questions)	Leonardi
3/20	W 11	36	11,13,14	Metabolism of tumor cells (Study questions)	Leonardi
3/22	**F 10**	**-**	**-**	**EXAM 3, Lectures 24-34 + clin corr 2**	**Shiemke/Leonardi**

3/25	M 10	37	16	Metabolism of membrane lipids (Study questions)	Leonardi
3/25	M 11	38	16	Absorption and transport of fuel lipids (Study questions)	Leonardi
3/27	W 10	CC3	16	Clinical Correlation 3: Diabetes Mellitus (Study questions)	Leonardi
3/27	W 11	CC4	-	Clinical correlation 4: Atherosclerosis (Study questions)	Balla
April 2019					
4/1	M 10	39	19	Nucleotide metabolism I (Powerpoint) (Outline/questions) (Camtasia)	Robart
4/1	M 11	40	19	Nucleotide Metabolism II (Powerpoint) (Outline/questions) (Camtasia)	Robart
4/3	W 10	41	18	Nucleic Acid structure/function I (powerpoint) (Camtasia) (Study questions)	Robart
4/3	W 11	42	18	Nucleic Acids II (powerpoint) (Camtasia) (Study questions)	Robart
4/8	M 10	43	20	DNA Replication (Camtasia) (Study questions)	Robart
4/8	M 11	44	21	Transcription (Camtasia) (Study questions)	Robart
4/10	W 10	45	21	Regulation of gene transcription (Camtasia) (Study questions)	Robart
4/10	W 11	46	20	DNA Repair (Camtasia) (Study questions)	Robart
4/12	**F 10**	**Exam 4**	**-**	**Covers Lectures 35-44 + CC3 + CC4**	**Leonardi/Robart**
4/15	M 10	CC5	-	CC 5: HIV progression into AIDS (Powerpoint) (Study questions) (Camtasia)	Gunther
4/15	M 10	CC6	-	Carcinogenesis and oral tumors (Powerpoint) (Outline) (Camtasia) (Study questions)	Gunther
4/17	W 10	47	21	Therapeutic Enzyme Inhibitors II (Powerpoint) (Outline) (Camtasia) (Study Questions)	Gunther
4/17	W 11	48	18	Post-transcriptional RNA processing (Powerpoint) (Camtasia) (Study questions)	Robart
4/22	M 10	49	22	Genetic code and tRNA (Powerpoint) (Outline) (Study questions) (Camtasia)	Robart
4/23	M 11	50	22	Translation (Powerpoint) (Outline) (Study questions) (Camtasia)	Robart
4/24	W 10	51	22	Regulation of Translation (Powerpoint) (Outline) (Study Questions) (Camtasia)	Robart
4/24	W 11	52	22	Protein processing and sorting (Powerpoint) (Outline) (Study Questions) (Camtasia)	Robart
May 2019					
5/1	**W 10**	**-**	**-**	**Exam 5, covers Lectures 45-52 + CC5 – CC6**	**Ruppert/Gunther**