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

Instructor: Dr. Sheila Fennoy
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Spr 2014: Mon Feb 10 – June 9

*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 AM 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

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.

Important Dates	Holidays
Drop w refund and no W- Feb 23 Last Date to drop (must be online) May 11 Final Exam Week: June 5 to 9	Martin Luther King – Jan 20 President's Day – Feb 14 to 17 Cesar Chavez Day – March 31 Spring Break – April 7 to 13 Memorial Day – May 26 Non-Instructional Day – May 27 (No classes/College services open) Independence Day – July 4

It is your responsibility to drop the class by the appropriate deadlines, May 11th.

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.

COURSE DESCRIPTION

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 FOR BIO3

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 science

BOOK AND RESOURCE REQUIREMENTS:

1. **Biology: Concepts & Connections**, Campbell et. al. (Pearson-Benjamin Cummings) 7th Edition 2011
(Online access to **Mastering Biology** – http://www.masteringbio.com/
2. Laboratory: Biology 3 "Lab Pack" available in the bookstore or for free download at:
http://www.lamission.edu/lifesciences/Biology3Laboratories.aspx
3. Scantron Forms (882-ES) and pencils (#2) for exams and genetics laboratory and mitosis and meiosis handouts.
You will be ~~dropped~~ from class if not obtained by first meeting of second week

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: TOTAL POINTS 1060

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 Discussions (3) at 25 each	75
*Extra Credit can be used in special circumstances, to replace up to 20 lab pts.		Human Evolution Online Essay	50
		Participation and Review Sessions.	75

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

	TENTATIVE UNIT LECTURE TOPICS **Exam follows completion of the 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
	Exam for Unit 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 **Exam for Human Body**
	FINAL EXAMINATION Mon, June 9, 2014 12:30pm to 2:30pm.

	MON	TUES	WED	THURS	
WEEK 1	10-Feb Lab 1-Sci Meth (Part 1)	11-Feb Lab 1-Sci Meth (Part 1)	12-Feb Lab 1-Sci Meth (Part 1)	13-Feb Lab 1-Sci Meth (Part 1)	WEEK1
WEEK 2	17-Feb HOLIDAY	18-Feb Lab 1-Sci Meth (Part 2)	19-Feb Lab 1-Sci Meth (Part 2)	20-Feb Lab 1-Sci Meth (Part 2)	WEEK 2
WEEK 3	24-Feb Lab 1-Sci Meth (Part 2)	25-Feb Lab 2- Molecules & pH	26-Feb Lab 2- Molecules & pH	27-Feb Lab 2- Molecules & pH	WEEK 3
WEEK 4	3-Mar Lab 2- Molecules & pH	4-Mar Lab 3- Microscope	5-Mar Lab 3- Microscope	6-Mar Lab 3- Microscope	WEEK 4
WEEK 5	10-Mar Lab 3- Microscope	11-Mar Lab 4- Macromolecules	12-Mar Lab 4- Macromolecules	13-Mar Lab 4- Macromolecules	WEEK 5
WEEK 6	17-Mar Lab 4- Macromolecules	18-Mar Lab 5- Enzymes	19-Mar Lab 5- Enzymes	20-Mar Lab 5- Enzymes	WEEK 6
WEEK 7	24-Mar Lab 5- Enzymes	25-Mar Lab 6- Respiration	26-Mar Lab 6- Respiration	27-Mar Lab 6- Respiration	WEEK 7
WEEK 8	31-Mar HOLIDAY	1-Apr Lab 7- Photosynthesis	2-Apr Lab 7- Photosynthesis	3-Apr Lab 7- Photosynthesis	WEEK 8
WEEK 9	7-Apr ####### SPRING	8-Apr ################	9-Apr ########BREAK	10-Apr ################	WEEK 9
WEEK 10	14-Apr Lab 6- Resp Lab 7 Photo	15-Apr Lab 8 Mitosis & Meiosis	16-Apr Lab 8 Mitosis & Meiosis	17-Apr Lab 8 Mitosis & Meiosis	WEEK 10
WEEK 11	21-Apr Lab 8 M&M Lab 9 Genetics	22-Apr Lab 9 Genetics	23-Apr Lab 9 Genetics	24-Apr Lab 9 Genetics	WEEK 11
WEEK 12	28-Apr Lab 10- DNA & Gene Ex	29-Apr Lab 10- DNA & Gene Ex	30-Apr Lab 10- DNA & Gene Ex	1-May Lab 10- DNA & Gene Ex	WEEK 12

WEEK 13	5-May Lab 11 - Natural Selection	6-May Lab 11 - Natural Selection	7-May Lab 11 - Natural Selection	8-May Lab 11 - Natural Selection	WEEK 13
WEEK 14	12-May Lab 12 - Cardio Health	13-May Lab 12 - Cardio Health	14-May Lab 12 - Cardio Health	15-May Lab 12 - Cardio Health	WEEK 14
WEEK 15	19-May Lab Practical	20-May Lab Practical	21-May Lab Practical	22-May Lab Practical	WEEK 15
WEEK 16	26-May HOLIDAY	27-May NON Instructional Day	28-May Lab 13 - Plant Kingdom	29-May Lab 13 - Plant Kingdom	WEEK 16
WEEK 17	2-Jun Lab 13 - Plant Kingdom	3-Jun Final Exam	4-Jun Final Exam	5-Jun Final Exam	WEEK 17
WEEK 18	9-Jun Final Exam	10-Jun COMMENCEMENT			WEEK 18

Lab Schedule (Above are exact topic for your section, accounting for holidays)

1 *Scientific Inquiry and Tools for Investigation - A Lab Topic 1A*
2 *Scientific Inquiry and Tools for Investigation - B Lab Topic 1B*
3 *Molecules, Water and pH Lab Topic 2*
4 *Use of the Microscope Lab Topic 3*
5 *Macromolecules Lab Topic 4*
6 *Enzymes Lab Topic 5*
7 *Cellular Respiration and Photosynthesis Lab Topic 6*
8 *Mitosis and Meiosis Lab Topic 7*
9 *Genetics Lab Topic 8*
10 *DNA and Gene Expression Lab Topic 9*
11 *Natural Selection Lab Topic 10*
12 *Kingdoms of Life Lab Topic 11*
13 *Circulation Lab Topic 12*
14 ***Laboratory Final Practical Exam***
15 *Plants and Flowers Lab Topic 13*