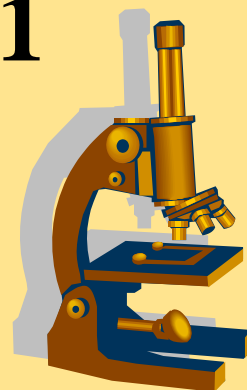


BIOL 1010

Department Wide

Final Exam Assessment

Spring Semester 2011



641 Students

21 Lecture Sections (ACS = 30.5)

1 Full-time Faculty Member

11 Adjunct Faculty Members

28 Lab Sections (ACS = 22.9)

9 Part-time Laboratory Instructors



Step Ahead.



Assessment Results listed by Course Objective

BIOL 1010 Departmental Final Exam Spring 2011			
Question #	Course Objective	Proficiency	St Deviation
1	2. The characteristics that describe living organisms (life).	71%	10%
2	3. The hierarchy of biological organization.	59%	6%
3	4. The diversity and general classification of living organisms	49%	10%
4	6. The value and use science as a process of obtaining knowledge based upon observable evidence.	57%	16%
5	1. That all matter is composed of chemical elements.	65%	33%
6	3. The structure and chemical properties of atoms.	63%	11%
7	4. That atoms react with one another to form molecules through chemical bonds and attractions.	50%	15%
8	5. The structure and unique properties of water.	86%	8%
9	1. The chemical properties of carbon atoms.	74%	14%
10	3. The synthesis and breakdown of biological polymers.	57%	8%
11	4. The basic structure and function of the four types of biological macromolecules.	75%	9%
12	1. That cells are the basic units of life.	85%	8%
13	2. The different sizes and types of cells and how cells are studied.	51%	13%
14	3. The basic structures found in prokaryotic and eukaryotic cells.	43%	16%
15	5. That cells carry-out energy transformations.	78%	9%
16	1. Energy and the laws that govern energy transformations.	30%	11%
17	2. The basics of cellular metabolism (endergonic/exergonic).	49%	13%
18	3. The structure and cycle of adenosine triphosphate (ATP).	58%	17%
19	5. The structure and function of the plasma membrane.	69%	12%
20	1. That autotrophs are the producers of the biosphere.	39%	6%
21	3. That photosynthesis involves two sets of reactions: The light reactions and the Calvin cycle reactions.	67%	10%
22	4. The light reaction absorbs solar energy and converts it into chemical energy.	23%	10%
23	5. The Calvin cycle (dark reaction) produces a carbohydrate using CO ₂	64%	9%
24	7. That photosynthesis helps moderate global climate change.	42%	6%
25	2. That cellular respiration (aerobic) is a redox reaction that requires oxygen.	54%	12%
26	3. That cellular respiration has four phases. Three phases occur in the mitochondria.	37%	11%
27	4. The electron transport chain captures much energy.	19%	4%
28	6. The types of anaerobic respiration (Fermentation).	34%	14%
29	1. That cell division ensures the transmission of genetic information.	80%	9%
30	2. That cell division is involved in both asexual and sexual reproduction.	83%	8%
31	3. That prokaryotes reproduce asexually.	87%	7%
32	5. That cancer is uncontrolled cell division.	68%	6%
33	7. That meiosis halves the number of chromosomes because homologous chromosomes separate during meiosis. Synapsis and crossing-over also occur during meiosis.	34%	11%
34	9. The types and causes of chromosomal mutations.	78%	14%
35	2. The units of inheritance are alleles of genes.	32%	6%
36	3. That Mendel's law of segregation describes how gametes pass on traits.	33%	11%
37	4. That Mendel's law of independent assortment describes inheritance of multiple traits.	30%	6%
38	6. The more complex patterns of non-Mendelian genetics (incomplete, complete, polygenic, pleiotropy etc).	31%	19%
39	8. That chromosomes are the carriers of genes.	65%	13%
40	2. The Structure of the DNA double helix.	70%	8%
41	4. That genes specify the makeup of proteins.	60%	7%
42	6. The genetic code for amino acids is a triplet code that is virtually universal.	47%	18%
43	1. The development of evolutionary theory.	17%	7%
44	3. The evidences for the principle/theory of evolution.	87%	3%
45	5. The various ways genetic variation arises in populations.	35%	13%
46	1. That species have been defined in more than one way.	55%	10%
47	3. The basic concept of macroevolution and speciation and that the origin of new species usually requires geographic separation (e.g. allopatric speciation).	62%	12%
48	5. The fossil record shows both gradual and rapid speciation.	48%	8%
49	2. That continental drift and mass extinctions have affected the history of life.	41%	8%
50	4. The three-domain classification system.	63%	20%

Assessment Results listed by Increasing Proficiency

BIOL 1010 Departmental Final Exam Spring 2011			
Question #	Course Objective	Proficiency	St Deviation
43	1. The development of evolutionary theory.	17%	7%
27	4. The electron transport chain captures much energy.	19%	4%
22	4. The light reaction absorbs solar energy and converts it into chemical energy.	23%	10%
16	1. Energy and the laws that govern energy transformations.	30%	11%
37	4. That Mendel's law of independent assortment describes inheritance of multiple traits.	30%	6%
38	6. The more complex patterns of non-Mendelian genetics (incomplete, complete, polygenic, pleiotropy etc).	31%	19%
35	2. The units of heritance are alleles of genes.	32%	6%
36	3. That Mendel's law of segregation describes how gametes pass on traits.	33%	11%
28	6. The types of anaerobic respiration (Fermentation).	34%	14%
33	7. That meiosis halves the number of chromosomes because homologous chromosomes separate during meiosis. Synapsis and crossing-over also occur during meiosis.	34%	11%
45	5. The various ways genetic variation arises in populations.	35%	13%
26	3. That cellular respiration has four phases. Three phases occur in the mitochondria.	37%	11%
20	1. That autotrophs are the producers of the biosphere.	39%	6%
49	2. That continental drift and mass extinctions have affected the history of life.	41%	8%
24	7. That photosynthesis helps moderate global climate change.	42%	6%
14	3. The basic structures found in prokaryotic and eukaryotic cells.	43%	16%
42	6. The genetic code for amino acids is a triplet code that is virtually universal.	47%	18%
48	5. The fossil record shows both gradual and rapid speciation.	48%	8%
3	4. The diversity and general classification of living organisms	49%	10%
17	2. The basics of cellular metabolism (endergonic/exergonic).	49%	13%
7	4. That atoms react with one another to form molecules though chemical bonds and attractions.	50%	15%
13	2. The different sizes and types of cells and how cells are studied.	51%	13%
25	2. That cellular respiration (aerobic) is a redox reaction that requires oxygen.	54%	12%
46	1. That species have been defined in more than one way.	55%	10%
10	3. The synthesis and breakdown of biological polymers.	57%	8%
4	6. The value and use science as a process of obtaining knowledge based upon observable evidence.	57%	16%
18	3. The structure and cycle of adenosine triphosphate (ATP).	58%	17%
2	3. The hierarchy of biological organization.	59%	6%
41	4. That genes specify the makeup of proteins.	60%	7%
47	3. The basic concept of macroevolution and speciation and that the origin of new species usually requires geographic separation (e.g. allopatric speciation).	62%	12%
6	3. The structure and chemical properties of atoms.	63%	11%
50	4. The three-domain classification system.	63%	20%
23	5. The Calvin cycle (dark reaction) produces a carbohydrate using CO ₂	64%	9%
39	8. That chromosomes are the carriers of genes.	65%	13%
5	1. That all matter is composed of chemical elements.	65%	33%
21	3. That photosynthesis involves two sets of reactions: The light reactions and the Calvin cycle reactions.	67%	10%
32	5. That cancer is uncontrolled cell division.	68%	6%
19	5. The structure and function of the plasma membrane.	69%	12%
40	2. The Structure of the DNA double helix.	70%	8%
1	2. The characteristics that describe living organisms (life).	71%	10%
9	1. The chemical properties of carbon atoms.	74%	14%
11	4. The basic structure and function of the four types of biological macromolecules.	75%	9%
15	5. That cells carry-out energy transformations.	78%	9%
34	9. The types and causes of chromosomal mutations.	78%	14%
29	1. That cell division ensures the transmission of genetic information.	80%	9%
30	2. That cell division is involved in both asexual and sexual reproduction.	83%	8%
12	1. That cells are the basic units of life.	85%	8%
8	5. The structure and unique properties of water.	86%	8%
31	3. That prokaryotes reproduce asexually.	87%	7%
44	3. The evidences for the principle/theory of evolution.	87%	3%

Assessment Results listed by decreasing Standard Deviation

BIOL 1010 Departmental Final Exam Spring 2011			
Question #	Course Objective	Proficiency	St Deviation
5	1. That all matter is composed of chemical elements.	65%	33%
50	4. The three-domain classification system.	63%	20%
38	6. The more complex patterns of non-Mendelian genetics (incomplete, complete, polygenic, pleiotropy etc).	31%	19%
42	6. The genetic code for amino acids is a triplet code that is virtually universal.	47%	18%
18	3. The structure and cycle of adenosine triphosphate (ATP).	58%	17%
14	3. The basic structures found in prokaryotic and eukaryotic cells.	43%	16%
4	6. The value and use science as a process of obtaining knowledge based upon observable evidence.	57%	16%
7	4. That atoms react with one another to form molecules through chemical bonds and attractions.	50%	15%
9	1. The chemical properties of carbon atoms.	74%	14%
28	6. The types of anaerobic respiration (Fermentation).	34%	14%
34	9. The types and causes of chromosomal mutations.	78%	14%
39	8. That chromosomes are the carriers of genes.	65%	13%
13	2. The different sizes and types of cells and how cells are studied.	51%	13%
45	5. The various ways genetic variation arises in populations.	35%	13%
17	2. The basics of cellular metabolism (endergonic/exergonic).	49%	13%
19	5. The structure and function of the plasma membrane.	69%	12%
47	3. The basic concept of macroevolution and speciation and that the origin of new species usually requires geographic separation (e.g. allopatric speciation).	62%	12%
25	2. That cellular respiration (aerobic) is a redox reaction that requires oxygen.	54%	12%
33	7. That meiosis halves the number of chromosomes because homologous chromosomes separate during meiosis. Synapsis and crossing-over also occur during meiosis.	34%	11%
6	3. The structure and chemical properties of atoms.	63%	11%
36	3. That Mendel's law of segregation describes how gametes pass on traits.	33%	11%
16	1. Energy and the laws that govern energy transformations.	30%	11%
26	3. That cellular respiration has four phases. Three phases occur in the mitochondria.	37%	11%
22	4. The light reaction absorbs solar energy and converts it into chemical energy.	23%	10%
1	2. The characteristics that describe living organisms (life).	71%	10%
21	3. That photosynthesis involves two sets of reactions: The light reactions and the Calvin cycle reactions.	67%	10%
46	1. That species have been defined in more than one way.	55%	10%
3	4. The diversity and general classification of living organisms	49%	10%
15	5. That cells carry-out energy transformations.	78%	9%
29	1. That cell division ensures the transmission of genetic information.	80%	9%
11	4. The basic structure and function of the four types of biological macromolecules.	75%	9%
23	5. The Calvin cycle (dark reaction) produces a carbohydrate using CO ₂	64%	9%
40	2. The Structure of the DNA double helix.	70%	8%
49	2. That continental drift and mass extinctions have affected the history of life.	41%	8%
10	3. The synthesis and breakdown of biological polymers.	57%	8%
8	5. The structure and unique properties of water.	86%	8%
12	1. That cells are the basic units of life.	85%	8%
30	2. That cell division is involved in both asexual and sexual reproduction.	83%	8%
48	5. The fossil record shows both gradual and rapid speciation.	48%	8%
41	4. That genes specify the makeup of proteins.	60%	7%
31	3. That prokaryotes reproduce asexually.	87%	7%
43	1. The development of evolutionary theory.	17%	7%
35	2. The units of heritance are alleles of genes.	32%	6%
32	5. That cancer is uncontrolled cell division.	68%	6%
20	1. That autotrophs are the producers of the biosphere.	39%	6%
24	7. That photosynthesis helps moderate global climate change.	42%	6%
2	3. The hierarchy of biological organization.	59%	6%
37	4. That Mendel's law of independent assortment describes inheritance of multiple traits.	30%	6%
27	4. The electron transport chain captures much energy.	19%	4%
44	3. The evidences for the principle/theory of evolution.	87%	3%