LEARNING OBJECTIVES FOR GENETICS

Exam I

Chapter 1: Introduction to Genetics
- Gain an overview of genetics and understand its central position in biology.
- Learn about the historical development of the science of genetics.
- Review and understand basic molecular genetics.

Chapter 2: Cell Reproduction
- Understand basic chromosome structure and the nature of homologues.
- Distinguish haploid and diploid numbers of chromosomes.
- Appreciate the position of mitosis and meiosis in the life cycle.

Chapter 3: Mendelian Genetics
- Distinguish genotype and phenotype.
- Understand the relationship of genes and chromosomes.
- Relate Mendel’s postulates to the behavior of genes during meiosis.
- Apply the basic rules of probability and statistics to genetics problems.
- Follow dominant and recessive traits using pedigrees.

Chapter 4: Extensions of Mendelian Genetics
- Master basic genetic nomenclature.
- Understand how alleles affect phenotypes.
- Distinguish the different types of dominance and their biochemical basis.
- Examine gene interactions and the many ways this is manifested in the phenotype.

READING AND PROBLEM ASSIGNMENTS

*Principles of Genetics, 5th edition, Snustad & Simmons*

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Be sure to review and understand the “Basic Exercises” and “Testing Your Knowledge” sections at the end of each chapter.

(See the STUDENT COMPANION SITE at [www.wiley.com/college/snustad](www.wiley.com/college/snustad) for additional useful resources and information)