

**BIOLOGY 7**  
**INTRODUCTION TO THE SCIENCE OF BIOLOGY**  
**Spring 2007**

**Course Information:**

**Lab Instructor:** Jana E. Shober  
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**Lab:** Section 6: MW – 12-1:15, Sequoia 110

File: Bio 7 SYLLABUS 07

**Lecture:** Melanie Loo, MWF – 9:00-9:50 HMB 202

**Required text:** Discover Biology, second edition, by Cain, Damman, Lue, and Yoon, WW Norton, 2002

**Required Lab Manual:** BIO 7 Laboratory Manual, by Melanie Loo, Elaine Kent, and Jennifer Lundmark

**Course Description/Objectives:**

BIO 7 is a required course for students obtaining a Multiple Subject Teaching Credential. BIO 7 is for students who are planning on becoming elementary school (K-8) teachers in California.

**Specific Lab Objectives:** By the end of the semester you should:

- Understand the process of scientific inquiry
- Be able to use appropriate observational and measuring methods
- Be able to write a testable hypothesis and design an experiment with independent, dependent, and controlled variables
- Be able to determine appropriate methods of analyzing data (tables, graphs, statistical tests)
- Understand how experimental and random errors can affect the results of an experiment and know how to minimize these errors
- Be able to classify an organism to its kingdom and sometimes to its phylum
- Understand how molecules' structures and functions are related and can be studied
- Be able to identify prokaryotic and eukaryotic cells under the microscope
- Be able to identify the stages of cell division (mitosis), describe the events occurring at each stage, and relate those events to the properties of the daughter cell produced
- Know and understand experiments which demonstrate factors involved in photosynthesis