Biology 3 Section 0138 and 0139: Introduction to Biology
Los Angeles Mission College Fall 2014

Instructor: Dr. Sheila Fennoy
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Fall 2014: Mon Sept 2 – Dec 20

*Ask questions, send personal message or chat with others on: www.*etudes.org
Prof Fennoy's website: http://www.lamission.edu/~fennoys

Lecture: MW 12:15 - 1:40 PM Room CMS 004 Class includes 2 days of lecture and 1 day of lab each week.
Laboratory: Section 0138 meets Mondays: Section 0139 meets Wednesdays 2p-5:10 p Rm CMS 110
Office Hours: MW 11:15-12:05 PM Room CMS106; *My Campus Phone Ext: 818-364-4269*
Life Sc. website - http://www.lamission.edu/lifesciences : **you will find copies of the lab manual. Please print the worksheet for the first lab only. Purchase the entire lab manual from the bookstore.**

Advisory: *English 28 or ESL8 is a prerequisite for taking this class.*
- College-level reading, writing and study skills is essential to success in the course.

Drop Dates	Holidays
Last day to apply for refund and without W- Sept. 14 Last day to drop with W - November 23 Final Exams: Mon: 12/15	Labor Day – Mon. September 1 Veteran's Day –Tue. November 11 Thanksgiving – Thur. November 27 – Sun 30

It is your responsibility to drop the class by the appropriate deadlines.

Articulation: Biology 3 articulates with CSUN 101 & 101L; CSULA 155 or 156 or 180. You are also encouraged to view articulation agreements at assist.org.

Biology 3 examines the fundamental principles of biology with laboratories emphasizing hands-on investigations. Topics include an introduction to evolutionary theory, basic biological chemistry, cell function and reproduction, cellular respiration and photosynthesis, classical and contemporary genetics, gene expression and an introduction to animal structure and function.

STUDENT LEARNING OUTCOME

1) Analyze a scientific experiment and determine the major components.
2) Graph, interpret, and analyze data pertaining to a biological process.
3) Analyze a genetic problem to determine the probabilities of genotypic and phenotypic outcomes.
4) Given a DNA sequence, BIO3 students will apply the principles of gene expression to determine the protein product.

COURSE OBJECTIVES
(1) To develop learning skills necessary for academic and professional success.
(2) To grow as a citizen to support the academic growth of our children and our community.
(3) To gain the knowledge to teach our children how to maintain healthy minds, bodies and ecosystems.
(4) To learn how to be resourceful
(5) To learn to work as a team in problem solving and the art of exchanging information for greater understanding
(6) To learn to make informed lifestyle decisions that will allow for a sustainable future and to become responsible global citizens.
(7) To become a critically thinking member of our democratic society, being able to read and discuss issues raised by modern advances in the life sciences

Materials Required: *You will be dropped from class if not obtained by first meeting of second week.*

1. A text book either:
   a. **Biology: Concepts & Connections**, Campbell et. al. (Pearson-Benjamin Cummings)

(Online access to **Mastering Biology** – http://www.masteringbio.com/

or b: Essential Biology w/ Physiology Alc+Mastering Biology Card 4/E Campbell (ISBN 978-0-321-7882-1 4th Edition)

2. "Lab Pack" Biol 3 available in the bookstore : Temporary printouts can be made at the following website: http://www.lamission.edu/lifesciences/Biology3Laboratories.aspx
3. No less than 5 Scantron Forms (882-ES) and pencils (#2) for exams and genetics laboratory and mitosis and meiosis handouts.

EXPECTATIONS:

Academic. You are expected to read and study the assigned text chapters before coming to class. Proficiency on exams and quizzes. You must demonstrate a proficiency in the reading and writing subject matter covered in both labs, lectures by passing weekly quizzes. There will be a number of exams covering the assigned reading at the start of class. Exams will cover your comprehension of concepts from lecture notes, lab, discussions, and your memory of terminology.

Attendance and participation is mandatory. You should drop the class if you know you will miss 3 classes. Continual tardiness will be looked upon as an unexcused absence. Students who attend class, take detailed notes and study those notes and the text receive passing grades. Students absent 3 or more times from class will be dropped from the roster. Points are lost for leaving lecture early.

Discipline: You will loose points for using cell phones in class, for having the phone on and ringing, or for texting in class. Under no circumstances are cell phone to be used in class. Leave the class when an emergency arises.

Laboratory: The laboratory will reinforce fundamental concepts related to lecture topics and the scientific method. During every lab emphasis is placed on measuring, graphing, recording and interpreting experimental results. There will be a lab quiz at the start of *every* lab. Each quiz is worth 10 points. Quizzes cover information from the current and previous lab as well as information from lecture. A lab practicum worth 50 points is given on the last day of on campus lab. You will loose 2 points each time you are reminded that there is No Eating in lab. Lab reports are worth 10 points each. No credit can be given on assignments or reports from a student who did not attend the class.

Examinations: Several exams worth 100 points are taken during the semester and a *comprehensive* final, at the end. There are no make-up exams. The lowest exam score will be dropped when evaluating the final score. Students caught cheating will automatically receive a zero "0" on that exam. Cheating is grounds for dismissal from *the college*.

Written Assignments:

Your Biology Grade is based on: percentage of TOTAL POINTS you earn

40% LAB		**60 % EXAMS AN LECTURE PRESENTATION**	
Laboratory practicum	100	Your Biology Grade is based on:	
Laboratory reports	150	3 lecture exams (100 points each)	300 pts
Quizzes	100	Final examination	200
		Online 1	25
* Credit upt to 20 pts can be made for missing lab and quiz by completing specific off campus activity.		Human Evolution Article Review	50
		Participation and Review Sessions. *****Uncertain	

Grade Scale: Letter grades are based on the following

A:90-100% B: 80-89% C:70-79% D:60-69% F:59% or less

Lab Schedule

Week		
1	*Holiday*	*Lab 1: Sci Method*
2	*Lab 1: Sci Method*	*Lab 2: Metric*
3	*Lab 2: Metric*	*Lab 3: Water and pH*
4	*Lab 3: Water and pH*	*Lab 4: Microscope*
5	*Lab 4: Microscope*	*Lab 5: Macromolecules*

6	*Lab 5: Macromolecules*	*Lab 6: Enzymes*
7	*Lab 6: Enzymes*	*Lab 7: Cell Respiration*
8	*Lab 7: Cell Respiration*	*Lab 8: Photosynthesis*
9	*Lab 8: Photosynthesis*	*Lab 9: Mitosis and Meiosis*
10	*Lab 9: Mitosis and Meiosis*	*Lab 10:Genetics*
11	*Lab 10:Genetics*	*Lab 11: DNA and Gene Expression*
12	*Lab 11: DNA and Gene Expression*	*Lab 12: Natural Selection*
13	*Lab 12: Natural Selection*	*Human Body Topics*
14	*Lab13:Circulation*	*Lab13:Circulation*
Week 15 Dec 8 & 10	***Laboratory Final Practical Exam***	***Laboratory Final Practical Exam***

TENTATIVE UNIT LECTURE TOPICS	
Unit 1	Lect 1. Introduction To Biology And The Scientific Method: Scientific Inquiry Metric System, Graphing Lect 2: Chemistry Of Life. Atomic Structure, Ions, Bonds And Properties Of Water Lect 3: Molecules Of Cells. Buffers and pH, Mono And Polysaccharides and Proteins Lect 4: Molecules Of Cells. Lipids And Nucleic Acids Lect 5: Cells. Prokaryotes And Eukaryotes Cell Structure. The 5 Kingdoms of Life. Lect 6: Intro To The Plasma Membrane
	Exam for Unit 1
Unit 2	Lect 7: Cellular Work: Enzymes, Membrane Transport, Osmosis, Passive And Active Lect 8: The Digestive & Nutrition Lect 9: Transport in Plants and Animals. Lect 10: Cell Respiration and making Cell Energy Lect 11: Photosynthesis Lec 12: The Role of Mitosis & Meiosis in Sexual Repro of Plants and Animal **Exam for Unit 2**
Unit 3	Lect 13: Genetics and Principles of Inheritance Lect 14: DNA and RNA Replication. Lect 15: Transcription And Translation Lect 16: Regulation Of Gene Expression. Promoter, Enhancer, Gene Sequences Lect 17: Biotechnology Lect 18: Principles Evolution: Evidence for Evolution How Natural Selection Works. Overview of Evolution of Plant and Animal Migration to Land
	Lecture Exam #3
Unit 4:	Structure And Function In The Human Body : **Lect 19:** Cells, Tissues And Organs and the Integumentary System **Lect 20:** The Nervous System Lect 21: The Endocrine & Reproductive System In Animals And Plants **Lect 22:** The Cardiovascular and Respiratory Systems. Lect 23: The Immune System Lec 24: The Excretory System; Salt and Water Balance Lec 25: The Skeletal And Muscular System
	FINAL EXAMINATION Mon, Dec 15, 2014 12:30pm to 2:30pm.