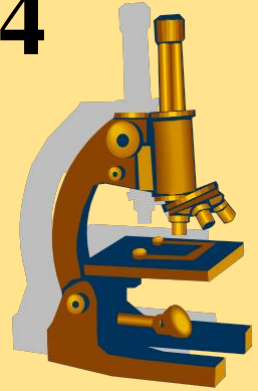


BIOL 1010

Department Wide Final

Exam Assessment

Spring Semester 2014



473 Students

21 Lecture Sections

**2 Full-time Faculty
Members**

9 Adjunct Faculty Members

27 Lab Sections

**11 Part-time Laboratory
Instructors**



Assessment Results listed by Course Objective

BIOL 1010 Departmental Final Exam Spring 2013			
Question#	Course Objective	Proficiency	St Deviation
1	2. The characteristics that describe living organisms [life].	96%	6.7
2	3. The hierarchy of biological organization.	78%	11.7
3	4. The diversity and general classification of living organisms	95%	9.5
4	6. The value and use science as a process of obtaining knowledge based upon observable evidence.	66%	15.5
5	1. That all matter is composed of chemical elements.	78%	22.7
6	3. The structure and chemical properties of atoms.	77%	14.9
7	4. That atoms react with one another to form molecules through chemical bonds and attractions.	76%	12.6
8	5. The structure and unique properties of water.	72%	8.2
9	1. The chemical properties of carbon atoms.	85%	8.6
10	3. The synthesis and breakdown of biological polymers.	47%	13.9
11	4. The basic structure and function of the four types of biological macromolecules.	58%	12.4
12	1. That cells are the basic units of life.	70%	13.9
13	2. The different sizes and types of cells and how cells are studied.	83%	15.5
14	3. The basic structures found in prokaryotic and eukaryotic cells.	86%	10.4
15	5. That cells carry-out energy transformations.	63%	12.5
16	1. Energy and the laws that govern energy transformations.	72%	15.0
17	2. The basics of cellular metabolism [endergonic/exergonic].	81%	16.9
18	3. The structure and cycle of adenosine triphosphate [ATP].	57%	19.6
19	5. The structure and function of the plasma membrane.	80%	13.7
20	1. That autotrophs are the producers of the biosphere.	58%	11.7
21	3. That photosynthesis involves two sets of reactions: The light reactions and the Calvin cycle reactions.	86%	12.1
22	4. The Light reaction absorbs solar energy and converts it into chemical energy.	36%	14.8
23	5. The Calvin cycle [dark reaction] produces a carbohydrate using CO ₂	82%	14.9
24	7. That photosynthesis helps moderate global climate change.	65%	14.0
25	2. That cellular respiration [aerobic] is a redox reaction that requires oxygen.	42%	13.3
26	3. That cellular respiration has four phases. Three phases occur in the mitochondria.	92%	8.6
27	4. The electron transport chain captures much energy.	52%	17.8
28	6. The types of anaerobic respiration [Fermentation].	71%	11.5
29	1. That cell division ensures the transmission of genetic information.	51%	17.0
30	2. That cell division is involved in both asexual and sexual reproduction.	74%	12.1
31	3. That prokaryotes reproduce asexually.	33%	21.7
32	5. That cancer is uncontrolled cell division.	69%	9.9
33	7. That meiosis halves the number of chromosomes because homologous chromosomes separate during Meiosis. Synapsis and crossing-over also occur during meiosis.	68%	11.9
34	9. The types and causes of chromosomal mutations.	65%	12.4
35	2. The units of inheritance are alleles of genes.	60%	13.7
36	3. That Mendel's law of segregation describes how gametes pass on traits.	73%	8.9
37	4. That Mendel's law of independent assortment describes inheritance of multiple traits.	88%	12.0
38	6. The more complex patterns of non-Mendelian genetics (incomplete, complete, polygenic, pleiotropy etc.).	61%	20.2
39	8. That chromosomes are the carriers of genes.	50%	17.3
40	2. The Structure of the DNA double helix.	50%	25.3
41	4. That genes specify the makeup of proteins.	59%	15.5
42	6. The genetic code for amino acids is a triplet code that is virtually universal.	66%	16.2
43	1. The development of evolutionary theory.	71%	23.0
44	3. The evidences for the principle/theory of evolution.	37%	19.0
45	5. The various ways genetic variation arises in populations.	71%	15.0
46	1. That species have been defined in more than one way.	74%	12.1
47	3. The basic concept of macroevolution and speciation and that the origin of new species usually requires Geographic separation [e.g. allopatric speciation].	76%	16.8
48	5. The fossil record shows both gradual and rapid speciation.	68%	11.3
49	2. That continental drift and mass extinctions have affected the history of life.	67%	17.0
50	4. The three-domain classification system.	41%	28.9

