

Antelope Valley College

Fall 2015

Course Number: PHYS 120-01; CRN: 75294

Course Title: General Physics

Time: MW 11:00 am – 1:05 pm (lecture)
F 7:45 – 10:50 am (lab)

Location: MW – HS 105 (lecture)
F – HS 251 (lab)

Instructor: Dr. Mark McGovern

E-mail: mmcgovern@avc.edu

Phone: 722-6300 x6006

Office: HS 262

Office Hours: MTWR 9:30 – 10:50 am
Also by appointment

Course Prerequisites: Completion of PHYS 110 and MATH 160 or concurrent enrollment. Advisory for eligibility for College Level Reading and ENGL 101 or satisfactory completion of ENGL 101.

Required Texts:

Physics for Scientists and Engineers, Vol. 4 (3rd Edition) by Knight
with Student Workbook (ISBN: 0-321-84429-7)
and MasteringPhysics (Course ID: **MPMCGOVERN12245**)

Course Description: This course is the second part of a three-semester calculus based introductory physics course for scientists and engineers. Topics covered are: Electrostatics, Electric Fields and Potentials, Capacitance, Resistance and current, DC Circuits, Magnetic Fields, Magnetic Induction, Maxwell's Laws, AC Circuits

Student Learning Outcomes:

1. Analyze the electric force and electric field created by a system of charged particles.
2. Evaluate the electric potential created by a system of charged particles.
3. Explain the origin of magnetic fields and calculate magnetic fields and forces.
4. Analyze and explain the behavior of DC circuits with resistors, capacitors, and batteries.
5. Analyze and explain the behavior of AC circuits with resistors, capacitors, and inductors.
6. Collect data, analyze it, and submit reports which demonstrate comprehension of the principles and processes involved.
7. Solve and assess solutions of physics problems by selecting the appropriate physics principles.

Methods of Evaluation and Grading:

Homework Assignments

Homework will be assigned at the start of each new chapter. Homework assignments are designed to evaluate your understanding of the material and reinforce conceptual principles. Homework will come from two main sources: textbook/tutorials (via MasteringPhysics), and the workbook. Due dates for homework will be announced on the assignment date.

11 Problem set assignments (10 points each, lowest score dropped)	100 pts
11 Workbook assignments (10 points each, lowest score dropped)	100 pts

In-class Activities

Most lecture sessions will include an in-class activity that will put into practice the concepts that we will be learning that day. You are encouraged to work with other classmates on completing the activity which must be done so before the end of class. These activities allow the instructor to individually investigate how students organize, solve and present open end physics problems.

28 In-class Activities (10 points each, drop 2 lowest)	260 pts
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Lab Assignments

Labs are conducted on most Fridays. Lab assignments are to be completed and turned in before the end of lab. Lab homework, if applicable, is to be turned at the following lab. Your grade will be based on how well you perform the tasks assigned and how well you address the questions given to you in the lab assignment and subsequent homework assignment.

12 assignments (20 points each; lowest score dropped)	220 pts
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Exams

Three exams will be given over the course of the semester to evaluate your understanding of the material up to that point. (Note some subject matter from earlier chapters might be included in later exams as it is a building block for the material in later chapters).

Exam 1 (Chapters 25 - 27)	100 pts
Exam 2 (Chapters 28 – 31)	100 pts
Exam 3 (Chapters 32 – 35)	100 pts

Total points	980 pts
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Letter grade breakdown:

A: 90% – 99%, B: 80% – 89%, C: 70% – 79%, D: 60% – 69%, F: < 60%

If deemed necessary a re-normalization of the grades will occur when calculating the final grade whereby the highest grade becomes 100% and everyone else’s grade is adjusted to reflect the new standard. Note: This is not a “curve”.

Reasonable Accommodation for Disabled Students: If you have a legally protected disability under the Americans with Disabilities Act (ADA) or California discrimination law, and believe you need reasonable accommodations to participate fully in this class, please make an appointment to see me during office hours to discuss your need or see me after class.

Semester Schedule: All students are required to read the sections listed for that day and complete any assignments prior coming to class.

	Mondays	Wednesdays	Fridays (Lab)
Week 1	Aug 24 th : Introduction	Aug 26 th : Chapter 25 Ch 25 HW assigned	Aug 28 nd : Lab 1 – Static Electricity*
Week 2	Aug 31 st : Chapter 25	Sept 2 nd : Chapter 25	Sept 4 th : Lab 2 – Error Analysis*
Week 3	Sept 7 th : No class (Labor Day)	Sept 9 th : Chapter 26 Ch 26 HW assigned	Sept 11 th : <i>Chapter 26 (lecture)</i>
Week 4	Sept 14 th : Chapter 26	Sept 16 th : Chapter 27 Ch 27 HW assigned	Sept 18 th : Lab 3 – Charge and Electrostatic Force*
Week 5	Sept 21 st : Chapter 27	Sept 23 rd : Chapter 27	Sept 25 th : <i>Review (lecture)</i>
Week 6	Sept 28 th : Exam 1	Sept 30 th : Chapter 28 Ch 28 HW assigned	Oct 2 nd : Lab 4 – Millikan Oil Drop Experiment*
Week 7	Oct 5 th : Chapter 28	Oct 7 th : Chapter 28	Oct 9 th : Lab 5 – Equipotential Lines*
Week 8	Oct 12 th : Chapter 29 Ch 29 HW assigned	Oct 14 th : Chapter 29	Oct 16 th : Lab 6 – Capacitance*
Week 9	Oct 19 th : Chapter 30 Ch 30 HW assigned	Oct 21 st : Chapter 30	Oct 23 rd : Lab 7 – Ohm’s Law
Week 10	Oct 26 th : Chapter 31 Ch 31 HW assigned	Oct 28 th : Chapter 31	Oct 30 th : Lab 8 – Real Time Physics: Batteries, Bulbs, and Current
Week 11	Nov 2 nd : Chapter 31, Review	Nov 4 th : Exam 2	Nov 6 th : Lab 9 – Real Time Physics: Current in Simple DC Circuits
Week 12	Nov 9 th : Chapter 32 Ch 32 HW assigned	Nov 11 th : <i>No class (Veterans Day)</i>	Nov 13 th : Lab 10 – Gyromotion*
Week 13	Nov 16 th : Chapter 32	Nov 18 th : Chapter 32	Nov 20 th : Lab 11 - Measurement of e/m*
Week 14	Nov 23 rd : Chapter 33 Ch 33 HW assigned	Nov 25 th : Chapter 33	Nov 27 th : <i>No class (Thanksgiving)</i>
Week 15	Nov 30 th : Chapter 33	Dec 2 nd : Chapter 34 Ch 34 HW assigned	Dec 4 th : Lab 12 – Transformers
Week 16	Dec 7 th : Chapter 35 Ch 35 HW assigned	Dec 9 th : Chapter 35, Review	Dec 11 th : Exam 3

Important Campus-Wide Dates:

Last day to drop without a "W" – Sept 7th ; Last day to drop with a "W" – Nov 13th

Absences: You are expected to regularly attend class and complete assigned coursework, as these are part of your responsibilities as a student in this college. Attendance will be taken at the beginning of each class and students not present will be marked absent. If you arrive late then inform me after class is over so you will be marked late instead of absent. Regarding lab, if you arrive more than 10 minutes late to lab then you will not be allowed to participate in lab for that day. You will be asked to leave and will be marked absent.

Students with more than 3 absences *may* be dropped for lack of participation as permitted in the college attendance policy. If this occurs after the drop date then you will receive an F grade. Based on past experience, I have found it to be extremely difficult to pass this class if you are excessively absent. In all cases talk to me about your situation and I'll try to be flexible.

Do not assume that if you stop attending class I will drop you from the course. I *may* drop you. It is entirely your responsibility to drop yourself from a class if you wish to do so.

Late work: MasteringPhysics assignments have a very strict deadline so make sure to be aware of due dates/times when homework is assigned. Late homework will be accepted for partial credit. Check the grading policy section of any assignment to view the penalties for late submissions. Late lab homework will not be accepted under any circumstances unless prior arrangements are made with me. In-class activities must be completed during lecture on the day it is assigned and can not be made up. Exams can only be re-scheduled beforehand on a case-by-case basis. One or two scores from each type of graded non-exam work will be dropped so don't be too concerned if you miss one or two.

On-campus resources: If you need assistance in refreshing your math, reading or writing skills, check with the Learning Center for free tutoring and make sure you attend it regularly. Open computer labs with print services can be found in rooms BE 317, BE 320, 2nd floor of the Health Science Building and at the Palmdale Campus. Computers and print services are available for students at the Instruction Media Center (IMC), first floor Business Education Building. Computers are also available for use at the Learning Center. Check with the facilities for hours and availability.

Academic Violations (From the College Catalog): Dishonesty, including but not limited to cheating, or plagiarism. Plagiarism- from the Latin word for "kidnap"- involves using another' work without giving proper credit, whether done accidentally or on purpose. This includes not only words and ideas, but also graphs, artwork, music, maps, statistics, diagrams, scientific data, software, films, videos, and the like. Plagiarism is plagiarism whether the material is from published or unpublished sources. It does not matter whether ideas are stolen, bought, downloaded from the Internet, or written for the student by someone else- it is still plagiarism. Even if only bits and pieces of other sources are use, or outside sources are reworded, they must still be cited. To avoid problems, students should cite any sources and check with the instructor before submitting any assignment of project. Students are always responsible for any plagiarism in their work. An instructor who determines that a student has cheated or plagiarized has the right to give an F grade for the assignment or examination.

Students are encouraged to review the entire Guidelines for Student Conduct found in the College Catalog.

Final Thoughts: The best way to ensure success in my class is by reading your textbook, coming to class everyday, on time, participate by taking notes in class, ask questions if material is unclear, and completing all in-class activities, homework and lab assignments. The number one reason students do not succeed in this class is that they do not put forth effort in the aforementioned categories. Communication with me is strongly recommended so I can address any issues you are having with the material and/or schedule.

Math 105 – Geometry and Methods of Proof
CRN: 76113

Fall 2015

Class Hours:

TR: 7:15–8:35pm

Room: SSV 202



Instructor: James Dorn

Web Page: <http://www.mrdorn.com>

e-mail: jdorn1@avc.edu (Put your name and class in subject)

Phone: 661.722.6300 x 6811

Office: HS254

Drop In Hours:

M – Th 10:30 –12:00pm

Fall Calendar:

Aug. 24 Classes Begin

Sep. 07 Labor Day (no school)

Nov. 11 Veteran's Day (no school)

Nov. 13 Last Day to Drop w/ W

Nov. 26 Thanksgiving (no school)

Dec. 10 Final Exam

Required Materials:

Proofs in Geometry and Pre-Calculus, 1st Edition, by Anderson and Mason

Scientific Calculator

Course Description: Using Euclidean geometry as a paradigm of deductive systems, this course is designed to give STEM students an introductory overview, appreciation, and understanding of the role of theorem and proof in mathematics in preparation for the calculus sequence and beyond. The deduction of geometric concepts and theorems important in later courses will emphasize the anatomy of a deductive system and basic direct proof. This experience will then be extended to non-geometric systems, where students will be introduced to some basic analytical methods of proving familiar mathematical statements about numbers, sets, and functions.

Statement of Access: If you have a legally protected disability under the Americans with Disabilities (ADA) or California discrimination law, and you believe you need reasonable accommodation to participate fully in this class, please make an appointment to see me during my private office hours to discuss your need.

Attendance/Participation: **You are required to attend class every day.** If you MISS MORE THAN FOUR class sessions, you may be dropped from the course. It is **your responsibility** to keep your enrollment status current. You risk an "F" if you stop attending without officially withdrawing. Do not bring friends or children to class.

Comfort and Courtesy: It is hoped that the learning environment will be comfortable and that students will feel free to ask questions and offer answers. It is the instructor's expectation that all students will extend common courtesy to each other and to the instructor. It is also expected that students will refrain from any unnecessary noise when other students are trying to listen and learn. **This includes but is not limited to conversing with friends and/or the use of cell phones. Please turn off any cell phones or other electronic devices during class time (or switch them to silent mode).** No cell phones or electronic devices will be allowed on your desk during exams. I am aware that you are all adults and it is my expectation that you act as such.

Grading Policies: Grades will be based on homework, quizzes, tests, and final exam. No notes, “cheat sheets”, or cell phones will be allowed on any exam.

Homework: There will be 4 homework assignments worth 25 points each. Each assignment will cover two chapters of material except for the last homework which will only cover 1 chapter. Homework will be due on the day of the test covering the respective chapters, except for the last assignment that will be due on the day of the last quiz. **No late homework will be accepted.**

Quizzes: We will have 4 quizzes and each will be worth 25 points. **No make-up quizzes will be given.**

Tests: There will be 3 tests worth 200 points each. Tests will be taken in class. It is expected that all tests will be taken on schedule. **No make-up tests will be given.**

Final Exam: A 200 point comprehensive final exam will be given during finals week.

KEEP all of your homework, quizzes and tests! I rarely make an error but the only way it can be fixed is if you can show me your grade on that item. ALSO, all of these items are helpful study guides for your final exam!!

Grading Summary:

Homework	=	100 pts. (10%)
Quizzes:	=	100 pts. (10%)
Tests:	=	600 pts. (60%)
Final:	=	<u>200 pts. (20%)</u>
Total:		1000 pts.

Grading Scale: A = 90% or above; B = 80%-89%; C = 70%-79%; D = 60%-69%; F =below 60%

Honesty Policy: Your grade is intended to be a reflection of what you have learned about this subject and how well you can demonstrate that learning. If cheating occurs it will be dealt with as college policy dictates, the minimum outcome being a zero score. Depending on the severity of the offense the dean and vice president of instruction may be notified, you may receive an F in the class and/or you may be removed from the course or the college. Do not take this risk.

Syllabus Disclaimer: It is the intention of the instructor to follow this schedule as closely as possible. There may be factors that arise that would cause a deviation from this schedule. The instructor reserves the right to amend the syllabus when circumstances dictate. Students will be duly notified.

Student Learning Outcomes:

1. Solve problems involving geometric figures by recognizing, identifying, and applying appropriate properties and formulas.
2. Prove statements about geometric figures using direct two-column proofs, indirect proof, or coordinate proofs.
3. Recognize and identify the elements of an axiomatic system, the role of conditional statements, and valid forms of deduction.
4. Use elementary analytic methods of proof to prove mathematical statements about numbers, sets, functions, and sequences.

MATH 105 Tentative Schedule

Week	Tuesday	Thursday
1	25-Aug Introduction / 1.1	27-Aug 1.2 - 1.3
2	1-Sep 1.4 - 1.5	3-Sep 2.1 Quiz 1
3	8-Sep 2.2 - 2.3	10-Sep 2.4
4	15-Sep Test 1	17-Sep 3.1
5	22-Sep 3.2	24-Sep 3.3
6	29-Sep 3.4	1-Oct 4.1 Quiz 2
7	6-Oct 4.2 - 4.3	8-Oct 4.3 - 4.4
8	13-Oct Test 2	15-Oct 5.1 - 5.2
9	20-Oct 5.3	22-Oct 5.4
10	27-Oct 6.1 - 6.2	29-Oct 6.3 - 7.1
11	3-Nov 7.2 - 7.3	5-Nov 8.1 Quiz 3
12	10-Nov 8.2	12-Nov 8.3
13	17-Nov Test 3	19-Nov 10.1 - 10.2
14	24-Nov 10.3 - 10.4	26-Nov Thanksgiving - No School
15	1-Dec 10.7	3-Dec 10.8 Quiz 4
16	8-Dec Review for Final	10-Dec Final Exam

Antelope Valley College
General Organismal, Ecological and Evolutionary Biology
(Biology 120)

Fall 2015

Dr. Zia Nisani

(661) 722-6300 ext 6916

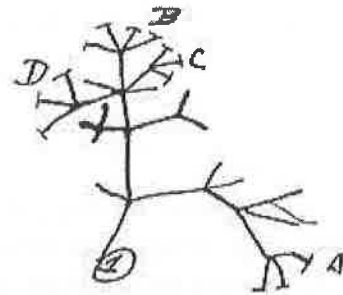
znisani@avc.edu

Office: HS 164

Hours: Monday 11 – 2pm

Thursday 1 – 3pm

I think



Required Textbooks

Life: The Science of Biology by Sadava, Hillis, Heller, & Berenbaum, 10th Edition
ISBN 9781429298643

Biology 120 lab Manual
Via the web on MyAVC under MyCourses (Free)

Investigating Biology Laboratory Manual by Morgan & Carte, Custom Edition
ISBN 9781323137505

Handbook of Biological Investigation by Ambrose, 7th Edition
ISBN 9780887253317

Recommended

Photographic Atlas for Biology Lab by Vandegraaff
ISBN 0895828030

Sokkia Field Book Item#49334Sokkia
(Yellow Notebook found in bookstore)

Various colored pencils

Important Dates & Deadline

- 8/24 Semester begins
- 9/7 Deadline to drop without “W”
- 9/7 Labor Day (No Classes)
- 11/9 Veterans Holiday (No Classes)
- 11/13 Deadline to drop with “W”
- 11/26-11/28 Thanksgiving (No Classes)
- 12/12 Semester ends

Course Description

A comprehensive, in-depth course designed for biology majors to complement the cell-molecular perspective presented in BIOL 110. A survey of multicellular organisms, emphasizing morphology, systematics, evolution, physiology, heredity, development, behavior and ecology. Laboratories consist of dissection and analysis of representative taxa and student projects. Data analysis and preparation of scientific reports are taught and applied to individual research projects. (CSU, UC, AVC)

Prerequisite: Completion of MATH 102.

Advisory: Completion of a general biology course and/or BIOL 110, and Eligibility for College Level Reading and ENGL 101.

Course Objectives

Upon successful completion of this course the student will be able to:

- Describe the fundamental process of animal development
- Outline the rationale supporting the theory of evolution
- Recognize the essential criteria of taxonomy and systematics
- Distinguish among the principal phyla representing the fungi, plants, and animals
- Recognize specific correlations between form and function
- Describe several homeostatic physiological processes
- Predict animal behavior based on ecological constraints
- Conduct a scientific investigation and provide a report of the results.

Student Learning Outcomes

- Describe mechanisms of evolutionary change including speciation, and provide evidence for evolution.
- Compare and contrast the development, life cycles, anatomical and physiological characteristics of major taxa of organisms.
- Evaluate the relationships of organisms to each other and their environments.
- Describe, identify key characteristics and classify representative specimens down to representative taxa.
- Apply scientific methodology and reasoning through experimentation and field experiences.

Attendance & Rules

- Students are expected to conduct themselves according to the STUDENT HANDBOOK:
<http://www.avc.edu/current/common/documents/StudentHandbook.pdf#page=32>
- Students are expected to attend their classes regularly, and they are responsible for all material covered in class and all assigned readings. Attendance is important and records will be kept. The College attendance policy (see the catalogue) will be observed. This means that if for any reason you miss more than a combined total of hours representing one week of class, you may be prohibited from further attendance in this class. Students (not instructors) are responsible for officially dropping themselves from a class. Students who stop attending class but remain officially enrolled will receive a letter grade (e.g., "F") based on total points earned through the date of last attendance.
- The first two class meetings are important; therefore missing any one of these two could result in the student being dropped from the class.
- Please be on time.
- No children or visitors are allowed to the class.
- No cell-phones, pagers, Google-glasses or any electronic equipment (including laptops) are allowed in the classroom. Any violation will result in a **pop-quiz for the whole class**. If you have the eBook version of the textbook, please talk to me during the first week of instruction.

Discipline

Lectures and laboratories are formal presentations that demand attention and concentration. Disruptive behavior in the classroom (defined in student handbook) tends to reduce the effectiveness of the instructor's presentation and decrease student comprehension. Please be considerate of others and avoid creating a discipline problem.

Academic Violation

- A. Violation of the Academic Honesty Policy; Dishonesty, including but limited to, cheating, or plagiarism. Plagiarism – from the Latin word for “kidnap” – involves using another’s work without giving proper credit, whether done accidentally or on purpose. This includes not only words and ideas, but also graphs, artwork, music, maps, statistics, diagrams, scientific data, software, films, videos, and the like. Plagiarism is plagiarism whether the material is from published or unpublished sources. It does not matter whether ideas are stolen, bought, downloaded from the Internet, or written for the student by someone else – it is still plagiarism. Even if only bits and pieces of other sources are used, or outside sources are reworded, they must still be cited. To avoid problems, students should cite any source(s) and check with instructor before submitting an assignment or project. Students are always responsible for any plagiarism in their work.
- B. An instructor who determines that a student has cheated or plagiarized has the right to give an “F” grade for the assignment or examination

Withdrawals

It is the student’s responsibility to withdraw from a class. If you fail to withdraw by the appropriate date you will receive the letter grade you would have earned at the end of the semester.

Reasonable Accommodation

If you have a legally protected disability under the Americans with Disabilities Act (ADA) or California discrimination law, and you believe you need reasonable accommodation to participate fully in this class, please make an appointment to see me during my private office hours to discuss your need.

Email Etiquette

Please when emailing me follow the following protocol and only use the AVC official email accounts. Failure to follow these requirements will result in a none-response to your email.

	Example
When mailing a professor, ALWAYS include your full name, class period or section	Janie Daniels, MW 11-1220 pm
Include your class and what the email is specifically regarding in the subject	Subject: Biol 120: Exam I questions

Grading

Letter grade	Percent
A	90-100
B	80-89
C	65-79
D	50-64
F	<50

Point Distribution

	Assignment	Points	Your Points	
Lecture	<i>Exams</i>			
		Exam I	100	
		Exam II	100	
		Final Exam	150	
	<i>Case studies</i>			
		Scientific Method	20	
		Origin of Life	50	
		Evolution	60	
		Ecology	50	
	Laboratory	<i>Lab Activities & Reports</i>		
		Microscope & Safety Quiz	10	
		Dichotomous Key Quiz	20	
		Population Genetics Report	20	
		Protista Report	20	
		Fungi Report	20	
		Plant Report	30	
		Comparative Animal Biology		
		Exercise 3	10	
		Tables 19.1, 19.2& Exercise 7	30	
<i>Lab Practicum & Research</i>				
	Lab Final	100		
	Research paper	100		
Total		990		

Note: The materials in the syllabus (including assignments) are subject to change and I have the right to modify the syllabus as deemed fit.

Lab Procedure

The lab manual and relevant support material can be downloaded from MyAVC. The lab consists of series of assignments and laboratory exercises that includes but it is not limited to:

- a) Examine, dissect, describe and draw specimens
- b) Observe any demonstrations given by the instructor
- c) Answer any specific questions regarding the lab material
- d) Conduct field work, library research, data analyses, as directed by the instructor.

All drawing and diagrams must be in color and properly labeled.

There are post laboratory reports that will be given for students to complete outside the classroom. The lab reports need to be organized and well written. **The reports due the dates can be found in the lab schedule.** No late assignment will be accepted. **The post laboratory reports will no be accepted from students that have missed the respective lab.**

A final laboratory practicum exam will be given during the last week of class (see Lab schedule). This exam will cover questions regarding specimen identification, biological concepts, data analysis, field techniques, and other material covered in the laboratory part of the course. Students are encouraged to keep a well-annotated laboratory notebook for the purpose of reviewing what was covered during the course.

Generally, there are no make ups for the labs. Students are expected to attend the relevant lab section that they are registered for. For example, a student in the Monday afternoon lab can not attend the Monday night lab and visa versa. However, each student will be allowed to make up one lab during the semester when he or she presents me with a documented emergency (or high priority such as job interview, etc.) situation.

Finally, please do the reading before coming to lab. This will ensure that the lab will go smoothly and you will get the most out of the lab. Let's not forget that lab is a big part of your grade.

ANTELOPE VALLEY COLLEGE

(Biology 120)

Monday & Wednesday Lecture, Reading and Examination Schedule
Chapters are based Sadava et al. Life the Science of Biology 10th Edition

Unless Specified Otherwise

Week	Date	Chapters	Topics
1	8/24 8/26	1 Handouts in class 4 (Review 2 & 3) Chapters 1 & 2 (Ambrose)	Introduction to class; What is science? "Case study: Scientific method" Origin of Life
2	8/31 9/2	Handouts in class 25	"Case study: Origin of life" History of life on Earth
3	9/7 9/9	Xxx 22 & 44	Labor Day - No Class Animal Development & Evolution
4	9/14 9/16	21 21	Evolutionary mechanisms Evolutionary mechanisms cont'd.
5	9/21 9/23	23 & handouts 23 & handouts Skim over 26-33	Speciation Speciation cont'd. Survey of Biodiversity
6	9/28 9/30	Handouts in class 22 & handouts	"Case study: Evolution" Phylogeny & Systematics
7	10/5 10/7	22 & handouts	Phylogeny & Systematics cont'd. EXAM I
8	10/12 10/14	55 55 56 & 57	Population Ecology Population Ecology Cont'd. Community Ecology
9	10/19 10/21	56 & 57 Handouts in class	Community Ecology; Coevolution "Case study: Ecology"
10	10/26 10/28	54 54 53	Biogeography Biogeography Cont'd. Animal behavior & Behavioral Ecology
11	11/2 11/4	53	Animal behavior & Behavioral Ecology cont'd. EXAM II

12	11/9	40	Animal Physiology I: Homeostasis, Temperature regulation & Osmoregulation
	11/11	xxx	Veterans Holiday – No Class
13	11/16	40	Animal Physiology I cont'd.
	11/18	41 & 43	Animal Physiology II: Hormones & Reproduction
14	11/23	41 & 43 49 & 50	Animal physiology II cont'd. Animal Physiology III: Respiration & Internal transport
	11/25	49 & 50	Animal Physiology III cont'd.
15	11/30	45 – 47	Animal Physiology IV: Neuroscience
	12/2	45 – 47	Animal Physiology IV cont'd.
16	12/7	xxx	Final Exam Review
16	12/7	(COMPREHENSIVE)	FINAL EXAM (Thursday)

Note: The syllabus and reading schedule (including exam dates) are subject to change.

ANTELOPE VALLEY COLLEGE

(Biology 120)

General Organismal, Ecological and Evolutionary Biology

Tuesday & Thursday Lecture, Reading and Examination Schedule

Chapters are based Sadava et al. Life the Science of Biology 10th Edition

Unless Specified Otherwise

Week	Date	Chapters	Topics
1	8/25	xxx	Introduction to class
	8/27	1 4 (Review 2 & 3) Chapters 1 & 2 (Ambrose)	What is science? Origin of Life
2	9/1	Handouts in class	<i>"Case study: Scientific method"</i>
	9/3	Handouts in class	<i>"Case study: Origin of life"</i>
3	9/8	25	History of life on Earth
	9/10	20 & 44	Animal Development & Evolution
4	9/15	21	Evolutionary mechanisms
	9/17	21	Evolutionary mechanisms cont'd.
5	9/22	23 & handouts	Speciation
	9/24	23 & handouts	Speciation cont'd.
		Skim over 26-33	Survey of Biodiversity
6	9/29	Handouts in class	<i>"Case study: Evolution"</i>
	10/1	22 & handouts	Phylogeny & Systematics
7	10/6	22 & handouts	Phylogeny & Systematics cont'd.
	10/8		EXAM I
8	10/13	55	Population Ecology
	10/15	55	Population Ecology Cont'd.
		56 & 57	Community Ecology
9	10/20	56 & 57	Community Ecology; Coevolution
	10/22	Handouts in class	<i>"Case study: Ecology"</i>
10	10/27	54	Biogeography
	10/29	54	Biogeography Cont'd.
		53	Animal behavior & Behavioral Ecology
11	11/3	53	Animal behavior & Behavioral Ecology cont'd.
	11/5		EXAM II

12	11/10	40	Animal Physiology I: Homeostasis, Temperature regulation & Osmoregulation Animal Physiology I cont'd.
	11/12	40	
13	11/17	41 & 43	Animal Physiology II: Hormones & Reproduction Animal physiology II cont'd. Animal Physiology III: Respiration & Internal transport
	11/19	41 & 43 49 & 50	
14	11/24	49 & 50	Animal Physiology III cont'd. Thanksgiving – No Class
	11/26	xxx	
15	12/1	45 – 47	Animal Physiology IV: Neuroscience Animal Physiology IV cont'd.
	12/3	45 – 47	
16	12/8		Final Exam Review
16	12/10	(COMPREHENSIVE)	FINAL EXAM (Thursday)

Note: The syllabus and reading schedule (including exam dates) are subject to change

Biology 120 Laboratory Schedule

Reading material

- (1) *Biology 120 Lab Manual*
- (2) *A Handbook of Biological Investigation 7th edition*
- (3) *Investigating Biology Laboratory manual*
- (4) *Life the Science of Biology 10th edition*

Week (Dates)	Topic	Lab	Reading
1 (8/25 & 8/26)	Introduction to Lab Safety and Microscopy	Safety & Lab 1	(1) 2-5 & 6-15
2 (9/1 & 9/2)	Introduction to Class Research Project <i>“Safety & Microscope Quiz”</i>	Lab 2	(1) 16-35 (2) Chapters 1 – 7
3 (9/8 & 9/9)	Classification & Dichotomous Keys Lab	Lab 3	(1) 35 - 43
4 (9/15 & 9/16)	Population Genetics Lab <i>“Dichotomous Key Quiz”</i>	Lab 4	(1) 44 - 49 (4) 436 – 440
5 (9/22 & 9/23)	Protista Lab <i>“Population Genetics Report Due”</i>	Lab 5	(1) 50 - 51 (3) 335 – 367 (4) Chapter 27
6 (9/29 & 9/30)	Fungi Lab <i>“Protista Report Due”</i> <i>“Fungi Report – In Class”</i>	Lab 6	(1) 52 - 58 (4) Chapter 30
7 (10/6 & 10/7)	Plant Diversity & Evolution Stream	Lab 7: <i>Anatomy & Morphology</i>	(1) 59 - 72 (4) Chapters 28 & 29
8 (10/13 & 10/14)	Plant Diversity & Evolution Stream	<i>Morphological & Anatomical Data Collection</i>	(1) 59 - 72 (4) Chapters 28 & 29
9 (10/20 & 10/21)	Plant Diversity & Evolution Stream	<i>Phylogenetic Analysis</i>	(1) 59 - 72 (4) Chapters 28 & 29
10 (10/27 & 10/28)	Comparative Animal Biology Stream <i>“Plant Report Due”</i>	Lab 8: <i>Exercises 1, 2 & 3</i>	(1) 73 - 81 (4) Chapters 31 & 44
11 (11/3 & 11/4)	Comparative Animal Biology Stream <i>“Comparative Animal Biology Exercise 3 Due”</i>	<i>Exercise 4</i>	(1) 82 - 85 (3) 472-474, 474-477, 477-480, 483-488 & 493-497. (4) Chapters 31-33

12 (11/10 & 11/11)	<i>No Labs This week</i>	xxx	(2) Chapters 11 - 13
13 (11/17 & 11/18)	Comparative Animal Biology Stream	Exercise 5	(1) 86 - 87 (3) 480 – 483, 497- 500, 501 – 503, 504 -507 & 507-511. (4) Chapters 31-33
14 (11/24 & 11/25)	Comparative Animal Biology Stream <i>“Comparative Animal Biology Exercise 7 – In Class”</i>	Exercises 6 & 7	(1) 88 - 95 (4) Chapters 31-33
15 (12/1 & 12/2)	Comparative Anatomy of Frog & Fish	Lab 9	(1) 99 - 107
16 (12/8 & 12/9)	Final Lab Practical	***	

Biology Study skills

You, too, can succeed in biology. The following strategies will help you get an A in biology. They are the result of years of interviewing students who were able to achieve success in their biology courses (Dr. Cynthia Arem, Pima Community College).

1. Successful biology students have told us they study a minimum of 2 to 3 hours per day, seven days a week, throughout the semester.
2. Biology is hard work, so be aggressive. Take it as a challenge and give it your time and your energy.
3. Know and understand all your terminology. This is one of the keys to success in any field. In biology it is extremely helpful to begin by studying your Latin and Greek roots. This is the basis for many seemingly difficult terms. Study these roots. Make 3" x 5" flash cards to help you memorize them and later do the same with your terminology.
4. Biology instructors have reported that if something is brought into the lab, it is guaranteed that you will be tested on it. So pay attention to whatever is brought into the lab, even its name.
5. Utilize your instructor's office hours.
6. Make it a practice to read over the topic or chapter before going to your biology class.
7. Attend all classes and be an active listener. It is important to be alert and concentrate on what is said in lecture. Successful students take full and comprehensive notes, writing down about 66% of what is said in lecture, while failing students write half as much. It is most important to stay current. Do not allow yourself to miss classes and fall behind or the entire course will become an effort and a struggle for you.
8. After class go over the material as soon as possible and again eight hours later. Studies have shown that you are more likely to remember the information later. Fill in all the missing words or incomplete explanations. Recite important concepts in your own words.
9. Always remember you have the right to ask questions before, during and after class. See your instructors during their office hours for help. Notice when you do not understand the material do seek help immediately (i.e. ask questions).
10. Read and study all your textbook explanations. You may wish to use at least two or more books. These books are often available in the library. Each book has a different discussion and examples on your topic, and one of these is likely to be helpful to you.
11. Whenever possible explain aloud to another person what you are learning. Work with a classmate and explain terminology and concepts to each other.

12. Describe in your own words the similarities and differences between the different concepts you are learning. Do this aloud with someone else.
13. If biology is your most difficult subject, then always study it before all other subjects. You must study biology when you are most alert and fresh. Make sure to take 5 or 10 minute breaks every 20 to 40 minutes in order to clear your mind.
14. Write up summary sheets of biology terminology and concepts and review often. The more you review the more you' will remember. Also, visually picture the terms in your mind's eye. Visualizing is a powerful technique for remembering terms. Break words into small chunks and picture each chunk until you can recall it. Then put the chunks together. Remember, the knowledge of roots can be extremely helpful.
15. Making up mnemonics memory techniques may be fun as well as beneficial. For example, if you need to remember the 12 cranial nerves you can take the first letter of each nerve and make up a sentence where each word begins with the first letter of each nerves.
16. Create sample tests for yourself and test yourself often.
17. Give yourself timed tests similar to those you expect in class. Time yourself with a kitchen timer or an alarm. Practice, practice, practice.
18. Review the types of errors you make and types of questions that cause you difficulty. Give yourself more practice in these areas of difficulty.
19. If possible, have a friend or family member quiz you on your notes and text information. Done regularly this commits more information to long-term memory.