

# Department of Biological Sciences

College of Natural and Social Sciences

Biological Sciences 143 • (323) 343-2050 • FAX (323) 343-6451

## Biology 2020 – Human Anatomy & Physiology II Fall semester 2019 Syllabus

### GENERAL COURSE INFORMATION

**Instructor:** Raul E. Diaz, Jr, MA, PhD

**Instructor's Office:** La Kretz 394

**Email Address:** [raul.diaz@calstatela.edu](mailto:raul.diaz@calstatela.edu)

**Meeting Times: Lecture:** TuTh 1:40PM - 2:55PM, ASCB 132

**Office Hours:** Tue & Thu 12:30-1:30 PM

Any questions regarding lab should be directed to your lab instructor. You're welcome to talk to me about the lab. **Any concern** about the overall course/lab should be directed to **professor Badr**.

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#### Laboratory Sections associated with Lecture

11	LAB	TR	12:15-1:30 PM	ASCB 365	Amir Jahani
12	LAB	TR	3:05-4:20 PM	ASCB 365	Mohammad Rezaee Baroon
13	LAB	TR	4:30-5:45 PM	ASCB 365	Kevin Chau
14	LAB	TR	6:00-7:15 PM	ASCB 365	Kevin Chau
16	LAB	MW	3:05-4:20 PM	ASCB 365	Anahid Mirzaton
17	LAB	MW	4:30-5:45 PM	ASCB 365	Anahid Mirzaton

**Emails:** [Kevin.Chau8@calstatela.edu](mailto:Kevin.Chau8@calstatela.edu)  
[Anahid.Mirzaton@calstatela.edu](mailto:Anahid.Mirzaton@calstatela.edu)  
[Amir.Jahani@calstatela.edu](mailto:Amir.Jahani@calstatela.edu)  
[Mohammad.Baroon@calstatela.edu](mailto:Mohammad.Baroon@calstatela.edu)  
[abadr@calstatela.edu](mailto:abadr@calstatela.edu) (**course coordinator**)

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### COURSE DESCRIPTION

This Course provides an introduction to human anatomy and physiology for non-science majors. The general objectives of the course are to gain a **detailed** understanding of the structure and function of the human body; to appreciate the relationship between structure and function; and to understand how various cells, tissues, organs and organ systems work together to maintain homeostasis. To achieve these general objectives, we will study the structure and function of the human body from a systems viewpoint.

This semester, we will cover the nervous system, the endocrine system, the reproductive system (including gametogenesis and development), the cardiovascular system (some lymphatic system included) and the respiratory system.

PowerPoint slides will be posted before every lecture. For each lecture students are advised to write their own additional notes. Slides will contain figures and/or bullet point information, I will elaborate on these points and it is up to YOU [the student] to take these additional notes. Further, students are required to read related Chapters

## **Course Alignment with Department of Biological Sciences Undergraduate Student Learning Outcomes**

Biology 2020 is designed to help students meet the following undergraduate degree learning outcomes:

1. The student will acquire the following attitudes:
  - 1.1 Learning about both living micro and macro systems is relevant and essential for understanding life.
2. The student will be able to demonstrate that he/she is skilled at:
  - 2.1 Applying the processes and methods of scientific inquiry, including the search and retrieval of scientific information, the formulation of scientific hypotheses, the design and conduct of experiments, and analysis and interpretation of data;
  - 2.2 Understanding and critically evaluating the scientific work of others;
  - 2.3 Communicating scientific information effectively using oral presentations and written reports;
  - 2.4 Performing laboratory techniques that are appropriate to the major, with an understanding of the principles of laboratory safety;
  - 2.5 Working collaboratively on group projects.
3. The biology student will be able to demonstrate knowledge of the following:
  - 3.1 Molecular and cellular structure and function;
  - 3.3 Basic principles of anatomy, physiology, and development.

### **Study effort & expectations**

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1. **You are expected to spend at least 3 extra hours** studying/reviewing for every hour we meet in this course; that means with the 5.00 hours that we meet every week, **you will need at least an extra 15.0 hours** to study and go over the materials covered. So good time management is a crucial part of being successful in this class. Success will depend on a commitment by the student to learning as well as proper time management skills.
2. Another crucial part of being successful is good studying practices, you will need to identify what type of learner you are and use it to your advantage. Do not blindly follow other's studying methods if they do not work for you.
3. Create lists of unfamiliar terms and concepts and review these frequently. Become very familiar with the slides provided after each lecture

4. You are expected to attend ALL classes and prepare before coming to lectures or labs

5. Talking, drinking, and eating in class are NOT allowed.

### REQUIRED TEXTBOOKS

Lecture: Anatomy & Physiology: An Integrative Approach. McKinley 2nd Edition; ISBN: 9781269454490

Laboratory: Human Anatomy & Physiology Laboratory Manual: for CSULA; McGraw-Hill. **MUST PURCHASE A LAB MANUAL TO COMPLETE ASSIGNMENT**

Access code: **MUST PURCHASE an ACCESS CODE TO COMPLETE HOMEWORK, LECTURE QUIZZES, AND LAB ASSESSMENTS.**

### COURSE WEBSITES AND REGISTRATION INFORMATION

- **Canvas for Biology 2020** - will contain syllabus, lecture slides, grade points and anything else the teaching staff deems relevant to your successful completion of the course.

**On Connect**, you will find all weekly **online homework assignments** and other activities to help you in this course. In addition, you find pictures of tissues, models, dissection specimens, and quizzes. **Use of this online homework resource will begin in week 2 through end of semester.**

#### **To register for BIOL 2020 /Fall 2019 on Connect:**

Instructions are posted on the course Canvas website.

**IMPORTANT:** Any questions related to the use or obtaining the code for connect should be directed to McGraw Hill. Their contact information is listed on Canvas.

**Homework assignments for each week will be made available online every Friday at 10:00am for 72hours or so. There will be NO extended times given. **NO** late assessments, homework, or quizzes will be accepted.**

#### **I-clicker**

- To obtain full credit for this course students need to purchase an iClicker 2 from the student bookstore or from a reputable seller. Starting 3<sup>rd</sup> week, each class session will have some clicker questions to test student knowledge on the material presented in class **that day and the lecture before**. Students should review lecture material before entering into class. **iClickers SHOULD BE REGISTERED, instructions are included with your clicker remote. Please review and register before using.** iClickers should **also** be **registered with your Canvas account**, allowing the clicker ID to sync with your name/account. **On your Canvas webpage you will see an icon allowing you to register your clicker on Canvas, please do this immediately to allow your clicker ID sync with your name.**

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### ATTENDANCE AND BEHAVIOUR

Lecture attendance is **required (also will be recorded by your I-Clicker)** and very important to the overall progress you can achieve in this course. You are responsible for your education and so it is in your best interest to be present in class and be an active participant in both class and lab.

Laboratory attendance is also very important to the level of success of this course. You must be enrolled in a lab session, where you will perform experiments, study and manipulate anatomical models and charts, study histological specimens, and view/study demonstrations relevant to the topics in the lecture material. This laboratory section is **NOT** another lecture; it is designed for collaborative, exploratory, and inquiry based learning. Therefore, come to lab prepared to work (this implies that there is some learning that should be done prior to arriving to lab). **NO MAKE UP LABORATORY SESSIONS.**

**NOTE:** If you miss more than two lab classes you will forfeit the ability to earn extra credit and lose any earned extra credit in lab and lecture throughout the quarter.

**No inappropriate behavior will be tolerated in lecture and lab sections. Any inappropriate behavior will be brought to professor Badr's attention. Class expulsion is an option that will be considered in certain cases.**

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### **IMPORTANT NOTICE!**

Cell phones: must be switched off and inside your backpack during lecture & lab. Violation of this policy would result in **5 points deduction per incident** of your overall score!!!

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### **ACADEMIC HONESTY**

Students are expected to read and abide by the University's Academic Honesty Policy, which can be found at: <http://www.calstatela.edu/academic/senate/handbook/ch5a.htm> **Students who violate this policy will be subject to disciplinary action**

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### **ADA STATEMENT**

Reasonable accommodation will be provided to any student who is registered with the Office of Students with Disabilities and requests needed accommodation.

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### **MAKE-UPS LAB AND LECTURE**

**NO MAKE-UP EXAMS WILL BE GIVEN.** Exception will **ONLY** be given with documentation (i.e., **physician's note**) of a serious and compelling reason for a missed exam.

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## **LECTURE AND LABORATORY EXAM PROCEDURE**

**NOTE: Topics covered in lab sessions could be examined in written lecture exams**

Leave **ALL your personal items** either in the back of the lecture hall, or on the floor in the front of the lecture hall. The only items you can take to your seat are the materials needed and allowed to take the exams such as pencils, pens and erasers. **No electronic devices of any kind are allowed to be on you or use on exam days. If caught, you will fail the class as this will be considered cheating and therefore violate the academic honesty statement. Student must have their student ID present during ALL exams**

**STUDENTS HAVE BEEN CAUGHT BEFORE WITH ELECTRONIC DEVICES IN LAB EXAMS, IF CAUGHT YOU WILL BE AUTOMATICALLY EXPELLED FROM LAB AND REFERRED TO THE DEPARTMENTAL CHAIR**

If you are LATE the day of the exam, you will NOT be allowed to take the test if ONE person already turned in their exam. For laboratory exams, you will NOT be allowed to make up any of the missed stations you rotate through. In other words, **DO NOT BE LATE ON EXAM DAYS. ABSOLUTELY NO EXCUSES.**

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## SYLLABUS DISCLAIMER STATEMENT

SERIOUS EFFORT AND CONSIDERATION WERE USED IN FORMULATING THE COURSE SYLLABUS. WHILE VIEWED AS AN EDUCATIONAL CONTRACT BETWEEN PROFESSOR BADR AND STUDENT, UNFORESEEN EVENTS MAY CAUSE CHANGES TO THE SCHEDULING OF LECTURES, EXERCISES, EXAMINATIONS, ETC. EVERY EFFORT WILL BE MADE NOT TO CHANGE SCHEDULED ITEMS. NONETHELESS, PROF. DIAZ RESERVES THE RIGHT TO MAKE ANY CHANGES DEEMED NECESSARY TO BEST FULFILL THE COURSE OBJECTIVES. STUDENTS REGISTERED FOR THIS COURSE WILL BE MADE AWARE OF ANY CHANGES IN A TIMELY FASHION USING REASONABLE MEANS (I.E. THROUGH CAMPUS EMAIL OR COURSE WEBSITE). THIS DISCLAIMER DOES NOT ABROGATE ANY STUDENT RIGHTS AS DESCRIBED BY UNIVERSITY RULES AND REGULATIONS.

## TENATIVE LECTURE & LAB SCHEDULE

Week	Tuesday	Thursday	Day 1 (Mon/Tue)	Day 2 (Wed/Thr)
08/20/19	Introduction & Syllabus Nervous System: Nervous Tissue (12.1-12.11)	Nervous System: Nervous Tissue (12.1-12.11)	No lab	Lab Safety & Syllabus
08/26/19	Nervous System: Spinal Cord & Spinal Nerves (14.1-14.3; 14.5, 14.7)	Nervous System: Spinal Cord and Spinal Nerves (14.1-14.3; 14.5, 14.7)	Lab Exercise 27 (Nervous Tissue & Nerves)	Lab Exercise 28 (Spinal Cord, Spinal Nerves & Meninges)  <b>Lab assessment 1</b>
09/2/19	Nervous System: Brain & Cranial Nerves (13.1-13.9)	Nervous System: Brain and Cranial Nerves (13.1-13.9)	<b>No lab for Mon ONLY Labor Day</b>	Lab Exercise 32 & Lab exercise 30 (Brain & Cranial Nerves) <b>Lab assessment 2</b>
09/9/19	Nervous System: Reflexes (14.6) <b>Lecture Quiz I</b>	Nervous System: Autonomic Nervous System (15.1-15.7)	Lab Exercise 29 (Reflex Arc & Reflexes)	<b>Review Day</b> <b>Lab assessment 3</b>
09/16/19	Nervous System: Senses (16.1-16.5; 14.4)	Nervous System: Senses (16.1-16.5; 14.4)	<b>LAB PRACTICAL 1</b>	Lab Exercise 33 (General Senses)
09/23/19	<b>LECTURE EXAM I</b>	Endocrine System (17.1-17.11)	Lab Exercise 34 (Smell & taste)	Lab Exercise 35 & 36 (The Eye) <b>Lab assessment 4</b>
09/30/19	Endocrine System (17.1-17.11)	Reproductive System (28.1-28.5)	Lab Exercise 37 (Ear & hearing)	Lab Exercise 38 <b>Lab assessment 5</b>
10/7/19	Reproductive System (28.1-28.5) <b>Lecture Quiz II</b>	Development & Pregnancy (29.1-29.8)	<b>REVIEW DAY</b>	<b>LAB PRACTICAL 2</b>
10/14/19	<b>LECTURE EXAM II</b>	Cardiovascular System: The Heart (19.1-19.10)	Lab Exercise 39 Endo str. & func)	Lab Exercise 58 (MALE MEIOSIS MODEL)
10/21/19	Cardiovascular System: The Heart (19.1-19.10)	Cardiovascular System: The Heart (19.1-19.10)	Lab Exercise 59 FEMALE MEIOSIS	<b>REVIEW DAY</b> <b>Lab assessment 6</b>
10/28/19	Cardiovascular System: Vessels & Circulation (20.1-20.12) <b>Lecture quiz III/Research paper due</b>	Cardiovascular System: Vessels & Circulation (20.1-20.12)	<b>LAB PRACTICAL 3</b>	Lab Exercise 41 & 43 (Blood & blood types)  <b>Lab assessment 7</b>

11/04/19	Finish up cardio.	Respiratory System (23.1-23.8)	Lab Exercise 44 Heart structure	Lab Exercise 45 Cardiac cycle <b>Lab assessment 8</b>
11/11/19	Respiratory System (23.1-23.8)	Lymphatic System (21.1 - 21.4)	<b>NO lab for Mon ONLY Veterans Day</b>	Lab Exercise 47&48 Blood vessels &HR/BP
11/18/19	<b>Lecture Exam III (Cardiovascular system ONLY!)</b>	Immune System & The Body's Defense (22.1-22.9)	Lab Exercise 50 & 51 (Resp. organs & volumes)	<b>REVIEW DAY I</b> <b>Lab assessment 9</b>
11/25/19	<b>Happy Thanksgiving! NO CLASS!!!!</b> <b>Lecture quiz IV</b>			<b>Lab assessment 10</b>
12/2/19	Immune System & The Body's Defense (22.1-22.9)	Finishing up the Immune system.	<b>REVIEW DAY II</b>	<b>LAB PRACTICAL 4 Cardiorespiratory ONLY!</b>

**FINAL EXAM WEEK (12/10-16/19): Final exam (cumulative).**

**Date/time (tentative): 12 December 2019, 12-2:00pm**

**Important Notes:**

- 1) This is tentative schedule; adjustment to the syllabus may be made at the professor's discretion to better meet the needs of the class.
- 2) **The lecture and laboratory sections will go out of sync during the semester.**
- 3) Lab exams will be model identification, histological identification based etc...
- 4) **No lab session swapping.**

**GRADING**

You will receive a single grade for the lecture and lab portions of the course. Letter grades will be determined based on the grading scale below. The plus/minus grading system will be used.

**Grading Scale**

A = (93% - 100%)	C+ = (77% - 79%)
A- = (90% - 92%)	C = (73% - 76%)
B+ = (87% - 89%)	C- = (70% - 72%)
B = (83% - 86%)	D = (60% - 69%)
B- = (80% - 82%)	F = (Below 59%)

Component	Points	Location	Comments
<b>LECTURE</b>		ASCB132	Attendance and class participation is <b>expected</b> . People who attend lectures <b>usually</b> do well in this course.
Online homework	<b>150</b>	Connect	Homework assignments (weekly starting end of week 2)
Clicker Questions	<b>70</b>	In class	Clicker questions will be given on a daily basis starting week 3
4 Quizzes	<b>100</b>	On Connect	fill- in-the-blanks, multiple choice, and/or True/False questions
3 Midterm Exams	<b>210</b>	In class	<b>Three</b> midterm exams; formats may be any or all of the following: multiple choice, short-answer, fill in the blanks, diagramming ( <b>70pts each exam</b> )

Final Exam	190	In class	<b><i>In class final exam</i></b> ; format may be any or all of the following: multiple choice, short-answer, fill in the blanks, diagramming
Research paper	50	Turn-it-in	See detail below
<b>Total Lecture Points</b>	<b>770</b>		
<b>LABORATORY</b>			
4 Lab exams	400	In lab	<b><i>Four Lab exams</i></b> , 100pts each
Lab Exercises	130	In lab	Thirteen End of Exercise Assessment page completion that will be due at the end of class period. Exercise # <b>27,28,30,39,58,59,41,43,44,45,48, 50,&amp;51.</b>
Lab assessment	70	Connect	<b><i>Ten assessments</i></b> will be post it on <b>Connect on Wednesdays.</b> Each one includes 14-15 questions and will test your knowledge on materials you learned that week. Each assessment will be due on Friday midnight of same week.
Individual demonstration	25	In lab	<b><i>One oral demonstration</i></b> of testable laboratory structures to the class, in preparation for the practical exams. You may elect to demonstrate any of the following resources: histology/microscopic anatomy, models, sheep/cow organs, although your demonstration must be pre-approved by the instructor. You will present a minimum of 15 features in front of the instructor and a minimum of 3 other students. You may use your study guide as a casual reference during the demonstration but you must know the material being presented. To earn the full 25 points credit for this demo: you will present with accuracy and confidence (see attached rubric).
Group demonstration	25	In lab	<b><i>One group demonstration</i></b> - Each student will work collaboratively on a group demonstration where you will collectively present on an organ system along with a written key to be used as a study specimen prior to practical exams for units two through four. Approximately 25 structures must be presented & accurately labeled to earn the full 25 points credit. Group members who are absent or do not participate will earn 0 points. They will be given a second chance later. It is your responsibility to participate in a group demonstration prior to the fourth practical exam.
<b>Total Lab points</b>	<b>650</b>		

### **Research paper guidelines: Coronary Artery Disease (CAD)**

- 5 typed pages not including title page and citations
- Line spacing 1.5
- Margins 1 inch
- Paper title Arial 16
- Arial 12 for main text
- Arial 12 for sub titles in bold

- Outline
  - **Introduction:**
    - Talk about the basic anatomy & physiology of the heart
    - Talk about blood supply to the heart.
  - Pathophysiology
    - Molecular events leading to CAD, particular susceptible groups of people etc..
  - Diagnostic tools
    - What are the different Methods to diagnose CAD?
  - Risk factors
    - What are CAD risk factors?
  - Methods of treatment
  - Prognosis
  - Conclusions and what you learned from your research
- **4-6 primary research articles** must be cited, only one physiology/anatomy textbook and one website can be used as a citation example CDC, NIH
- Citation must be properly referenced with authors, year of publication, complete title and page and volume number
- Example: 1. Doe, John & Soap, Joe (2014). The study of bone diseases in Americans, Journal of Osteoporosis, vol 3 p26-34.
- Citation referred to in the text must be numbered.
- PubMed/Medline are a good source for information.
- **No referencing Wikipedia or random webpages**

**Your research paper must be submitted to TURNITIN on the BIOL2020 MOODLE/CANVAS webpage. This program will scan for plagiarism and a score higher than 20% will not be graded and earned of 0 points out of 50. Research paper is due on 10/28/2019!!!!**