**BI-102 Learning Objectives – Chapter 12: Patterns of Inheritance**

**Fall '08**

1. Be able to explain what the terms *P*, *F1* and *F2* mean with respect to genetic experiments.
2. Be able to state, explain and use the two “Laws” Mendel deduced from his experimental results.
3. Be able to explain the difference between an individual’s *phenotype* and *genotype*.
4. Be able to analyze and predict the results of *monohybrid* (single characteristic) crosses involving *complete dominance*, *incomplete dominance*, *codominance*, *multiple alleles* and *pleiotropic* genes.
5. Be able to give an example of a gene the expression of which is influenced by the environment.
6. Be able to analyze and predict the results *dihybrid* (two characteristic) crosses involving *complete dominance* and *epistasis*.
7. Be able to explain what a *test cross* is and what information it provides.
8. Be able to analyze and predict the results of test crosses.
9. Be able to describe the general concept of polygenetic inheritance and give an example of its occurrence in humans.
10. Be able to describe the genetics of human ABO blood groups.
11. Be able to solve human ABO blood group problems like those discussed in class and included in the homework assignment.