WILMINGTON UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
BASIC COURSE INFORMATION

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89. Analyze human pedigrees and be able to distinguish autosomal recessive, autosomal dominant, X-linked recessive, and X-linked dominant patterns.
90. Explain how haplotypes are analyzed to identify disease causing alleles in humans
91. List different testing methods for genetic abnormalities.
92. Explain how prions cause disease
93. List the four events that give rise to a body pattern.
94. Outline the four overlapping stages of animal development.
95. List the stages of Drosophila development.
96. Compare and contrast how maternal-effect genes, gap genes, and homeotic genes affect Drosophila development.
97. Explain how an understanding of cell lineages in Caenorhabditis elegans aids in the identification of mutations that affect the timing of developmental changes.
98. Explain how Hox gene expression affects vertebrate development.
99. Describe the extent of polymorphism in natural populations.
100. Use the Hardy-Weinberg equation to calculate allele and genotype frequencies.
101. Define microevolution and explain the role of mutation in microevolution.
102. Explain the process of natural selection.
103. Define genetic drift.
104. Explain and calculate how migration affects allele frequencies between neighboring populations
105. List examples of quantitative traits and explain how they may be described with a frequency distribution.
106. Calculate the mean, variance, standard deviation, and correlation coefficient for quantitative traits and explain their meanings.
107. Define quantitative trait locus and explain how they are mapped along chromosomes using molecular markers
108. Describe how interactions and associations between genotype and environmental factors may affect phenotypic variance.
109. Explain the two factors that lead to adaptive evolution.
110. Define species concept and give examples.
111.

B. Evaluation Methods

ATTENDANCE POLICY:

EVALUATION PROCEDURE AND GRADING POLICY:

LATE ASSIGNMENT POLICY:

CAS CLASSROOM STANDARDS: See Canvas "Syllabus" area

COURSE SCHEDULE (all assignments and due dates):