

Note: The following learning objectives are meant to represent a general overview of the General Biology (BSC 1005) and by no means are to be used as an all inclusive study guide. Requisites for this course include all assigned readings, handouts, written assignments, movies and lectures as well as any extra projects. Students are responsible for all the assigned materials regardless of whether or not said materials have been specifically covered or addressed during class. As always, students with questions regarding assignments, whether covered in class or not, are welcome to come to my office during office hours, or by appointment, or may e-mail at [arodrigu@broward.edu](mailto:arodrigu@broward.edu) their questions to me and I will respond in a timely manner.

## Chapter 2

### 1. Define:

- a. Proton
- b. Neutron
- c. Electron
- d. Ionic
- e. Covalent
- f. Compound
- g. Atom
- h. Isotope

2. List the levels of organization in the atom.

3. Name the general characteristics of the water molecule.

4. List and define the characteristics of Acids and Bases.

### 5. Define:

- a. buffer
- b. neutral
- c. salts

### 6. Define and give examples of:

- a. organic compounds
- b. monomers
- c. disaccharides
- d. polymers
- e. macromolecules

### 7. Define and describe:

- a. carbohydrates
- b. lipids
- c. proteins
- d. nucleic acids

8. Contrast a saturated fat with a non-saturated fat.

9. Define condensation and hydrolysis.

10. Define in proteins, the:

- a. primary structure
- b. secondary structure
- c. tertiary structure
- d. quaternary structure

### Chapter 3

1. List the structural organization of the cells

2. Define:

- a. phospholipids
- b. hydrophilic
- c. hydrophobic

3. What is the cell membrane and why it is important?

4. List the characteristics of Eukaryotic and Prokaryotic cells.

5. Define the following organelles:

- a. nucleus
- b. nucleolus
- c. mitochondria
- d. ER
- e. Ribosome
- f. Cytoskeleton
- g. Golgi body
- h. Chloroplast

6. List the ways that cells move.

### Chapter 4

1. Define the first and second law of thermodynamics

2. List the function of enzymes

3. Define:

- a. Oxidation
- b. Reduction
- c. Metabolism

- d. Osmosis
  - e. Diffusion
  - f. Catabolism
  - g. Anabolism
  - h. Exergonic and endergonic
4. List the components and functions of the:
- a. Chloroplast
  - b. Mitochondria