

PVAMU Course Syllabus

Biology 1064

Anatomy and Physiology II

Department of
Biology
Brailsford College of
Arts and Sciences

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Office Hours: M,T,W,TH 2:00 P.M. –3:00 P.M.

Course Location: New Science Building: Lecture RM 101 Laboratory: RM 311

| <u>Time</u> | <u>Day</u> | <u>Room Location</u> |
|--------------------|------------|----------------------|
| 9:30-10:20 a.m. | T-TH | NSCI. 101 |
| Lecture: | | |
| <u>Time</u> | <u>Day</u> | <u>Room Location</u> |
| 8:00 – 9:50 am | M-W | NSCI. 311 |
| Laboratory: | | |

Course Abbreviation and Number: Biology 1064 Lecture – 10612. Sec. P01 Anatomy and Physiology,
Biology 1064 Laboratory – 11038. Sec. P61 - Anatomy and Physiology

Catalog Description: **Biology 1064. Anatomy and Physiology II;** (2-4) 4 Credit semester hour. The Structure and functions of the human body. The structure of each of the system demonstrated by models, charts, and animal dissections with their functions studied by experiments. Laboratory fee required. (BIOL 2402)

Prerequisites: **BIOL 1054 Anatomy and Physiology**
Co-requisites:

Required Text: Bundle:9780077548339
Anatomy & Physiology (Saladin, 6th ed.) Published 2012
Anatomy & Physiology Lab
On line access code (Connect)

Recommended Text: Electronic Books. Go Green!! www.mhhe.com/ebooks for details.

Access to Learning Resources: PVAMU Library: phone: (936) 261-1500;
web: <http://www.pvamu.edu/pages/3585.asp/>
University Bookstore: phone: (936) 261-1990;
web: <https://www.bkstr.com/Home/10001-10734-1?demoKey=d>

Course Goals: Students will use microscopes, microscopic slides, diagrams, models, physiological processes and dissection of animal specimens during their study of the following systems: cardiovascular, lymphatic, respiratory, urinary, digestive, and reproductive.

Learning Outcomes:

At the completion of this course, the student will be able to satisfactorily:

1. Identify the important anatomical structures in each of the state organ systems (Critical Thinking);
2. Demonstrate a critical understanding of all-important physiological processes of the stated systems as well as fluid and electrolyte balance, nutrition, metabolism, pregnancy, human embryology, fetal development and human genetics (Critical Thinking);
3. Interpret biomedical related datasets (Empirical and Quantitative);
4. Describe the interrelationships between anatomy and physiology in each of the organ systems listed (Critical Thinking, Communication);
5. Explain the principle of homeostasis and the primary control mechanisms that operate in each of the organ systems listed (Critical Thinking and Communication);
6. Perform oral and written communication of biomedical terms relative to the human body (Communication);
7. Collaboratively work through physiological case studies (Teamwork);
8. Develop independent learning skills such as active learning and problem solving.

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – Each lecture and laboratory exam will focus on measuring the students understanding of the physiological processes and anatomical structures of the human anatomy.

Lecture: Minimum of four major lecture exams will be given during the semester. Exams will consist of multiple-choice and short answer questions. The exams will measure the student's ability to process anatomy and physiology lexicon, identify the structural similarities and differences, process physiological processes. In addition relate concepts to clinical application and communicate their thoughts in written format. **The lecture exams count for 30% of your grade.**

Laboratory: Minimum of four major practical laboratory exams will be given during the semester. One laboratory practical will be oral format. The practical

examinations consist of identification of anatomical parts and physiological functions. Models and animal specimen will be utilized to test your knowledge of these systems.

The laboratory exams accounts for 30% of your grade.

Learnsmarts

LearnSmart helps students succeed by providing a personalized learning path that's based on responses to questions (right or wrong), as well as how confident they feel about the answers they provide. The program also encourages the retention of the material by identifying concepts that students are likely to forget, and directing them back to portions of the e-book to help them solidify concepts.

The Learnsmarts will be due each week and count 10% of your grade.

Exercises – written assignments designed to supplement and reinforce course material

On-line Assignments: will be answering a collection of questions discussing scientific concepts on the chapter by using composition, labeling, classification, sequencing, true and false, matching and essay question.

Biopac Laboratory Assignments: Students are engaged in scientific inquiry by performing in group data collection, analysis and write-ups. The students will perform exercises targeting circulatory system, respiratory system, muscular function, brain function, ANS, exercise physiology and neurophysiology. **This will count 10% of your grade.**

Projects – web development assignments designed to measure ability to apply presented course materials.

Case studies/Biological Topic:

Students will collaboratively engage an assigned scientific topic discussed in the course. The group is expected to written and oral presentation of their case study to the class on the assigned day. **This will count 10% of your grade.**

Comprehensive Final Exam is given at the end of each semester. The final exam accounts for 10% of your grade. The final exam schedule is set by the University. See attached final exam schedule for exact date.

***Do not schedule any activity during the final exam period (*see above dates).**

Critical Thinking, Empirical and Quantitative Core Assessment

Pulmonary Function I BIOPAC assignment will measure the students ability to observe the experimentally, record and/or calculate selected pulmonary volumes and capacities. The student will compare the observed values of volume and capacity with average values. Lastly, the student will compare normal values of pulmonary volumes and capacities of subjects differing in sex, weight and height. This assignment will be assessed against the Association of American College and

Universities Empirical and Quantitative rubric.

Teamwork, Oral and Written Communication

Case Study/Scientific Topic Core Assessment will measure the student's ability to research, analyze and communicate information for a given case study/scientific topic. Each student will be assigned to a group to discuss the case study requirements. Each member of the group will be responsible for a written portion of the case study and perform a part for the oral presentation. The topics will require students to research information and compare data. After which, they will collaboratively assemble an oral presentation using Prezi to be assessed by their peers and professor. This assignment will be assessed against the Association of American College and Universities Written and Oral communication rubric, Teamwork rubric and Peer Evaluation Rubric (Herreid, C.F., 2007).

Example of Case study is "Wake-Up Call" by L.A. Rubin and C.F. Herreid. The case study requires the students to evaluate a patient's physiological symptoms and provide a diagnosis. They will learn physiological lexicon such as LDL/HDL, cardiac ischemia and angina pectoris. Lastly, the group of students will produce a brochure and presentation on altering their life styles in relation to smoking, cholesterol, blood pressure, obesity and diabetes.

Grading Matrix

| Instrument | Value (points or percentages) | Total |
|---|--------------------------------------|--------------|
| Lecture Exams | 4 Lecture exams at 100 points ea. | 30% |
| Laboratory Practical Exams | 4 Practical exams at 100 pts each | 30% |
| Learnsmart | 16 Learnsmarts | 10% |
| Assignment (Online, Laboratory Assignments, ECG, EOG, Blood pressure and Pulmonary Biopacs) | 10 Assignments | 10% |
| Group Case-study Presentation | 100 points | 5% |
| Individual Case-Study | 100 points | 5% |
| Comprehensive Final Exam | 100 points | 10% |

Exam Policy

Exams should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook). **Each student must provide their own Scantron B during the lecture exams. One exam (lecture or laboratory grade) will be dropped, if you miss an exam that automatically becomes your dropped grade.**

BIOL 1064 Tentative Schedule

| <u>Week</u> | <u>Laboratory</u> | <u>Lecture</u> | <u>Online Assignments</u> |
|-------------|--|---|---|
| 1 | Syllabus/Register for Connect/ Bioethics video Safety Forms/ Exercise 29/30 | Pre-Test/Syllabus Chapter 18 Circulatory System: Blood | LearnSmart Chapter 18 |
| 2 | Dr. Martin Luther King Jr. Day (University Closed) General Assembly | Chapter 18 Circulatory System: Blood Chapter 19 Circulatory System: Heart | Assignment 1 Chapter 18 Learnsmart Chapter 19 |
| 3 | Exercise 31,33, 34 Exercise 32 , BIOPAC Lesson 5 ECG | Chapter 19 Circulatory System: Heart Chapter 20 Circulatory System: Vessels and Circulation | Learnsmart Chapter 20 |
| 4 | Exercise 35,36, Dissection Exercise 38 , BIOPAC Lesson 16 Blood Pressure | Chapter 20 Circulatory System: Vessels and Circulation Chapter 21 Lymphatic System | Assignment 2 Chapter 19 and 20 Learnsmart Chapter 21 |
| 5 | Lab Exam I Exercise 37 | Lecture Exam I (18,19,20) Chapter 22 Respiratory System | Learnsmart Chapter 22 |
| 6 | Exercise 39 Exercise 40, BIOPAC Lesson 12 Pulmonary Function I | Chapter 22 Respiratory System Chapter 23 Urinary systems Chapter 24 Water, Electrolyte and Acid-Base Balance | Learnsmart Chapter 23/24 |
| 7 | Lab Exam II Exercise 44 | Lecture Exam II (21,22) Chapter 23/24 | Assignment 3 Chapter 21 and 22 |
| 8 | Exercise 10 Dissection | Chapter 23/24 Midterm Lecture Exam (23/24) | |
| 9 | Spring Break Spring Break | Spring Break Spring Break | |
| 10 | Exercise 42 Exercise 16,17 | Chapter 25 Digestive System Chapter 26 Nutrition and Metabolism Chapter 25/26 | Learnsmart Chapter 25/26 Assignment 4 Chapter 25 and 26 |
| 11 | Lab Exam III | Lecture Exam IV (25/26) | |

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|----|---------------------|--|-----------------------------------|
| | Honors Convocation | Chapter 27 | Learnsmart Chapter 27 |
| 12 | Male reproduction | Male Reproduction Chapter 27 | |
| | Male reproduction | Chapter 28 | Learnsmart Chapter 28 |
| 13 | Female Reproduction | Female Reproduction Chapter 28 | Assignment 5 Chapter 27 and 28 |
| | Female Reproduction | Chapter 29 | Learnsmart Chapter 29 |
| 14 | Embryo Development | Human development and Aging Chapter 29 | Assignment 6 Chapter 29 |
| | <i>Case Studies</i> | <i>Case Studies</i> | |
| 15 | Lab Exam IV | Exam V (27,28,29) | |
| | <i>Case Studies</i> | <i>Case Studies</i> | |
| 16 | Final Exams | Final Exams | |

* **Items in italics will be used for assess for compliance in foundational core areas.**

University Rules and Procedures

Disability statement (See Student Handbook):

Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

Academic misconduct (See Student Handbook):

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

Forms of academic dishonesty:

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.
2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. Fabrication: use of invented information or falsified research.
4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

Nonacademic misconduct (See Student Handbook)

The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

Sexual misconduct (See Student Handbook):

Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

Attendance Policy:

Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". **Absences are accumulated beginning with the first day of class.**

Absences on Religious Holy Days- In accordance with Texas education Code, section 61.003, subdivision (7), student may be absence from class for the observance of a religious holy day will be permitted to take missed examinations and complete missed assignments provided the student has notified the instructor of the planned absence in writing and receipt of notification has been acknowledged by the instructor in writing.

"A religious holy day means a holy day observed by a religion whose place of worship is exempt from property taxation under the Texas Tax Code, section 11.20"

Student Academic Appeals Process

Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.