

COURSE OUTLINE FALL 2008

WK	Day/Date	Lecture topics	Reading in Campbell text	Laboratory activities (lab book pages in parentheses)
1	Mon., 8/25	Introduction Scientific method	Ch. 1	Scientific investigation - Hypothesis testing (handout only-- not in lab manual)
	Wed., 8/27	The chemistry of life Water and the fitness of the environment	Ch. 2 Ch. 3	Lab topic 1 in lab manual: Scientific Investigation (pages 1-27)
2	Mon., 9/1	NO VVC - LABOR DAY HOLIDAY	-----	NO VVC - LABOR DAY HOLIDAY
	Wed., 9/3	Carbon and the molecular diversity of life The structure and function of large biological molecules	Ch. 4 Ch. 5	Lab quiz 1 on scientific investigation & hypothesis testing labs Lab on molecules of Life: Simple tests used to identify/detect macromolecules (handout only - not in lab manual)
3	Mon., 9/8	The structure and function of large biological molecules, continued	Ch. 5	Lab quiz 2 on molecules of life lab Lab on measuring the energy in macromolecules by calorimetry (handout only - not in lab manual) JEOPARDY 1
	Wed., 9/10	Exam 1 on chapters 1 through 4	-----	Lecture during lab time today: A tour of the cell No lab activity
4	Mon., 9/15	A tour of the cell	Ch. 6	Lab quiz 3 on calorimetry lab Lab topic 3 - Microscopes and cells (to be continued if we do not finish today)
	Wed., 9/17	Membrane structure and function	Ch. 6 Ch. 7	Cell fractionation lab (handout only - not in lab manual) Continue with microscope and cells lab if not completed
5	Mon., 9/22	An introduction to metabolism and enzymes	Ch. 8	Lab quiz 4 on microscope & cells and cell fractionation labs Lab topic 4 - Diffusion and Osmosis (83-106) JEOPARDY 2
	Wed., 9/24	Exam 2 on chapters 5 through 7		Lab topic 2 in lab manual - Enzymes (pages 33-55)
6	Mon., 9/29	Cellular respiration: Harvesting chemical energy	Ch. 9	Lab quiz 5 on diffusion and osmosis lab Lab quiz 6 on enzyme lab Measurement of cell respiration in ectotherm and endotherm (handout only - not in lab manual)
	Wed., 10/1	Cellular respiration, cont.	Ch. 9	Lab quiz 7 on measurement of cell respiration in ecto- & endotherm Lab topic 5 - Cellular Respiration & Fermentation (111-131)
7	Mon., 10/6	Photosynthesis	Ch. 10	Lab quiz 8 on cellular respiration & fermentation lab Measurement of photosynthetic rate (handout only - not in lab manual)
	Wed., 10/8	Photosynthesis, cont.	Ch. 10	Lab topic 6 - Photosynthesis (135-152) JEOPARDY 3
8	Mon., 10/13	Exam 3 on chapters 8 through 10	Ch. 11	Lecture during lab time today: Cell communication
	Wed., 10/15	Continue lecture on cell communication The cell cycle	Ch. 11 Ch. 12	Lab quiz 9 on both photosynthesis labs Lab topic 7 - Mitosis & Meiosis (157-182) PLUS root squash technique (handout only - not in lab manual)

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				Lab quiz 10 on mitosis & meiosis and root squash labs Mendelian Genetics - practice problems (handout only - not in lab manual) Begin pedigree project (handout only - not in lab manual) JEOPARDY 4
9	Mon., 10/20	Meiosis and sexual life cycles Mendel and the gene idea	Ch. 13 Ch. 14	
	Wed., 10/22	Exam 4 on chapter 11 through 13	Ch. 15	Lecture during lab time - The chromosomal basis of inheritance Continue Mendelian genetics practice problems
10	Mon., 10/27	The chromosomal basis of inheritance	Ch. 15	Lab quiz 11 on Mendelian genetics problems Lab topic 9 - Mendelian Genetics (<i>Drosophila</i>) Lab quiz 12 on <i>Drosophila</i> lab
	Wed., 10/29	The molecular basis of inheritance	Ch. 16	Isolation of genomic DNA from plant tissues (handout only - not in lab manual) Lab topic 10 - Molecular Biology (243-266) JEOPARDY 5
11	Mon., 11/3	Exam 5 on chapters 14 and 15	Ch. 16	Lecture during lab time today: Continue molecular basis of inheritance
	Thur., 11/5	From gene to protein	Ch. 17	Lab quiz 13 on isolation of genomic DNA from plant tissues lab Fish protein electrophoresis (Edvotek handout only - not in lab manual)
12	Mon., 11/10	NO VVC - VETERANS' DAY HOLIDAY	-----	NO VVC - VETERANS' DAY HOLIDAY
	Wed., 11/12	Regulation of gene expression	Ch. 18	Lab quiz 14 on fish protein electrophoresis lab Present pedigree projects Work on student projects in cell respiration & photosynthesis (126-129, 152) - experimental design due with list of needed items JEOPARDY 6
13	Mon., 11/17	Exam 6 on chapters 16 and 17	Ch. 18	Lecture during lab time today: Regulation of gene expression, continued
	Wed., 11/19	Viruses	Ch. 19	Work on student projects in cell respiration & photosynthesis - perform experiments
14	Mon., 11/24	Biotechnology	Ch. 20	Recombinant DNA lab: Transformation of <i>E. coli</i> with p-glo gene from jellyfish (Edvotek handout only - not in lab manual) JEOPARDY 7
	Wed., 11/26	Exam 7 on chapters 18 and 19	-----	Finish recombinant DNA lab (read plate results) Work on student projects in cell respiration & photosynthesis - prepare PowerPoints
15	Mon., 12/1	Biotechnology, continued	Ch. 20	Lab quiz 15 on recombinant DNA lab DNA fingerprinting (Edvotek handout only - not in lab manual)
	Wed., 12/3	Genomes and their evolution	Ch. 21	Read DNA fingerprinting results Work on project PowerPoints
16	Mon., 12/8	Student project PowerPoint presentations	-----	Lab quiz 16 on DNA fingerprinting labs JEOPARDY 8
	Wed., 12/10	Exam 8 on chapters 20 and 21	-----	SEMESTER ENDS! No lab today.