### Student Learning Outcomes

This course covers fundamental concepts of modern genetics, including the anatomy of a gene, genetic principles, the processes of inheritance, and the role of genetics in the study of evolution. Students will develop an understanding of the scientific principles of genetics and their applications in the life sciences.

### Course Modality

Course Modality: Fully Online

### Required Materials

- *Textbook*: *Principles of Genetics* by John D. Dobzhansky
- *Online Resources*: Access to Canvas LMS and Webcourses

### Course Schedule

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### Course Topics

1. **Introduction to Genetics**
   - Definition of genes and genetic traits
   - Basic Mendelian genetics
   - Understanding genetic diversity

2. **DNA Structure and Function**
   - DNA replication
   - Mutations and repair mechanisms
   - Gene expression

3. **Genetic Variation and Evolution**
   - Population genetics
   - Genetic drift and founder effect
   - Gene flow and migration

4. **Linkage and Mapping**
   - Pedigree analysis
   - Linkage disequilibrium
   - Mapping genes

5. **Genome Organization and Architecture**
   - Chromosome structure
   - Epigenetics
   - Genome organization

6. **Evolutionary Genetics**
   - Molecular evolution
   - Comparative genomics
   - Evolutionary trends

### Assessment

- **Regular Exam 1** (20%)
- **Regular Exam 2** (20%)
- **Final Exam** (20%)
- **Peer Grading** (20%)
- **Assignments** (10%)

### Course Policies

- **Attendance**: Regular attendance is required. Absences will be recorded and may affect your final grade.
- **Homework**: All assignments must be submitted on time to avoid a 5% penalty per day.
- **Exams**: Regular exams are closed-book, closed-notes, and proctored. Special arrangements can be made for students with disabilities.
- **Collaboration**: Collaboration is encouraged, but each student must submit their own work.
- **Plagiarism**: Strict policies against plagiarism will be enforced. Any violation will result in a failing grade for the course.

### Course Information

- **Instructor**: Professor Jane Smith
- **Office Hours**: Office Hours - Monday 8:30am to 10am
- **Office Hours - Monday**: 8:30am to 10am
- **Office Hours - Wednesday**: 8:30am to 10am
- **Office Hours - Wednesday**: 3:30pm to 5:30pm
- **Office Hours - Thursday**: 8:30am to 10am
- **Office Hours - Thursday**: 11am to 1pm
- **Office Hours - Friday**: 8:30am to 10am
- **Office Hours - Friday**: 2:30pm to 4:30pm

### Additional Resources

- **UCF Bookstore**: Access to the course materials and textbooks.
- **Academic Support and Learning Services**: Assistance for students with disabilities.
- **Integrative Learning Site**: A platform for interactive learning experiences.
- **UCF Library**: Access to research resources.

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*UCF Bookstore*: 1111 Co. Rd. 233, Orlando, FL 32816

*Academic Support and Learning Services*: 1000 W. John Young Pkwy, Orlando, FL 32816

*Integrative Learning Site*: [Website](https://example.edu/isl)

*UCF Library*: [Website](https://library.ucf.edu)

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*Note*: Students are encouraged to check their email regularly for updates and important announcements. You may do this by copying and pasting the heading "[Course Name]" into the subject line of your email. This will ensure timely communication.