

# Biology 2101 Lab, (AP1 Lab) Course Syllabus, James

## Course Description

Weekly laboratory activities are designed to complement and/or coincide with Biology 2301 lecture topics. Therefore it is **highly recommended** that you take lecture and lab concurrently in the same semester. Some topics covered in lab are 'stand-alone' with no corresponding counterpart in lecture. Laboratory activities will include the use of various organ system models, group activities, and dissections of preserved or fresh specimens. No live animal experiments are used. The students will be guided through a study of the anatomy of the integumentary, skeletal, muscular, nervous, and endocrine organ systems.

## Prerequisites

None

## Instructor

Jerry James

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Mobile: 979-418-0643 but no later than 9 p.m. please.

## Learning Outcomes (Course Goals)

1. Students will demonstrate knowledge of body cavities, planes, regions, and directional terminology.
2. Students will demonstrate knowledge of the appendicular and axial skeletons as well as microscopic bone anatomy.
3. Students will demonstrate knowledge of the structure and functions of the skin.
4. Students will demonstrate knowledge of select muscles of the arm, leg, face, and torso and the actions these muscles produce.
5. Students will demonstrate knowledge of the various structures and functions of the central and peripheral nervous systems.
6. Students will demonstrate knowledge of the major neurotransmitters.
7. Students will demonstrate knowledge of various endocrine glands and their hormones and how they are involved in the control of variables such as blood pressure, blood sugar, electrolytes, osmolality of the blood, etc.
8. Students will demonstrate knowledge of the anatomy of the eye and ear and associated disorders.

	<b>LAB TOPICS SEQUENCE (Sample)</b> <b>Also always check for helpful videos, etc. on the Web of Life and your instructor's web page.</b>
Lab 1	Intro. to A&P Lab Body Cavities and Organs Serous Membranes, Mesenteries, & 'Retroperitoneal' 4 Abdominopelvic Quadrants and 9 Abdominopelvic Regions Body Planes Directional Terminology
Lab 2	Quiz #1 _____ Build Your Own Cell Membrane The Integumentary System – Your Skin Synovial Joints The knee joint as example OYO from handout: Rheumatoid Arthritis, Osteoarthritis, Gout
Lab 3	Quiz #2 _____ Human Axial Skeleton anatomy. Learn the bones (and their features) of the axial skeleton. Microscopic Anatomy of bone
Lab 4	Quiz #3 _____ Generic Bone Anatomy. Human Appendicular Skeleton anatomy.
Lab 5	Quiz #4 _____ Neuron Anatomy. Use models. Spinal Cord Anatomy. Use models. Meninges
Lab 6	Quiz #5 _____ The Brain. Anatomy and regional functions. Use models and laser disc. Divisions of the CNS and Their Functions
	Comprehensive Mid-Term over Labs 1-6 (150 points)

Lab 7	Quiz #7 ____ Learn Cranial Nerves I-XII Pain and pain blockage T.E.N.S. Unit demo Dissection of the cow brain.
Lab 8	Quiz #8 ____ Movements seen at Synovial Joints Muscles of the Torso, Neck, & Face and the movements they produce.
Lab 9	Quiz #9 ____ Muscles of the Arms and Legs and the movements they produce.
Lab 10	Quiz #10 ____ **Today's lab is very helpful for lecture exam #5** Endocrine System. Identify gland locations on torso manikins. Hormones: Learn source, target tissue, and primary function of each hormone from "Hormone Hall of Fame" handout.
Lab 11	Quiz #11 ____ Human Eye. Anatomy and functions. Use Models. Human Ear - Use models. Dissection of the eyeball. Eye Surgery Video
	Comprehensive Final for Labs 8-12 (150 points)

## Learning Resources

### Textbook:

Marieb & Hoehn. Human Anatomy and Physiology, 10th edition, Pearson Publishing, 2016, ISBN- 978-0-321-92704-0. The 9<sup>th</sup> or even 8<sup>th</sup> edition of the same text is equally good. Just expect page #s and Figure #s to be slightly different. 99% of the information is the same.

Required course materials are available at the Brazosport College bookstore, on campus or online at <http://www.brazosport.edu/bookstore>. A student of this institution is not under any obligation to purchase a textbook from the college bookstore. The same textbook is/may also be available from an independent retailer, including an online retailer.

This text is used for both lecture and lab for both AP1 & AP2. Study Guides may be provided by your instructor to help you identify the most important topics in the text.

\*Students may choose to use an alternate text or even a variety of online resources. However this course has been designed on the assumption the student has access to the aforementioned text.

**Supplemental Instructors (SI)** - SIs are 'A' students from previous semesters who learning sessions showing you how to become an 'A' student yourself. Students who participate regularly in SI sessions typically score 10 points higher on lab quizzes than those who don't participate.

**Web of Life** – our departmental web site with all kinds of useful links to handouts, YouTube videos, etc. for labs and for lectures.

<http://www.brazosport.edu/sites/CurrentStudents/Programs/AllCourses/weboflife/default.aspx>

\*\* From the Web of Life you will need to print and bring to lab with you each week Lab Activity Sheets that will serve as a study guide along with instructor notes and other activities.

**CD Rom – Interactive Physiology.** This CD comes with your text (if brand new) and is full of great tutorial animation clips, explanations, and practice quizzes. It is not required but you may find it helpful. Computers are available for your use in both A&P labs as well as the Learning Services Center.

### **Students with Disabilities**

Brazosport College is committed to providing equal education opportunities to every student. BC offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software to assist students with special needs. Please contact Phil Robertson, Special Populations Counselor, 979-230-3236 for further information.

### **Student Responsibilities**

Students are expected to fully participate in labs. You are responsible for your own success or failure. Good time management, punctuality, initiative, and teamwork are keys to success. Participation may or may not be factored in to grading by your instructor.

### **Academic Honesty**

Brazosport College assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct including academic honesty. The principle of academic honesty is that all work presented by you is yours alone. Academic dishonesty including, but not limited to, cheating, plagiarism, and collusion shall be treated appropriately. Please refer to the Brazosport College Student Guide for more information. This is available online at <http://www.brazosport.edu>.

Academic dishonesty violates both the policies of this course and the Student Code of Conduct. In this class, any occurrence of academic dishonesty will be referred to the Dean of Student Services for prompt adjudication, and may, at a minimum, result in anything from zero for the assignment to an F in this course. Sanctions may be imposed beyond your grade in this course by the Dean of Student Services.

### **Attendance and Withdrawal Policies**

Regular attendance is critical for the comprehension of material and successful completion of the course. Every student is responsible for everything covered in lab whether you were present that day or not. . Students may be withdrawn from the course by their instructor for excessive absences. Contact your instructor for his/her policy concerning excessive absences.

If a student decides to no longer participate in the course, for any reason, **it is the student's responsibility to officially withdraw from the course.** To officially withdraw from the course, students must complete and sign a withdrawal form, available in the Registrar's Office. **Failure to do so will result in the student remaining enrolled and receiving a grade – most likely an 'F'.**

## Testing & Grading

Lab quizzes are given weekly at the beginning of lab over the previous lab's information. Come early.

There are 9 weekly lab quizzes. (100 points each)

Two comprehensive lab quizzes will be included.

Comprehensive Mid-Term for Labs 1-6 (150 points)

Comprehensive Lab Final for Labs 7-11 (150 points)

Additional Assignments or Opportunities may be included at your instructor's discretion.

A point basis will be used to calculate your score grade. Based on the 9 weekly quizzes and 2 comprehensives it is possible to earn a total of 1200 points. However 1100 is considered a "perfect" score. In other words, you could miss one weekly quiz and still earn 1100 points and have a perfect 100 average. It's very similar to "dropping one weekly quiz."

At the end of the semester your **total points earned** is divided by 1100.

For course grades the scale is:

90% and above = A

80% and above = B

70% and above = C

60% and above = D

Below 60% = F

## Make-up policy

There are no makeup lab quizzes although your instructor may allow you to take your quiz with an alternate lab. Inquire with your instructor.

## Other Student Services Information

**Writing Center:** Located within the Student Success Center (second floor of the main building above the counseling and registration office) is the Brazosport College Writing Center. The Writing Center provides drop-in tutoring Monday – Thursday 9 am – 8 pm and Friday 9 am – noon. Online tutoring and other times are available by appointment. The Writing Center can assist with brainstorming, organizing and developing paragraphs, understanding professors' directions, learning about MLA or other styles, learning how to avoid plagiarism, improving mechanics, using Microsoft Word, becoming an even stronger writer, and much, much more. Check out our growing collection on handouts, videos, and other online resources, too.

**Math Center:** Located within the Student Success Center (second floor of the main building above the counseling and registration office) is the Brazosport College Math Center. The Math Center provides drop-in tutoring Monday – Thursday 9 am – 8 pm and Friday 9 am – noon. The Math Center can assist with transitional math, college algebra, trigonometry, accounting, statistics, calculus, and every other math course offered at the college. Check out our growing collection on handouts, videos, and other online resources, too.

### Library:

Information about the **Library** is available at <http://www.brazosport.edu/~lib/Information.htm> or by calling 979-230-3310.