

Spring Course Schedule Template 2007

Hour	Monday	Tuesday	Wednesday	Thursday	Friday
1:00 - 1:30 PM	Biochemistry	Biochemistry	Biochemistry	Biochemistry	Biochem./Physio. Quiz
1:30 - 2:00 PM	Lecture	Lecture	Lecture	Small Group	Biochemistry
2:00 - 2:30 PM	Physiology	Biochemistry	Physiology		Lecture
2:30 - 3:00 PM	Lecture	Small Group	Lecture		Physiology
3:00 - 3:30 PM				Physiology	Lecture
3:30 - 4:00 PM				Lecture/Small	
4:00 - 4:30 PM	Biochemistry			Group	
4:30 - 5:00 PM	Tutorial/Office hour				

Date	Time	Instructor	Activity	Read	Topic & Context
Week 1					
1/2	1:00-1:30 PM	Payer	Course Orientation	<i>BD1</i>	
1/2	1:30--2:20 PM	Blaber	Lecture 1	<i>MG1; MG2; MG3</i>	Intro to genetic diseases: gene mutation & gene rearrangement
1/3	1:00-1:50 PM	Blaber	Lecture 2		DNA & chromatin structure & stability
1/4	1:00-1:50 PM	Blaber	Lecture 3	<i>BD30²⁵⁻³², BD31</i>	Replication & transcription: reading DNA
1/5	1:00-1:30 PM		Quiz 1 (L1-3)		
1/5	1:1:30-2:20 PM	Blaber	Lecture 4	<i>BD31</i>	Basel transcription factors, RNA splicing, other RNA processing
Week 2					
1/8	1:00-1:50 PM	Vanlandingham	Lecture 5	<i>BD32</i>	Protein synthesis (translation)& related antibiotics & antineoplastics; Amyloid diseases: defects in protein processing
1/8	4:00-5:00 PM	Blaber	Tutorial/office hour		
1/9	1:00-1:50 PM	Vanlandingham	Lecture 6	<i>BD41; MG11²³²⁻⁴⁷</i>	Introduction to cancer, cell cycle & cell death control (apoptosis)
1/9	2:00-2:50 PM		<i>SGL 1</i>		Introduction to <i>SGL</i> ; Case 1: Translation-directed antibiotics, mushroom toxins
1/10	1:00-1:50 PM	Vanlandingham	Lecture 7	<i>BD30³³⁻³⁶, MG3²⁹⁻³³, MG3³⁶⁻⁴⁰</i>	DNA damage & repair; cancer progression: oncogenes & tumor suppressors
1/11	1:00-1:50 PM	Nagy	Library resources		Medical Informatics Workshop: Basic Sciences Resources (NIH, Other)
1/12	1:00-1:30 PM		Quiz 2 (L4-7)		
1/12	1:30-2:20 PM	Stefanovic	Lecture 8	<i>BD33</i>	Control of gene expression
Week 3					

1/15			No Class		MLK Day
1/16	1:00 - 1:50 PM	Vanlandingham	Lecture 9	MG4	Medical Genetics: Single gene disorders, population genetics
1/16	2:00 - 2:50 PM	Clark	Medical informatics		Medical Informatics Workshop: Clinical Sources
1/16	4:00 - 5:00 PM	Vanlandingham	Tutorial/office hour		
1/17	1:00-1:50 PM	Vanlandingham	Lecture 10	MG5; MG12	Medical Genetics: Sex linkage; mosaicism, multifactorial inheritance
1/18	1:00-1:50 PM	Clark	Medical informatics		Medical Informatics Workshop: Practice in Medical Informatics
1/18	2:00-2:50 PM		SGL 2		Case 2: Progression & therapy in HIV/AIDS infection
1/19	1:00-1:30 PM		Quiz 3 (L8-10)		
1/19	1:30-2:20 PM	Horabin	Lecture 11	MG2 ²²⁻²⁷ ; MG6; MG8 ¹⁶¹⁻³	Chromosome rearrangements; clinical cytogenetics
Date		Instructor	Activity	Read	Medical Biochemistry & Genetics Topic
Week 4					
1/22	1:00-1:50 PM	Blaber	Lecture 12	BD34; MG3 ⁴²⁻⁵⁵	Techniques & medical applications of biotechnology
1/22	4:00-5:00 PM	Vanlandingham	tutorial/office hour		
1/23	1:00-2:50 PM	Team	SGL 3,4		Case 3: Susceptibility to cancer: oncogenes & suppressors
					Case 4: Heritable mental retardation: fragile X syndrome
1/24	1:00-1:50 PM	Blaber	Lecture 13	BD34; MG3 ⁴²⁻⁵⁵	Molecular-genetic approaches to diagnosis & therapy: present & future
1/25	1:00-1:50 PM	Vanlandingham/ Blaber	Review		
1/26			EXAM 1		Exam I coverage: lectures 1-13
Week 5					
1/29	1:00-1:50 PM	Blaber	Lecture 14	BD2 ⁵⁻¹⁶	Amino acids; protein structure & folding
1/29	4:00-5:00 PM	Blaber	tutorial/office hour		
1/30	1:00-1:50 PM	Blaber	Lecture 15	BD2 ¹⁶⁻²⁴ ; BD3 ²⁵⁻²⁸	Blood constituents; Plasma proteins: classes & protein fractionation
1/30	2:00-2:50 PM		SGL 5		Case 5: A weak heart: X-linked cardiomyopathy (dystrophin defect)
1/31	1:00-1:50 PM	Blaber	Lecture 16		Blood tests: Clinical assays & plasma & other proteins of clinical significance
2/1	1:00-1:50 PM	Blaber	Lecture 17	BD3 ²⁶⁻²⁹ ; BD10 ¹¹³⁹⁻⁴¹	Diseases from defects in transport proteins & storage proteins
2/1	2:00-2:50 PM		SGL 6		Case 6: Dementia: Alzheimers, amyloid diseases
2/2	1:00-1:30 PM		Quiz 4 (L14-17)		

2/2	1:30-2:20 PM	Stefanovic	Lecture 18	BD 4 & 28	Jaundice & other disorders of heme & hemoglobin turnover; antiproteases & other non-immune defenders
Week 6					
2/5	1:00-1:50 PM	Vanlandingham	Lecture 19	BD36	Inflammatory response: antibodies, complement, macrophages (ROS)
2/5	4:00-5:00 PM	Blaber	tutorial/office hour		
2/6	1:00-1:50 PM	Vanlandingham	Lecture 20	BD4 ³⁵⁻⁴²	Anemias & altitude effects; O ₂ binding of hemoglobin; cooperativity
2/6	2:00-2:50 PM		SGL 7		Case 7: Copper transport diseases: Wilson's, ceruloplasmin deficiency
2/7	1:00-1:50 PM	Vanlandingham	Lecture 21	BD4 ³³⁸⁻⁴⁹ , MG3 ^{33-36, 46}	Hemoglobinopathies & thalassemias; globin genes & defects
2/8	1:00-1:50 PM	Vanlandingham	Lecture 22	BD23 ³³³⁻³⁹	Acidosis & alkalosis: acidity, pH buffers, Henderson-Hasselbach equation
2/8	2:00-2:50 PM		SGL 8		Case 8: Iron storage diseases: hemochromatosis; hemosiderosis
2/9	1:00-1:30 PM		Quiz 5 (L18-21)		
2/9	1:30-2:20 PM	Vanlandingham	Lecture 23	BD23 ²³⁹⁻⁴⁴	Hemoglobin's role in CO ₂ transport, Ying/Yang of CO ₂ /O ₂
Date		Instructor	Activity	Read	Medical Biochemistry & Genetics Topic
Week 7					
2/12	1:00-1:50 PM	Blaber	Lecture 24	BD5	Enzymes as diagnostics & drug targets: enzyme kinetics & reversible inhibition
2/12	4:00 - 5:00 PM	Vanlandingham	tutorial/office hour		
2/13	1:00-1:50 PM	Blaber	Lecture 25	BD5; BD2 ¹⁴⁻¹⁶	Intelligent drug design: enzyme mechanisms, irreversible inhibitors (poisons)
2/13	2:00-2:50 PM		SGL 9		Case 9: Hemoglobinopathy: Oxygen deficiency from hemoglobin defects
2/14	1:00-1:50 PM	Blaber	Lecture 26	BD6	Hemophilia: platelet & coagulation defects
2/15	1:00-2:50 PM		SGL 10,11		Case 10: Chest pains: MI diagnosis
					Case 11: Difficulty breathing: COPD, antiprotease deficiency
2/16	1:00 - 1:30 PM		Quiz 6 (L22-25)		
2/16	1:30-2:20 PM	Blaber	Lecture 27	BD6	Thrombosis: inappropriate clotting & preventing clots; clot-busters
Week 8					
2/19	1:00-1:50 PM	Vanlandingham	Lecture 28	BD7	Sperocytic anemia: RBC membrane & cytoskeleton defects
2/19	4:00 - 5:00 PM	Blaber	tutorial/office hour		
2/20	1:00-2:50 PM		SGL 12,13		Case 12: Inappropriate clotting: thrombosis & clot busters
					Case 13: Yellowed skin: anemia & heme degradation; jaundice

2/21	1:00-1:50 PM	Vanlandingham	Lecture 29	BD7	Cystic fibrosis & other membrane transport defects; membrane-directed bacterial toxins
2/22	1:00-1:50 PM	Vanlandingham Blaber	Review		
2/23			EXAM 2		Exam 2 coverage: Lectures 14-29
Week 9					
2/26	1:00-1:50 PM	Vanlandingham	Lecture 35	BD11	RBC Metabolism: anaerobic glycolysis; pentose phosphate pathway
2/26	4:00 - 5:00 PM	Vanlandingham	tutorial/office hour		
2/27	1:00-1:50 PM	Vanlandingham	Lecture 36	BD12	Glycogen storage diseases: Glucose storage in glycogen & retrieval
2/27	2:00-2:50 PM		SGL 16		Case 14: Night blindness, color blindness: visual pigments & visual signaling; vitamin D
2/28	1:00-1:50 PM	Vanlandingham	Lecture 37	BD12 ¹⁵⁷⁻⁶⁴	Gluconeogenesis; hormone signaling pathways of glucose homeostasis
3/1	1:00-1:50 PM	Vanlandingham	Lecture 38	BD12 ¹⁶⁴⁻⁷²	Diabetes & Metabolic Syndrome: mechanisms & defects in glucose homeostasis
2/3	2:00-2:50 PM		SGL 17		Case 15: Hemolytic anemia: G6PDH deficiency; erythrocyte metabolism
3/2	1:00 - 1:30 PM		Quiz 8 (L34-38)		
3/2	1:30 - 2:20 PM	Vanlandingham	Lecture 39	BD13, BD10 ¹³³⁻³⁹	Key metabolic roles of acetyl CoA, pyruvate dehydrogenase & B-vitamins
			NO CLASS		SPRING BREAK: MARCH 5-9
Date		Instructor	Activity	Read	Medical Biochemistry & Genetics Topic
Week 10					
3/12	1:00-1:50 PM	Blaber	Lecture 30	BD8 ⁹³⁻¹⁰²	Introduction to energy metabolism; ATP & other high energy compounds
3/12	4:00 - 5:00 PM	Vanlandingham	tutorial/office hour		
3/13	1:00-1:50 PM	Blaber	Lecture 31	BD8 ¹⁰³⁻¹¹	Respiratory chain, oxidative phosphorylation, respiration poisons
3/13	2:00-2:50 PM		SGL 14		Case 16: Membrane Transport; Cystic Fibrosis
3/14	1:00-1:50 PM	Blaber	Lecture 32	BD9	Oxidation as a mechanism of aging: oxidative damage & protection
3/15	1:00-1:50 PM	Blaber	Lecture 33	BD9, BD10 ¹²⁷⁻³²	Digestion, carbohydrate degradation & protein degradation
3/15	2:00-2:50 PM		SGL 15		Case 17: Digestive distress; Dyslipidemia
3/16	1:00 - 1:30 PM		Quiz 7 (L30-33)		
3/16	1:30 - 2:20 PM	Blaber	Lecture 34	BD35	Lipid digestion, absorption of lipids & fat-soluble vitamins; water soluble vitamins
Week 11					

3/19	1:00-1:50 PM	Blaber	Lecture 40	BD13	Oxidative carbon metabolism via the TCA cycle; reducing equivalent production
3/19	4:00 - 5:00 PM	Blaber	tutorial/office hour		
3/20	1:00-1:50 PM	Blaber	Lecture 41	BD14	Fatty acid degradation (b-oxidation); ketogenesis & ketoacidosis
3/20	2:00-2:50 PM		SGL 18		Case 18: Insufficient energy, easy exhaustion; glycogen storage disease
3/22	1:00-1:50 PM	Blaber	Lecture 43	BD18	Amino acid metabolism: degradation
3/22	2:00-2:50 PM		SGL 19		Case 19: Diabetes I and II
3/22	1:00 - 1:30 PM		Quiz 9 (L39-42)		
3/23	1:30 - 2:20 PM	Blaber	Lecture 44	BD20	Insulin and Glucose Homeostasis
Week 12					
3/26	1:00-1:50 PM	Blaber	Lecture 45	BD20	Integrated energy metabolism: Roles of GI tract, liver, muscle, adipose; Energy Metabolism under compromise
3/26	4:00 - 5:00 PM	Blaber	tutorial/office hour		
3/27	1:00-2:50 PM		SGL 20,21		Case 20: Starvation
					Case 21: Alcoholism
3/28	1:00-1:50 PM	Vanlandingham	Lecture 46	BD10	Nutrition: roles of vitamins & minerals reviewed
3/29	1:00-1:50 PM	Blaber/Vanlandingham	Review		
3/30			EXAM 3		Exam 3 coverage: lectures 30-46
Date		Instructor	Activity	Read	Medical Biochemistry & Genetics Topic
Week 13					
4/2	1:00-1:50 PM	Vanlandingham	Lecture 47		Atherosclerosis & hyperlipidemia; lipid peroxides; inflammation; MI
4/3	1:00-1:50 PM	Vanlandingham	Lecture 48	BD16	Cholesterol & steroid synthesis
4/3	2:00-2:50 PM		SGL 22		Case 22: Vitamin deficiency disease: beri-beri, thiamin deficiency
4/4	1:00-1:50 PM	Vanlandingham	Lecture 49	BD17 ²²⁵⁻³⁴	Lipoproteins & lipid transport
4/5	1:00-1:50 PM	Vanlandingham	Lecture 50	BD17 ²³⁴⁻⁴³	Cholesterol transport & elimination; LDL receptors, bile salts
4/5	2:00-2:50 PM		SGL 23		Case 23: Ambiguous gender; steroid hormones & receptors
4/6	1:00 - 1:30 PM		Quiz 10 (L47-50)		
4/6	1:30 - 2:20 PM	Vanlandingham	Lecture 51	BD26 ³⁷⁵⁻⁸⁰	Glycerophospholipids; hormone-like lipids

Week 14					
4/9	1:00-1:50 PM	Blaber	Lecture 52	BD26 ³⁸¹⁻⁸⁶	Lipid storage diseases: sphingolipids, gangliosides
4/9	4:00 - 5:00 PM	Vanlandingham	tutorial/office hour		
4/10	1:00-1:50 PM	Blaber	Lecture 53	BD18 ²⁴⁷⁻⁵³ , BD28 ³⁹⁹⁻⁴⁰²	Nitrogen metabolism & excretion; urea cycle
4/10	2:00-2:50 PM		SGL 24		Case 24: Arteries at risk; cholesterol synthesis & transport; atherosclerosis
4/11	1:00-1:50 PM	Blaber	Lecture 54	BD28 ⁴⁰³⁻¹²	Failed liver function: protein, heme synthesis, bile synthesis
4/12	1:00-1:50 PM	Blaber	Lecture 55	BD29	Nucleotide analogs as anticancer and antiviral agents
4/12	2:00-2:50 PM		SGL 25		Case 25: Diabetes complications: kidney physiology; bone demineralization
4/13	1:00 - 1:30 PM		Quiz 11 (L51-54)		
4/13	1:30 - 2:20 PM	Blaber	Lecture 56	BD29	Nucleotide metabolism
Week 15					
4/16	1:00-1:50 PM	Vanlandingham	Lecture 57	BD27	Osteogenesis imperfecta, scurvy, other collagen-related connective tissue disorders
4/16	4:00 - 5:00 PM	Blaber	tutorial/office hour		
4/17	1:00-2:50 PM	Team	SGL 26,27		Case 26: Lysosomal storage disease
					Case 27: Cartilage defects; Stickler syndrome
4/17	3:00- 3:50 PM	Vanlandingham	Tutorial 14		
4/18	1:00-1:50 PM	Vanlandingham	Lecture 58	BD27	Muscular dystrophy, Marfan syndrome, other non-collagen connective tissue disorders
4/19	1:00-1:50 PM	Blaber/Vanlandingham	Review		
4/20			EXAM 4		Exam 4 coverage: Lectures 47-58
Week 16					
4/27			FINAL		NBME Subject Exam in Biochemistry