

BIOLOGICAL SCIENCE 102 – ANIMAL BIOLOGY – SPRING 2019

PROFESSOR: BLAKE BARRON

BLAKE'S OFFICE: EBS 322



BLAKE'S

OFFICE HOURS:

Monday 10:00 AM - 11:00 AM, Tuesday, 2:30 PM - 3:30 PM

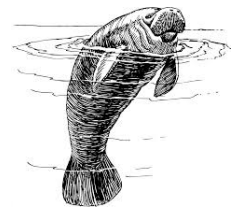
Wednesday 10:00 AM - 11:00 AM, Thursday, 2:30 PM - 3:30 PM
or other office hours at a previously arranged appointment time

BLAKE'S E-MAIL ADDRESS: zoo@biosciweb.net

BLAKE'S PHONE #: 965 - 0581 x2444

TURN OFF OR SILENCE YOUR CELL PHONE NOW, IT IS THE LAST TIME IT WILL BE ON IN LECTURE!

INTRODUCTION: Welcome to Biology 102 and the study of the wondrous array of animal life and adaptation that has evolved on our planet! For most students this is an astounding, interesting, sometimes awe-inspiring and quite fun view of zoology as we know it. This is a 5 unit course designed for students who are interested in a career in the Biological Sciences or related fields and plan to be Biology Majors. This course is the second in a 4 course Biological Sciences Majors series at SBCC. This course also satisfies the SBCC General Education Requirement in Natural Sciences, but you should be aware that **THIS IS A VERY CHALLENGING COURSE** that will require a significant amount of your time and effort both during and outside of class. In order to reach your greatest potential in this course, you should PLAN TO SPEND MANY, MANY HOURS OUTSIDE OF CLASS EACH WEEK reading, studying and preparing for this course (a minimum of 12 hours of study for just this course per week is suggested). This course is also transferable to both the UC and CSU as a laboratory science course. If you are simply looking to fulfill a general education requirement as a non-major, Biological Science 100 or Zoology 122/123 will best serve you as an alternate course. These courses are both general education introductory courses that also transfer to the UC and CSU as a general education laboratory science (for IGETC).



For this course, you must attend two 80-minute lectures each week and two 3 hour labs each week.

You must enroll in, attend and pass the laboratory as well as the lectures to pass this course.

TEXT: The required text is: *Integrated Principles of Zoology*, hardback by Hickman et al., 17th or 16th edition or similar. I suggest that you **skim the reading assignments before coming to class** and then **read the text assignments thoroughly after you attend lecture** as you will be better prepared to grasp the material presented in the textbook. You are NOT required to have a ConnectPlus textbook code and there will be no assignments using this software, but some of you may find it useful and helpful to access this resource in your studies.

As majors students you will quickly realize the tremendous benefit of the text as a resource.

You will find the *Dictionary of Word Roots and Combining Forms* (paperback) by Donald J. Borror to be a very useful reference for this course to help explain the **etymology of the scientific vocabulary and taxonomy** (often from Greek and Latin) that is critical to a true understanding of zoology.

LAB MANUALS: There is a required *Biological Sciences 102 - Animal Biology - Laboratory Procedures lab manual* (to go in a 3 ring binder) to purchase from the bookstore OR you may print the labs on your own from the course website at home or at a campus computer lab (for a charge of 10 cents per page at SBCC!).

There is an optional (but recommended) lab manual: *A Photographic Atlas for the Zoology Laboratory*, Van De Graaf and Crawley, 6th ed. or similar
Additional required lab handouts will be distributed on the web and/or during laboratory meetings.



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LECTURE NOTES: A required series of supplementary lecture notes, web links, videos, labs, vocabulary lists, review sheets and practice quizzes are available for download as PDF files and slideshow presentations from my website (<http://www.biosciweb.net/animal>). Please contact me if you have problems with access to a computer or the Internet. Additional required lecture videos will be distributed on the course website.

LECTURES: Monday & Wednesday, 8:00 am - 9:20 am in EBS 309

LABS: M & W, 11:10 am - 2:15 pm in EBS 209 (SEC# 54956) or
M & W, 2:30 pm - 5:35 pm in EBS 209 (SEC# 54957) or
T & TH, 11:10 am - 2:15 pm in EBS 209 (SEC# 54958)



THE FINAL COURSE GRADE IS DETERMINED BY STUDENT COMPLETION AND PERFORMANCE OF THE FOLLOWING ASSIGNMENTS:

ASSIGNMENTS	DATE	POINTS	% of COURSE GRADE
Three Lecture & Lab Assessment Exams:	Wednesday, February 13 th , 8:00 am - 9:20 am	125	~8%
	Wednesday, March 20 th , 8:00 am - 9:20 am	125	~8%
	Wednesday, April 17 th , 8:00 am - 9:20 am	125	~8%
One Final Exam:	Wednesday, May 8 th , 8:00 am - 10:00 am	175	~11%
Laboratory Quizzes:	13 @ 10 points each	130	~8%
Lab Assignments:	25 @ 8 points each	200	~13%
Laboratory Animal Identification Practica:	2 practica @ 100 points each	200	~13%
Oral Lab Presentation:	1 presentation @ 75 points on April 22 nd or 23 rd	75	~5%
Literature Search Paper:	1 paper @ 100 points - final copy due March 4 th	100	~6%
Required Critical Reading/RA, CLA & Homework Assigns:	345 pts total	345	~22%
TOTAL:		1600	100%

YOU MUST BRING A 100 QUESTION BLANK SCANTRON TO EACH EXAM ONLY.
All of the exams will be held in EBS 309 - All of the lab quizzes will be held in EBS 209

OPTIONAL REVIEW SESSIONS FOR EXAMS WILL BE SCHEDULED OUTSIDE NORMAL CLASS HOURS.

EXAMS: Each of the exams and quizzes will consist of a varied combination of multiple choice, fill-in-the-blank, sentence completion, matching, short answer, essay, and diagram/graph interpretation questions. The vast majority of the exam will be short answer and interpretive types of questions.

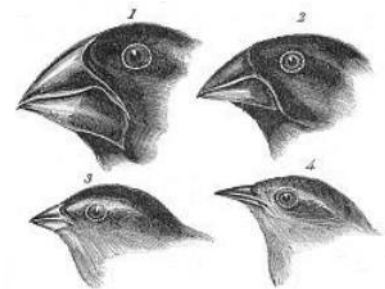
1. THE EXAMS WILL BE SEMI-CUMULATIVE WITH AN EMPHASIS ON MOST RECENT STUDY MATERIAL.
2. EXAMS WILL COVER INFORMATION FROM BOTH LECTURE AND LABORATORY.
3. A MISSED EXAM WILL SIGNIFICANTLY LOWER YOUR COURSE GRADE, USUALLY BY ONE LETTER GRADE.

THE FINAL EXAM HAS A CUMULATIVE COMPONENT.

4. FAILURE IN THE LAB PORTION OF THIS COURSE WILL USUALLY RESULT IN AN OVERALL FAILING GRADE IN THIS COURSE.

YOU WILL RECEIVE ONE COMBINED GRADE FOR BOTH LECTURE AND LAB.

5. NONE OF THE EXAMS WILL BE DROPPED. ALL EXAMS SCORES WILL COUNT TOWARD THE FINAL GRADE.



1. Geospiza magnirostris
2. Geospiza fortis
3. Geospiza parvula
4. Certhidea olivacea

Finches from Galapagos Archipelago

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QUIZZES: The lab quizzes will cover material discussed and studied during lab only as indicated each week.

1. THERE WILL BE 13 LAB QUIZZES - ALL OF THESE QUIZZES WILL COUNT TOWARD YOUR FINAL GRADE.
2. THERE WILL NOT BE ANY LAB QUIZ OR LAB PRACTICA MAKEUPS. AS MAJORS STUDENTS, YOU CANNOT AFFORD TO MISS ANY MATERIAL. IF YOU MISS A LAB QUIZ OR PRACTICUM YOU WILL NOT EARN THOSE POINTS.
3. DO NOT DISMISS THE LAB QUIZZES AS THEY ACCOUNT FOR 130 POINTS AND ABOUT 8% OF THE FINAL GRADE, MORE THAN THE EQUIVALENT OF AN EXAM.
4. IF YOU MISS MORE THAN ANY COMBINATION OF FOUR LECTURE OR LAB MEETINGS YOU MAY BE DROPPED FROM THE COURSE UNLESS YOU DISCUSS WITH ME ANY INTENDED OR UNFORESEEN ABSENCES.

REQUIRED READING ASSIGNMENTS IN THE 17th or 16th EDITION OF THE HICKMAN TEXT ARE LISTED BELOW



LECTURE SCHEDULE

*THIS SCHEDULE MAY BE MODIFIED DURING THE COURSE AT MY DISCRETION
REQUIRED LECTURE MATERIAL WILL ALSO BE DISCUSSED DURING LABORATORY SESSIONS*

Laboratory sessions will focus on taxonomy, diversity and specific adaptations of the animal phyla while lecture meetings will focus more on broad-based, integrated and comparative concepts across the various disciplines of animal cell biology, evolution, ecology, physiology and behavior.

Read these chapters BY the dates indicated. If you follow this reading schedule, you will stay ahead in your reading as you should be doing for both the lecture and laboratory meetings.

WEEK	DATES	LECTURE TOPIC & READING ASSIGNMENT (HICKMAN et al., 17 or 16 ed.)
1	JAN 14 & 16	COURSE INTRODUCTION & THE SCIENCE OF ZOOLOGY HOW TO "THINK" LIKE A SCIENTIST & BEING A BIOLOGY MAJOR, HOW TO STUDY FOR THIS CLASS & THE HEIRARCHY OF LIFE READING ASSIGNMENT = CHAPTER 1 and for lab: CHAPTER 6
2	MON. JAN 21	NO LECTURE DUE TO MARTIN LUTHER KING, JR. HOLIDAY
	WED. JAN 23	THE HISTORY OF LIFE ON EARTH: BUILDING A UNIVERSE (THE BIG BANG) & THE SIGNIFIANCE OF WATER AND CARBON READING ASSIGNMENT = CHAPTERS 1,2 & 3 and for lab: CHAPTERS 6, 9, 10, 11
3	JAN 28 & 30	HISTORY OF LIFE ON EARTH: FUNDAMENTAL PRINCIPLES OF CHEMISTRY, NUTRIENT CYCLING, CHEMISTRY AND IMPORTANCE OF WATER TO LIFE ON EARTH, DIFFUSION & OSMOSIS & THE EVOLUTION OF THE FIRST CELLS READING ASSIGNMENT = CHAPTERS 2 & 3 and for lab: CHAPTERS 9, 12 & 13



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- 4 FEB 4 & 6 HISTORY OF LIFE ON EARTH: THE FIRST BIOMOLECULES, STRUCTURE OF BIOMOLECULES, CELL MEMBRANES, MEMBRANE TRANSPORT AND ENZYMES, LUCA TO PROKARYOTES TO EUKARYOTIC CELLS, ENDOSYMBIOTIC THEORY AND BASIC CELL STRUCTURE & FUNCTION
READING ASSIGNMENT = CHAPTERS 2, 3 & 4 and for lab: CHAPTER 14 (all) & CHAPTER 15 pgs. 317-322 & 324-328 & CHAPTER 16 (all) & CHAPTER 17 (all) & CHAPTER 18 (all)



- 5 MON. FEB 11 HISTORY OF LIFE ON EARTH: EUKARYOTES TO THE CAMBRIAN EXPLOSION & PROTISTS
READING ASSIGNMENT = CHAPTER 11 and for lab: CHAPTER 14 (all) & CHAPTER 15 pgs. 317-322 & 324-328 & CHAPTER 16 (all) & CHAPTER 18 (all) & CHAPTER 17 (all)

WEDNESDAY FEB 13 FIRST LECTURE EXAMINATION

- 6 MON. FEB 18 NO LECTURE DUE TO WASHINGTON'S BIRTHDAY HOLIDAY
- WED. FEB 20 THE EVOLUTION AND IMPORTANCE OF SEXUAL REPRODUCTION AND THE ARCHITECTURE OF ANIMAL BODIES: EARLY ANIMAL EMBRYONIC DEVELOPMENT AND ANIMAL TISSUES
READING ASSIGNMENT = CHAPTERS 7, 8, 9, 11 and for lab: CHAPTERS 19 & 20
- 7 FEB 25 & 27 REVIEW OF ANIMAL DIVERSITY: CORAL REEFS - RADIATE ANIMALS TO VERTEBRATES AND BASIC MOLECULAR GENETICS, PROTEIN SYNTHESIS & ANIMAL HEREDITY
READING ASSIGNMENT = CHAPTERS 12, 13, 5 & PARTS OF 2, 3 & 7 & SKIM CH. 16 - 28 and for lab: CHAPTER 21
- 8 MAR 4 & 6 ANIMAL BIOTECHNOLOGY & APPLICATIONS AND DNA BARCODING AND MENDELIAN GENETICS AND ANIMAL HEREDITY
READING ASSIGNMENT = CHAPTERS 5 & 7 and lecture handouts and assigned online reading for lab: CHAPTERS 22 & 23 & intertidal websites for tidepooling

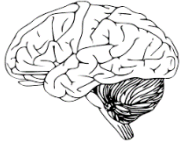
EDITED FINAL COPY OF LITERATURE SEARCH PAPER IS DUE MAR 4 (NO LATE PAPERS ACCEPTED - NO EXCUSES!)

- 9 MAR 11 & 13 HISTORY, PRINCIPLES & MECHANISMS OF EVOLUTION
READING ASSIGNMENT = CHAPTERS 5 & 6 and for lab: study for first laboratory practicum
- 10 MON. MAR 18 MORE EVOLUTIONARY BIOLOGY, POPULATION GENETICS & SPECIATION
READING ASSIGNMENT = CHAPTER 6 & PARTS OF 16 - 28 and for lab: CHAPTERS 24 & 25

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WEDNESDAY MAR 20 SECOND LECTURE EXAMINATION

MARCH 25 THROUGH MARCH 29 - NO LECTURE OR LABS DUE TO SPRING BREAK

- 11 APR 1 & 3 COMPARATIVE ANIMAL ADAPTATIONS & PHYSIOLOGY:
INTEGUMENTARY, SKELETAL & MUSCULAR SYSTEMS
READING ASSIGNMENT = CHAPTERS 29, 30 & PARTS OF 16 - 28 and
for lab: CHAPTERS 25 & 26
- 12 APR 8 & 10 COMPARATIVE ANIMAL ADAPTATIONS & PHYSIOLOGY:
CIRCULATORY SYSTEMS & VERTEBRATE HEARTS &
LYMPHATIC & ENDOCRINE SYSTEMS
READING ASSIGNMENT = CHAPS. 31 & 34 & PARTS OF 16 - 28 and
for lab: CHAPTERS 26 & 27
- 
- 13 APR 15 COMPARATIVE ANIMAL ADAPTATIONS & PHYSIOLOGY:
RESPIRATORY SYSTEMS & NERVOUS SYSTEMS
READING ASSIGNMENT = CHAPTERS 31, 33 & PARTS OF 16 - 28 and
for lab: CHAPTERS 28, 30 & 32

WEDNESDAY APR 17 THIRD LECTURE EXAMINATION

- 14 APR 22 & 24 COMPARATIVE ANIMAL ADAPTATIONS & PHYSIOLOGY:
NERVOUS & SENSORY SYSTEMS &
IMMUNE SYSTEMS & ANIMAL TOXINS
READING ASSIGNMENT = CHAPTER 33 & 35 & PARTS OF 16 - 28 and
for lab: prepare and practice for oral presentations

**ORAL PRESENTATIONS OF DIGITAL REVIEW TOPICS IN LAB ON APR 22 & 23
(NO LATE ORAL LAB PRESENTATIONS ACCEPTED - NO EXCUSES!)**

- 15 APRIL 29 &
MAY 1 ECOLOGICAL PRINCIPLES: ANIMALS IN THE BIOSPHERE -
POPULATION & COMMUNITY INTERACTIONS
BIOMES, BIOGEOGRAPHY, MIGRATION & CHRONOBIOLOGY
READING ASSIGNMENT = CHAPTERS 37 & 38 and
for lab: CHAPTERS 32 & 7 & 8
& review for second laboratory practicum



**FINAL EXAMINATION: WEDNESDAY, MAY 8TH,
8:00 AM - 10:00 AM in EBS 309**

GRADE POLICY IS ON THE NEXT PAGE

**Be sure to read the last page of this syllabus
regarding the Student Learning Outcomes for
Biological Sciences 102 - Animal Biology**

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POLICY ON GRADES - READ THESE PAGES VERY THOROUGHLY AND CAREFULLY!

As we progress through the course and you complete each of the exams, quizzes and assignments, you will accrue points towards a final letter grade for the course. **Specific letter grades will not be given after each exam or quiz, but you will receive a percentile score and I will give you a general idea of where you stand in the course after each exam with reference to the rest of the class.** Generally, I have found that letter grades given for each exam can be misleading for some students. Often students will attempt to "figure out" their grade based simply on the letter grade they received for each exam or assignment (e.g. "I got an A on one test and a C on another test, so I probably have a B"). Since your course grade is based on your cumulative score for all your work, this can be an inaccurate method of determining your true course grade (although you may have a B, your cumulative percentile may be closer to an A or a C). Additionally, by giving letter grades for each exam, the focus tends to be on "getting the grade" instead of learning the subject matter. I will do everything in my power to prevent this learning from becoming an arduous and boring task for you, but it does require serious, diligent and studious effort on your part. Your percentile score on each exam is a more accurate depiction of how much of the course material you truly understand and have learned.

It is important that you realize that your grade is the result of your learned performance on the exams, quizzes, and assignments. Some students may understand the material very well, but perform poorly on any particular exam while other students may not have a complete grasp of the information and perform more adeptly on a particular exam. I can only evaluate you and assign grades based on your "performances" for each of the exams, quizzes, and other assignments. I make every attempt to grade fairly and impartially. **Each exam will include some objective (scantron) type questions, but most (typically about 80%) of the exam questions will be of the fill-in-the-blank or short answer or diagram drawing/labeling/interpretation type. YOU MUST BRING A 100 POINT SCANTRON TO EACH EXAM. You will not need a blue book or green book to each exam. I will provide the blank written portion of the exams and quiz answer sheets. You should bring two sharpened #2 pencils and perhaps a pen and colored pencils for each exam.**

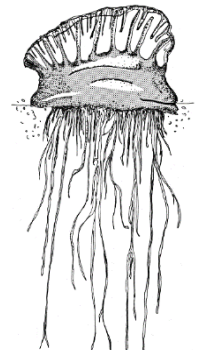
A student who earns an **A grade** has performed excellent, exemplary work and completed all course assignments, while a student who earns a **C grade** has performed only adequate work in the course but still completed all course assignments. A student who earns a **B grade** has performed well in the course and completed all course assignments, while a student who earns a **D grade** has performed inadequate work, but has shown effort and completed most course assignments. An **F grade** is earned when a student performs at an unacceptably low level usually due to a poor attendance record, lack of diligent study effort and study time and/or incomplete course assignments.

THE FOLLOWING SCALE WILL BE USED FOR DETERMINING FINAL COURSE GRADES:

Anyone who earns above 90% in this class is guaranteed an A- or higher grade. Anyone who earns above 80% in this course is guaranteed at least a B- grade or higher. Likewise, any student who earns at least 65% in this course is guaranteed at least a C grade. **Do not allow yourself to settle for merely passing this course, each of you deserves the best grade that you can achieve.** Come talk to me if you are finding yourself lost, confused, overwhelmed, bored or scared about your grade or any of the information presented at the earliest possible sign that you are having difficulty.

Remember that for most of you this is information that you will utilize in your future careers on a daily basis.

GRADE	TOTAL OVERALL PERCENTAGE	TOTAL POINTS ACCRUED
A+	98% - 100%	1553 - 1600
A	93% - 97%	1473 - 1552
A-	90% - 92%	1425 - 1472
B+	88% - 89%	1393 - 1424
B	83% - 87%	1313 - 1392
B-	80% - 82%	1265 - 1312
C+	78% - 79%	1233 - 1264
C	65% - 77%	1025 - 1232
D	55% - 64%	865 - 1024
F	0% - 54%	0 - 864



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ATTENDANCE: ATTENDANCE OF ALL LECTURES AND LAB SESSIONS IS REQUIRED. THERE WILL BE AN ATTENDANCE SHEET WHICH YOU MUST INITIAL DURING THE FIRST FEW LECTURE AND LAB SESSIONS UNTIL THE DROP ROSTER IS DUE AND I LEARN YOUR NAMES. Attendance of lecture or lab is not optional and attendance as well as participation will be the first criteria considered when determining "borderline grades". Arrive on time and I expect you to be fully prepared for lecture and lab. I am aware that parking is a problem; however, "I couldn't find a spot" is not a sufficient enough excuse for being late for lecture or for not attending. Don't let yourself miss lecture or lab just because parking is a hassle.

Please allow yourself enough time to account for difficulties in parking.

You should be prepared to attend all lectures and labs. In my experience, those students who do not attend class are the students who do not fulfill their potential regardless of their level of understanding. Medical, legal and other scheduled appointments should not be scheduled during normal class times and these will not be considered as excused absences. Medical or personal emergencies will require a written notice of the specific problem signed by an appropriately qualified individual.

CHEATING: Absolutely no form of academic dishonesty or plagiarism will be tolerated. It is unethical, unfair, and a violation of your own intelligence as well as being lame, slimy, vile, and pathetic. Anyone caught cheating will be subjected to the most severe academic penalties. **More than ever, most academic institutions and professors are acutely aware that this is a serious and unfortunately all too common issue.**

MAKEUP EXAMS: There will be no makeup exams except in the case of death/illness of a family member or death/illness of you. If you are sick, a written medical excuse will be required. It is your responsibility to make sure that you have no conflicts in your exam schedule. The final exam time is set by campus policy beyond my control and the lecture exams are all scheduled during regular lecture hours. In the case of some unforeseen personal crisis, a makeup will only be granted with my consent.



EXTRA CREDIT ASSIGNMENTS: Put simply, there really are not any other than a few points on some assessments. **DO THE WORK!** Stay focused and put an effort into your studies early on and you won't care about extra credit. If you are having trouble in the course, you certainly don't need more to study - which is what extra credit would entail!

WITHDRAWAL AND YOUR CONCERNS ABOUT YOUR GRADE: January 26th is the last day to drop the course and receive a refund. The last day to withdraw from the course (without a refund and with a "W") is **March 15th**. **February 14th** is the last day to petition for Pass/No Pass status. **IF YOU ARE CONCERNED ABOUT YOUR GRADE, PLEASE COME TALK TO ME AT THE EARLIEST POSSIBLE TIME SO THAT WE CAN DISCUSS YOUR OPTIONS. It is to your great advantage to discuss with me (I don't bite!) any problems you are having early in the semester so that I can try and assist you as much as possible. If you do decide to withdraw, please tell me so that I will be aware of what happened to you and remember IT IS YOUR PERSONAL RESPONSIBILITY TO OFFICIALLY WITHDRAW SO THAT YOUR TRANSCRIPT RECORD WILL NOT BE ADVERSELY AFFECTED.**

ACCOMODATIONS FOR STUDENTS WITH DISABILITIES (DSPS): Disabled Student Programs and Services (DSPS) coordinates all academic accommodations for students with documented disabilities at Santa Barbara City College. If you have, or think you might have, a disability that impacts your educational experience in this class please contact DSPS to determine your eligibility for accommodations. DSPS is located in the Student Services (SS) Building, Room 162. Their phone number is 805-730-4164. If you are already registered with DSPS please submit your accommodation requests via the '**DSPS Online Services Student Portal**' as soon as possible. Once submitted and confirmed please visit with me about your specific accommodations. Please complete this process in a timely manner to allow adequate time to provide accommodation.

PERSONAL DISCUSSIONS IN LECTURE: You will not text message on your cell phone during lecture. When you ask me questions, I will listen intently and provide you with the best possible answer that I can. I expect the same level of respect from you. I encourage you to discuss the material with your classmates during lab and outside of class, but please be courteous AND DO NOT TALK AMONGST YOURSELVES WHILE I AM LECTURING AS IT IS VERY DISTURBING TO THE STUDENTS AROUND YOU. **Student discussions during labs are required and encouraged.**

I WELCOME AND ENCOURAGE YOU TO ASK ME QUESTIONS DURING LECTURE

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IMPORTANT NOTES REGARDING THE ANIMAL BIOLOGY LABORATORY:

1. **LAB MATERIALS:** The lab will make use of many SBCC museum specimens, live animals, models, charts, and other lab materials. These educational aids are very expensive and some of them are irreplaceable, thus, you must be careful when handling them.

You are allowed to touch most of the specimens and live animals as long as you are careful.

You will NOT poke, injure, or similarly mess with the live animals in an inappropriate manner.

YOU MUST NOT REMOVE ANY MATERIALS FROM THE LAB.

ANYONE WHO REMOVES MATERIALS FROM THE LABORATORY WILL BE DROPPED FROM THE COURSE.

2. **LAB QUIZ FORMAT:** The lab quizzes will cover material discussed and studied during previous laboratory sessions. Generally, these will be short answer types of questions. **DO NOT DISMISS THE LAB QUIZZES, STUDY FOR THEM WELL AND REGULARLY AS THEY ACCOUNT FOR 130 POINTS AND ABOUT 8% OF THE FINAL GRADE, MORE THAN THE EQUIVALENT OF AN EXAM.**

3. **All laboratory quizzes will count toward your total course grade, no lab quizzes will be dropped.**

4. **If you decide to stop taking the course, it is your personal responsibility to be sure that you drop the course with the Admissions & Records office before the drop deadline so as not to adversely affect your academic record.**

ANIMAL BIOLOGY LABORATORY SCHEDULE

<u>DATES</u>	<u>LAB TOPIC AND LAB ASSIGNMENT</u>	<u>LAB QUIZ</u>
JAN 14 OR JAN 15	#1 - LABORATORY INTRODUCTION, LAB POLICIES AND PROCEDURES MICROSCOPY REVIEW AND REVIEW OF EVOLUTION	NO QUIZ
JAN 16 OR JAN 17 (LAB #1 DUE)	#2 - CELL THEORY, ANIMAL CELLS, CELL LOCOMOTION, CELL DIVISION AND KINGDOM PROTISTIA: PROTOZOA	QUIZ #1
JAN 21 OR JAN 22	NO LABORATORIES DUE TO MARTIN LUTHER KING, JR. DAY HOLIDAY	NO QUIZ
JAN 23 OR JAN 24 (LAB #2 DUE)	#3 - ZOOLOGICAL SYSTEMATICS: TAXONOMY & CLASSIFICATION AND #26 - INTRODUCTION TO DNA BARCODING	QUIZ #2
JAN 28 OR JAN 29 (LAB #3 DUE)	#4 - EARLY EUMETAZOAN EVOLUTION, BASIC ANIMAL TISSUE & ORGAN STRUCTURE AND PHYLUM PORIFERA AND INTRODUCTION TO FUNDAMENTAL MOLECULAR BIOLOGY TECHNIQUES	QUIZ #3
JAN 30 OR JAN 31 (LAB #4 DUE)	#5 - SYMBIOSIS, PHyla CNIDARIA & CTENOPHORA, BASIC ANIMAL EMBRYOLOGY AND NERVOUS SYSTEMS	QUIZ #4
FEB 4 OR FEB 5 (LAB #5 DUE)	#6 - PARASITISM, PHyla PLATYHELMINTHES, NEMERTEA, NEMATODA & ROTIFERA AND BASIC ANIMAL REPRODUCTIVE SYSTEMS AND MORE FUNDAMENTAL MOLECULAR BIOLOGY TECHNIQUES	QUIZ #5
FEB 6 OR FEB 7 (NO LAB DUE)	#7 - PHYLUM MOLLUSCA AND INTRODUCTION TO DIGESTIVE SYSTEMS	QUIZ #6
FEB 11 OR FEB 12 (LABS #6 & #7 DUE)	#8- PHYLUM ANNELIDA AND CARDIOVASCULAR SYSTEMS AND MORE FUNDAMENTAL MOLECULAR BIOLOGY TECHNIQUES	QUIZ #7
FEB 13 OR FEB 14 (LAB #8 DUE)	#9 - PHYLUM ONYCHOPHORA, PHYLUM ARTHROPODA: TRILOBITA & CHELICERATA AND RESPIRATORY SYSTEMS	NO QUIZ (EXAM #1)

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FEB 18 OR FEB 19	NO LABORATORIES DUE TO WASHINGTON'S DAY HOLIDAY	NO QUIZ
FEB 20 OR FEB 21 (LAB #9 DUE)	#10 - PHYLUM ARTHROPODA: CRUSTACEA AND MUSCULAR SYSTEMS	QUIZ #8
DUE BY FEBRUARY 22 INDIVIDUAL FIELD TRIP	#25 - INTRODUCTION TO ECOLOGY FIELD TRIP: LAKE LOS CARNEROS TRIP - NOT DURING NORMAL LECTURE OR LAB TIME - SEE COURSE WEBSITE FOR DETAILS <u>PLEASE WEAR FIELD CLOTHING AND COMFORTABLE WALKING SHOES</u>	
FEB 25 OR FEB 26 (LAB #10 DUE)	#12 - PHYLUM ARTHROPODA: MYRIAPODA & HEXAPODA AND INTRODUCTION TO ANIMAL SENSORY SYSTEMS AND #26 - COLLECT AND DIGEST TISSUE SAMPLE FOR DNA BARCODING	QUIZ #9
FEB 27 OR FEB 28 (NO LAB DUE)	#13 - ECOLOGY/DIVERSITY FIELD TRIP: STREAM INSECT ADAPTATIONS AND RIPARIAN HABITAT ECOLOGY <u>PLEASE WEAR "WET" FIELD CLOTHING AND COMFORTABLE "WET" SHOES</u>	NO QUIZ
MAR 4 OR MAR 5 (NO LAB DUE) PAPER DUE MAR 4	#14 - PHYLUM ECHINODERMATA, MORE ON ANIMAL DEVELOPMENT, INTRODUCTION TO THE PHYLUM CHORDATA: TUNICATES & CEPHALOCHORDATES AND #26 - PURIFY GENOMIC DNA AND RUN PCR REACTION FOR DNA BARCODING SAMPLE	NO QUIZ
MAR 6 OR MAR 7 (LABS #12 & #14 DUE)	#15 - <i>MACROCYSTIS PYRIFERA</i> (BROWN MACROALGAE/KELP) HOLDFAST LAB AND FIRST LABORATORY PRACTICUM REVIEW	NO QUIZ
MAR 11 OR MAR 12 (NO LAB DUE)	FIRST LABORATORY PRACTICUM (PROTISTS THROUGH CRUSTACEA)	NO QUIZ
MAR 13 OR MAR 14 (NO LAB DUE)	#16 - PHYLUM CHORDATA: THE FISHES - DIVERSITY AND ANATOMY	QUIZ #10
MAR 18 OR MAR 19 (LAB #16 DUE)	#17 - PHYLUM CHORDATA: CLASSES AMPHIBIA & REPTILIA, THE EVOLUTION OF TERRESTRIAL VERTEBRATES (TETRAPODS) AND VERTEBRATE CARDIAC ANATOMY AND PHYSIOLOGY	NO QUIZ
MAR 20 OR MAR 21 (NO LAB DUE)	START LAB #18 - PHYLUM CHORDATA: CLASSES REPTILIA & AVES AND FINISH LAB #26 - RUN ELECTROPHORESIS TO VISUALIZE AMPLICONS FOR DNA SEQUENCING	NO QUIZ (EXAM #2)
MAR 25 TO MAR 29	NO LABORATORIES DUE TO SPRING BREAK	NO QUIZ
APR 1 OR APR 2 (LAB #17 DUE)	ANIMAL MOVIE DAY (refreshments will be provided) AND EVOLUTION, DIVERSITY AND EXTINCTION OF THE DINOSAURIA	NO QUIZ
APR 3 OR APR 4 (NO LAB DUE)	#19 - ECOLOGY/BIRD DIVERSITY FIELD TRIP: ANDREE CLARK BIRD REFUGE, COMPLETE LAB #18 - PHYLUM CHORDATA: CLASSES REPTILIA & AVES AND REVIEW OF BIRD ADAPTATIONS & FLIGHT <u>PLEASE WEAR FIELD CLOTHING AND COMFORTABLE WALKING SHOES</u>	NO QUIZ
APR 8 OR APR 9 (LABS #18 & 19 DUE)	#20 - PHYLUM CHORDATA: CLASS MAMMALIA AND INTEGUMENTARY, SKELETAL & THERMOREGULATORY SYSTEMS	QUIZ #11
APR 10 OR APR 11 (NO LAB DUE)	#21 - DIVERSITY FIELD TRIP: SANTA BARBARA ZOOLOGICAL GARDENS <u>PLEASE WEAR FIELD CLOTHING AND COMFORTABLE WALKING SHOES</u>	NO QUIZ
APR 15 OR APR 16 (NO LAB DUE)	#24 - INTERTIDAL ECOLOGY/DIVERSITY FIELD TRIP: DEVEREUX/COAL OIL POINT TIDE POOLS <u>PLEASE WEAR "WET" FIELD CLOTHING AND COMFORTABLE "WET" SHOES</u>	NO QUIZ
APR 17 OR APR 18	#22 - VERTEBRATE ANATOMY & PHYSIOLOGY: FETAL PIG --	NO QUIZ

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(LABS #20 & #21 DUE)	FOCUS ON THE DIGESTIVE SYSTEM AND THORACIC & ABDOMINAL ORGANS	(EXAM #3)
APR 22 OR APR 23 (NO LAB DUE)	#11 = ORAL & DIGITAL PRESENTATIONS OF LITERATURE REVIEW TOPICS	NO QUIZ
APR 24 OR 25 (LAB #22 DUE)	#23 - VERTEBRATE REPRODUCTION, DEVELOPMENT & EMBRYOLOGY AND HUMAN REPRODUCTION & DEVELOPMENT MOVIE: "AN EVERYDAY MIRACLE"	QUIZ #12
APR 29 OR APR 30 (LAB #23 DUE)	MORE VERTEBRATE ANATOMY & PHYSIOLOGY AND SECOND LABORATORY PRACTICUM REVIEW	QUIZ #13
MAY 1 OR MAY 2	SECOND LABORATORY PRACTICAL (MYRIAPODA THROUGH MAMMALS)	NO QUIZ

FINAL EXAMINATION: WEDNESDAY, MAY 8, 8:00 AM - 10:00 AM in EBS 309

