





**(09/26//2013).** In theory, a mid-term grade is necessary for a student to assess how s/he is doing in class by midterm. In this course, students will have feedback on at least one major exam by midterm, several lab quizzes, lab assignments, and any homework or writing assignments. The instructor will, in general, assign an overall average grade at this point on the normal scale of A-F viewable on Banner. Students receiving a grade of “D” or lower should therefore carefully evaluate their option of dropping this course by midterm without academic penalty.

**Student identification:** Students should have in their possession at all times their VSU student identification card. In order to verify the identification of students officially enrolled in the course, it is the instructor’s prerogative to request official student photo identification cards at any time during lecture. During examinations, students will routinely be asked to display their VSU student identification cards visibly on the desk top and to make them available for inspection by their instructor and/or assistants.

**Privacy Act (FERPA):** The Family Educational Rights and Privacy Act (FERPA) prohibit the public posting of grades by social security number or in any manner personally identifiable to the individual student. No grades can be given by email or over the telephone, as positive identification cannot be made by this manner.

**Academic conduct:** Cheating and plagiarism will not be tolerated and may result in a failing grade for the assignment, exam or the class. Additionally, students caught cheating will be reported to the Dean of Students. Please see the Department of Biology’s plagiarism policy.

**Disruptive behavior:** No disruptive behavior of any kind will be tolerated in this course. Students should restrict talking and discussion to pertinent questions related to course material and these questions should be directed toward the instructor. Entering a classroom late or early is discouraged. Any student disrupting lectures will be required to leave the classroom. Use 6 689.ad-5(o)-18(n)6( )-2(c)

**TENTATIVE LECTURE OUTLINE: Chapters in Life are listed for 9<sup>th</sup> or 10<sup>th</sup> edition.**

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**Date:**

**Topics:**

**Chapters:**

**Generalized Eukaryotic Cell**

A. NUCLEUS

1. Defining characteristics: membrane bound nucleus, presence of organelles, meiotic division
2. Nucleus: compartmentalization, storage of genetic information
3. Nucleolus: location and function
4. Nuclear envelope, nuclear pores

B. MEMBRANE-BOUND ORGANELLES

1. Mitochondria
  - a. site of ATP production
  - b. self-replication
  - c. inner and outer membrane
2. Lysosomes: membrane vesicle containing hydrolytic enzymes
3. Endoplasmic reticulum:
  - a. rough and smooth components
  - b. rough endoplasmic reticulum site of ribosomes
  - c. double membrane structure, role in membrane biosynthesis
  - d. role in biosynthesis of secreted proteins
4. Golgi apparatus: general structure and role in packaging and secretion

C. PLASMA MEMBRANE

1. General function in cell containment
2. Protein and lipid components, fluid mosaic model
3. Osmosis
4. Passive and active transport
5. Membrane channels
6. Sodium/potassium pump
7. Membrane receptors
8. Membrane potential
9. Exocytosis and endocytosis
10. Cell-cell communication (General concepts of cellular adhesion)
  - a. gap junctions
  - b. tight junctions
  - c. desmosomes

D. CYTOSKELETON

1. General function in cell support and movement
2. Microfilaments: composition and role in cleavage and contractility
3. Microtubules: composition and role in support and transport
4. Intermediate filaments, role in support
5. Composition and function of eukaryotic cilia and flagella

