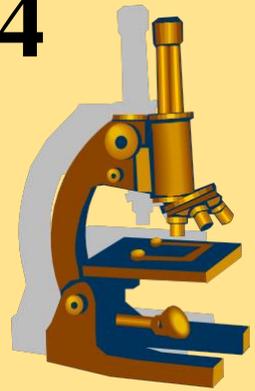


BIOL 1090
Department Wide Final
Exam Assessment
Spring Semester 2014



766 Students

34 Lecture Sections

**3 Full-time Faculty
Members**

12 Adjunct Faculty Members

Salt Lake
Community
College



Step Ahead.



Assessment Results listed by Course Objective

BIOL 1090 Departmental Final Exam Spring 2014			
Question#	Course Objective	Proficiency	St Deviation
Obj.#	Objective	57.31	36.50
1.0	Formulate a hypothesis based on observations.	53.13	38.09
2.0	Distinguish between a hypothesis and a theory	54.01	33.58
3.0	Explain the variables that affect the validity of experimental data.	37.93	22.88
4.0	Illustrate the difference between anecdotal evidence and credible evidence.	28.55	25.89
5.0	List the commonalities shared by living organisms.	45.30	26.65
6.0	Explain how the polarity of water allows it to participate in chemical reactions.	45.08	28.59
7.0	Illustrate the difference between ionic bonding and covalent bonding.	49.46	28.01
8.0	State the four biological macromolecules and explain the function of each.	61.11	42.94
9.0	Differentiate between the major cell components by explaining the function of	41.07	26.38
10.0	Describe the classification scheme used to organize living organisms.	49.82	30.17
11.0	Identify dietary sources of vitamins and effects of deficiency or excess.	48.20	28.33
12.0	Illustrate the role of enzymes in metabolism.	31.61	24.25
13.0	Compare and contrast diffusion, osmosis, and active transport.	48.72	27.02
14.0	Use the greenhouse effect to show the relationship between rising CO ₂ and	44.01	25.37
15.0	Describe the basic steps of cellular respiration.	40.61	25.58
16.0	Contrast the behavior of normal cells with the behavior of cancer cells.	58.04	35.22
17.0	Explain how mutations can lead to the formation of cancer cells.	49.58	26.97
18.0	Compare and contrast mitosis and meiosis, identifying when they occur and what	42.35	25.61
19.0	Identify and explain the main processes that contribute to genetic diversity.	39.00	26.68
20.0	Use examples to contrast genotype and phenotype.	47.80	27.76
21.0	Construct a Punnett square to predict the inheritance of a recessive disease.	30.87	24.70
22.0	Use Punnett squares to predict the phenotypic results from crosses involving	60.38	39.75
23.0	Construct a pedigree that illustrates the inheritance of a sex-linked trait.	48.89	29.40
24.0	Explain why some mutations may not be harmful.	35.16	24.91
25.0	Describe the technical, social and ethical aspects of at least one new	47.29	29.08
26.0	Describe the general outline of Darwin's theory of evolution by natural selection.	29.59	24.81
27.0	Give examples of the five sources of evidence that support the theory of evolution.	52.00	32.33
28.0	Explain why alternative theories do not fit the diversity observed on earth.	50.42	31.15
29.0	Illustrate the role of natural selection in the rise of antibiotic resistant bacteria.	59.27	36.14
30.0	Summarize evolutionary mechanisms that have led to differences between human	50.68	30.31
31.0	Summarize the concept of races and the effects of cultural influence.	53.26	31.19
32.0	Describe the biological classification of human beings.	40.19	28.97
33.0	State the basic functions of the four different types of tissues.	37.88	25.43
34.0	Differentiate between the various types of connective tissues.	30.30	20.33
35.0	Illustrate the differences between smooth, cardiac, and skeletal muscle tissues.	54.17	31.52
36.0	Diagram the path of food as it goes through the digestive system.	56.82	38.03
37.0	Explain the function of feedback systems, giving examples of both positive and negative feedback.	29.95	23.05
38.0	Describe the basic structure and function of the respiratory system.	48.75	28.20
39.0	Describe the basic structure and function of the cardiovascular system.	44.25	30.25
40.0	Trace the path of oxygen through the respiratory and cardiovascular systems to the	29.38	24.93
41.0	Describe and give examples of the major methods by which infectious agents are	41.20	25.01
42.0	Define the components of the three lines of defense, and illustrate the functions of	30.11	28.71
43.0	Describe the basic structure and function of the endocrine system.	57.75	38.46
44.0	Describe the basic structure and function of the musculoskeletal system.	58.65	39.55
45.0	Illustrate how gender-specific hormones affect males and females.	64.02	45.40
46.0	Identify specific bones and muscles in the body.	45.76	28.58
47.0	Label a diagram of the male and female reproductive systems.	49.43	30.18
48.0	Summarize the basic steps of gametogenesis in males and females.	43.20	25.10
49.0	Illustrate the development from zygote to fetus.	44.68	27.55

