

**MCB C142 / IB C163 “Survey of General Genetics” Fall 2008**  
**Tentative Reading and Problems for Amacher lectures**

*Note: Assignments are subject to change. It is your responsibility to double check this sheet with the reading and problems assigned each lecture day.*

LECTURE 1: Extensions to Mendel (Wed 9/3)

Reading: Ch 3, especially p. 45-67

Problems: Ch 3, Solv probs I, II, #2, 3, 5, 10, 11, 15, 17, 20, 23, 25, 29, 32, 36

LECTURE 2: Chromosomes and Inheritance; Non-disjunction (Fri 9/5)

Reading: Ch 4, p. 81-88; 105-110

Problems: Ch 4, Solv probs I, II, #12, 24, 27, 33, 34, 38, 39

LECTURE 3: Pedigree Analysis (Mon 9/8)

Reading: Ch 2, p 30-33; Ch 4, p 110-111

Problems: Ch 2 Solv prob III, #29-34, 35a, 36; Ch 4 Solv prob III, #26, 28, 29, 31, 35, 40

LECTURES 4 and 5: Linkage and Genetic Maps; Chi-Square Test (Wed 9/10 and Fri 9/12)

Reading: Ch 5, p 123-141

Problems: Ch 5 Solv probs I, II; #2 – 5, 7 – 9, 12, 14, 15, 20, 21, 23, 24, 27

LECTURE 6: Tetrad Analysis; Gene Conversion (Mon 9/15)

Reading: Ch 5, p 142-151; Ch 6, p 192-194

Problems: Ch 5 Solv prob III, #28a, 29, 30, 32, 35; Ch 6, #30, 31

LECTURES 7 and 8: Chromosomal Rearrangements; Transposable Elements (Wed 9/17 and Fri 9/19)

Reading: Ch 14, p 489-515; Fig 7.9 (p 215) & associated text; Drosophila portrait (p 79-83)

Problems: Ch 14, Solv probs I, II, #6, 8, 11 – 14, 17, 20, 21, 24

LECTURE 9: Changes in Chromosome Number (Mon 9/22)

Reading: Ch 14, p 516-525

Problems: Ch 14 #29 – 31, 33, 38, 39

LECTURE 10: Sex determination/Dosage Compensation (Wed 9/24)

Reading: Ch 4, p 85-88; Ch 6, p 195, 200; Ch 11, p 415; Ch. 18, skim p 669-677, Ch 13, 481-482

Problems: Ch 4, #23, 25; Ch 13, #24, 27 – 31

LECTURE 11: Review (Fri 9/26)

*(Professor Dernberg gives 12 lectures)*

**Midterm on Monday, October 6<sup>th</sup> (6-8 pm) covers material through Friday, October 3<sup>rd</sup>**

LECTURE 12: Organelle Genetics (Mon 10/27)

Reading: Ch 16, p 581-603 (skim 581-592)

Problems: Ch 16 Solv prob III, #13, 14, 18 – 20, 25 – 29

LECTURE 13: Genomic Imprinting (Wed 10/29)

Reading: Ch 18, p 660-664. Additional reading may be posted on website

Problems: Ch 18 #21 – 24

LECTURE 14: Developmental genetics: Zebrafish as a model system (Fri 10/31)

Reading: Ch 20 (skim p 717-732). Additional reading may be posted on website

Problems: To be assigned

LECTURE 15: Reverse genetics in the mouse (Mon 11/3)

Reading: Ch 20 p 721-722; Mouse portrait (p 115-123)

Problems: To be assigned

**Midterm on Thursday, November 6<sup>th</sup> (7-9 pm) covers material through Monday, November 3<sup>rd</sup>**