Cell And Systems Biology BME 205H1S (Winter 2017)
Tentative Lecture, Tutorial, and Lab Schedules
Course Coordinator: Professor Penney M. Gilbert

Date	Type	Lecturer	Topic*	Laboratories	Tutorials
Tue, 10-Jan	Lecture 1	PMG	Course overview & setting expectations		
Thu, 12-Jan	Lecture 2	PMG	Part I, The musculoskeletal system: from tissues to cells (Ch1)		
Week of Jan 16	Tutorial 1		Review of concepts and aspects of design (Lecture 1-3)	Lab 1: EMG or Lab 2: Microscopy	Units of Measurement
Tue, 17-Jan	Lecture 3	PMG	Part I, Chapter 1, Introduction to the study of cell & systems biology		
Thu, 19-Jan	Lecture 4		Part I, Chapter 2, The chemical basis of life		
Week of Jan 23	Tutorial 2		Review of concepts and aspects of design (Lecture 4-5)	Lab 1: EMG or Lab 2: Microscopy	Review of Concepts
Tue, 24-Jan	Lecture 5	PMG	Part I, Chapter 2, The chemical basis of life		
Thu, 26-Jan	Lecture 6	PMG	Part I, Chapter 3, Bioenergetics, enzymes, and metabolism		
Week of Jan 30	Tutorial 3		Review of concepts and aspects of design (Lecture 6-7)	Lab 1: EMG or Lab 2: Microscopy	Western Blotting
Tue, 31-Jan	Lecture 7	PMG	Part I, Chapter 4, The structure and function of the plasma membrane		
Thu, 2-Feb	Lecture 8	PMG	Part I, Chapter 4, The structure and function of the plasma membrane		
Week of Feb 6	Tutorial 4		**Preparation Quiz (5%, Covers lectures 1-7)**	Lab 1: EMG or Lab 2: Microscopy	Preparation Quiz
Tue, 7-Feb	Lecture 9	PMG	Part I, Chapter 5, Aerobic respiration and the mitochondrion		
Thu, 9-Feb	Lecture 10	PMG	Part I, Chapter 5, Aerobic respiration and the mitochondrion		
Week of Feb 13	Tutorial 5		Review of concepts and aspects of design (Lecture 8-11)	Lab 3: Cheek Cell Isolation & Proteomics	FRAP
Tue, 14-Feb	Lecture 11	PMG	Part I, Chapter 7, Interactions between cells and their environment		
Thu, 16-Feb	Lecture 12	PMG	Part I, Chapter 7, Interactions between cells and their environment		
Week of Feb 20	READING WEEK			No Labs	No Tutorials
Tue, 21-Feb			Reading week begins		
Thu, 23-Feb			Reading week ends		
Week of Feb 27	Tutorial 6		Review of concepts and aspects of design (Midterm Review Lectures 1-12)	Lab 3: Cheek Cell Isolation & Proteomics	Jeopardy!
Tue, 28-Feb	Lecture 13	PMG	Part II, Chapter 7, Interactions between cells and their environment		
Thu, 2-Mar	Lecture 14	PMG	Part II, Chapter 8, Cytoplasmic membrane systems		
Week of Mar 6	Tutorial 7		**March 9th, 9-11am (EX100)**	No Labs	Nanomedicine
Tue, 7-Mar	Lecture 15	PMG	Part II, Chapter 8, Cytoplasmic membrane systems		
Thu, 9-Mar	Lecture 16	PMG	Part II, Chapter 10, The nature of the gene & the genome		
Week of Mar 13	Tutorial 8		Review of concepts and aspects of design (Lectures 16-17)	Lab 4: PCR	Mitochondrial Diseases & Crispr/Cas9
Tue, 14-Mar	Lecture 17	PMG	Part II, Chapter 11, Gene expression: from transcription to translation		
Thu, 16-Mar	Lecture 18	PMG	Part II, Chapter 11, Gene expression: from transcription to translation		
Week of Mar 20	Tutorial 9		Review of concepts and aspects of design (Lectures 18-19)	Lab 4: PCR	PCR
Tue, 21-Mar	Lecture 19	PMG	Part II, Chapter 12, Control of gene expression		
Thu, 23-Mar	Lecture 20	PMG	Part II, Chapter 9, The cytoskeleton and motility		
Week of Mar 27	Tutorial 10		**Preparation Quiz. (5%, Covers Lectures 12-19; Labs 2-4; Tutorials 7-9)**	Lab 5: Forensic DNA fingerprinting	Preparation Quiz
Tue, 28-Mar	Lecture 21	PMG	Part II, Chapter 9, The cytoskeleton and motility		
Thu, 30-Mar	Lecture 22		Part II, Chapter 9, The cytoskeleton and motility - Stem cell mechanobiology		
Week of Apr 3	Tutorial 11		Review of concepts and aspects of design (Lectures 20-22)	Lab 5: Forensic DNA fingerprinting	Cell Contractility
Tue, 4-Apr	Lecture 23	PMG	Part II, Chapter 14, Cellular reproduction		
Thu, 6-Apr	Lecture 24	PMG	Part II, Chapter 14, Cellular reproduction - Engineering biosensors		
Week of Apr 10			Review of concepts and aspects of design (Lectures 23-24)	No Labs	No Tutorials
Tues, 11-Apr	Lecture 25	PMG	Part II, Chapter 14, Cellular reproduction - Stem cell bioprocessing		
Thurs, 13-Apr	Lecture 26	PMG	Part II, Review Session (Jeopardy!)		
Mon, 17-Apr			Exam period begins		
TBD			**TBD**		
Fri, 28-Apr			Exam period ends		

* Corresponding textbook chapters taken from Karp 7th edition
*EngSci classes/labs/tutorials cancelled on Fri Jan 20th, 2017 for EngSci Education Conference