

BIOLOGY A Section 0392- **INTRODUCTION TO BIOLOGY**
Kareen Martin

The class meets from Mondays to Thursdays from 8am to 10:05am in MSA 005.

Contact:

- **email:** martink@wlaac.edu
- **Office hours:** Mondays to Thursdays from 7:30am to 8am in MSB 211

Course description:

This course covers the major principles of biology. The lecture will include basic biological molecules, cell structure and function, energy acquisition, the mechanisms of heredity, gene expression and the organization of the human body. This course is designed for students who are not biology majors.

Grading:

Your grade will be based upon the following scores:

2 Exams	200 points
4 Assignments	100 points
Total points	300 points

• **EXAMS (100 points each)**

- 2 exams will be administered.
- Exams will consist of objective-type questions (true/false, multiple choice)
- They will be on **January 19th and February 4th**.
- **Missed Exam:** All exams must be taken on the day decided by the instructor. **NO MAKE UP EXAMS** will be given for any reason. Any exam that is missed will receive a zero on it.

• **ASSIGNMENTS (25 points each).**

- There will be 4 assignments.
- Assignments will be given on a Monday. **You will have until the following Monday night to complete these assignments.**
- Assignments could be activities such as small written essays, participation into a discussion. **Any plagiarism will result in a zero**

Grading policy:

The grade scale for the entire course will be assigned using a percentage system:

A	B	C	D	F
89-100%	76-88%	60-75%	50-59%	below 50%

Religious holidays:

If you are going to miss an exam due to religious holidays, inform me **in writing** within the first 2 weeks of class. You will need to provide the appropriate verifications from your religious leader. We will meet and discuss the arrangements.

ADA Accommodations:

If you require accommodations as per ADA, you must register with the college's disabled student services and inform me (in writing) prior to the end of the 2nd week of class.

Recommendations for succeeding in this class:

Study and review each day. Here are some suggestions:

- every time you study, spend at least 10 minutes reviewing previous lessons (this is the secret to long term memory)
- prepare note cards and use them to help you review
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STUDENT LEARNING OUTCOMES

- Describe the characteristics of living things.
- Describe how living things are classified.
- Describe the scientific method; define the terms hypothesis, variable, experimental control.
- Describe the forces that attract atoms.
- Recognize functional groups found in biological molecules.
- Differentiate prokaryotic and eukaryotic cells.
- Describe the structures and functions of the different parts of a cell.
- Predict the movement of molecules in diffusion and osmosis.
- Define catalyst, enzyme and active site.
- Describe how ATP is used in metabolism.
- Describe the role of electron carrier transport chain in eukaryotic cells.
- Define autotroph and heterotroph.
- Compare and differentiate cellular respiration and photosynthesis.
- Compare and contrast the role and stages of meiosis and mitosis.
- Recognize the contribution of Gregor Mendel.
- Contrast genotype and phenotype.
- Compare complete dominance and incomplete dominance.
- Describe how DNA is copied and replicated.
- Name the 3 major types of RNA and tell how they function in protein synthesis.
- Explain how a cell controls gene expression.
- Define Biological evolution and discuss the four lines of evidence for evolution.
- Name the processes that occur in organisms that make variation of phenotypes possible.
- Explain the role of beneficial mutation and neutral mutation in evolution.

WEEK	THEME	MODULES	ACTIVITIES
1 January 4 th to 7 th	Introduction- CHEMISTRY	<ul style="list-style-type: none"> • Introduction to Study of Life • Molecules of Life • Organic Molecules 	<ul style="list-style-type: none"> • Assignment 1
2 January 11 th to 14 th	The CELL	<ul style="list-style-type: none"> • The Cell • Membrane Structure and Function • Cell Division 	<ul style="list-style-type: none"> • Assignment 2
3 January 18 th	<i>MLK Day</i>	<i>Campus closed</i>	
3 January 19 th			EXAM 1
3 January 20 th to 21 st	ENERGY	<ul style="list-style-type: none"> • Metabolism: Energy and Enzyme • Cellular Respiration • Photosynthesis 	<ul style="list-style-type: none"> • Assignment 3
4 January 25 th to 28 th	DNA	<ul style="list-style-type: none"> • DNA structure • Gene Expression • Biotechnology 	<ul style="list-style-type: none"> • Assignment 4 (Museum Assignment)
5 Feb 1 st to 3 rd	GENETICS And EVOLUTION	<ul style="list-style-type: none"> • Genetics and Inheritance • Evolution 	
5 Feb 4 th			EXAM 2