

**Cedar Crest College**  
**BIO 117, Human Anatomy and Physiology I**  
**Laboratory Syllabus and Operational Procedures**  
**Fall 2009**

**Professor's name:** \_\_\_\_\_  
**Lab Section:** \_\_\_\_\_  
**Office:** \_\_\_\_\_  
**Telephone:** \_\_\_\_\_  
**Email:** \_\_\_\_\_  
**Availability:** \_\_\_\_\_

**Laboratories:** Tues. 7-10  
Wed. 4-7, 7-10  
Thurs. 8-11, 1-4, 4-7, 7-10  
Fri. 6:30 - 9:30

**I. Description:** Human Anatomy & Physiology I (0 credits for lab; 4 credits lecture and lab)

This laboratory component is an experiential course integrating the structure and function of the human body with clinical applications through microscopic and macroscopic observations and dissections. Laboratory exercises will provide foundational knowledge in anatomical terminology, a survey of the body systems, microscopy, the structure and function of the cell and cell transport, histology and the integumentary, skeletal, muscular, nervous and sensory systems.

*Prerequisites: None; Must be taken concurrent with BIO 117 Lecture.*

**II. Course Objectives:** In a *hands-on* approach, students will develop a coherent understanding of the human body through the use of slides, models, specimens, experiments, posters and audiovisual aids in order to:

- Learn, understand and appreciate the anatomical and physiological design of the human body.
- Learn, understand and appreciate the intimate relationship between structure and function.
- Learn, understand and appreciate the interrelationships of the body systems.
- Learn, understand and appreciate the concept of homeostasis.

**III. Learning Outcomes/Assessment:**

- Students will demonstrate knowledge of anatomical and medical terminology and engage in direct applications to health careers and their own health and wellness.  
**Assessment:** Oral review, lab practical tests.
- Students will demonstrate knowledge of physiology and the understanding that structure determines function.  
**Assessment:** Experiments, lab practical tests, class discussion, physiological pathways
- Students will develop critical thinking skills and scientific reasoning in the analysis of physiological experiments and understanding the complementarity of structure and function.  
**Assessment:** Lab practical tests, class discussion.
- Students will demonstrate knowledge of the cellular importance of the anatomical/physiological design of the human body and develop microscopy skills.  
**Assessment:** Cytological and histological studies/microscopy; lab practical tests.
- Students will demonstrate anatomical knowledge of bones, muscles, the nervous system and our senses.  
**Assessment:** Skeletal study, dissections of sheep brains, cow eyes, models and cadaver photos.

#### IV. Laboratory Course Topics:

- Anatomical Terminology
- Organ Systems
- Microscopy
- Cell Structure/Function
- Tissues
- Integumentary System
- Skeletal System
- Muscular System
- Nervous System
- Senses

#### V. Required Books:

Marieb, E. and Hoehn, K. 2010. *Human Anatomy and Physiology*, 8th Ed.  
Pearson/Benjamin Cummings, San Francisco, CA

Marieb, Elaine N., Mitchell, Susan J. (2009). *Human Anatomy and Physiology Laboratory Manual*. (Main 8<sup>th</sup> Ed. Update). Pearson Benjamin Cummings, San Francisco, CA

Rust, Thomas G., (1986). *A Guide to Anatomy and Physiology Lab*. 2nd Ed.  
Southwest Educational Enterprises, Boerne, TX

Rohen J.W., Yokochi, C., Lutjen-Drecoll, E. (2006). *Photographic Anatomy of the Human Body*, 6<sup>th</sup> Ed. Lippincott, Williams & Wilkins, Philadelphia,

#### VI. POLICIES: Attendance

Laboratory attendance is **MANDATORY**. Notification from the Dean of Student's Office is the **only** acceptable documentation for an absence. **Undocumented lab absences (on non-test days) will result in a 10% current test grade reduction for each absence. Undocumented lab absences on test days will result in a zero for the test.**

A documented absence on a test day will result in an incomplete grade for the course providing you have completed 75% of the course with an overall minimum average of a C-. The test will then be completed in accordance with the College catalog and at the discretionary time of the laboratory coordinator, Mrs. Malitsch. The consequences of any documented absences will be discussed with your professor in conjunction with Mrs. Malitsch.

Tardiness will be penalized at the discretion of your laboratory professor. Do not report for another section lab class or lab practical test unannounced. If you report unannounced, an automatic penalty (10%- lab class, ZERO-test day) will be earned. If you arrive late for a test, you will forfeit that time for completion of the test.

#### Preparation for Class:

Lab coats and closed-toe shoes are mandatory. Fingernail length must not interfere with lab skills. Bring your lab manual, supplemental guides, folder, notebook, highlighter, colored pencils (optional) **to every lab**. Prepare for each lab by reading through the exercise. Since the labs are very comprehensive and thorough in design, it is imperative that you are prepared to work. Use all available class time for laboratory work, written work, or both.

**While in Lab: Take notes!**

**Written Work:** You are expected to completely answer all questions and label diagrams in the lab exercise and the laboratory review sections (answer keys are provided).

**Laboratory Work:** You are expected to complete each exercise that is assigned. You are also expected to contribute as a team member for lab exercises. Professor's discretion will be used to penalize non-cooperative team members. In order to be successful in A&P lab, **YOU MUST COME INTO THE LAB TO STUDY!** Plan your time for study/dissection review in the lab during *open lab times* and on weekends.

**When not in Lab:** Use the *PAL* (Practice Anatomy Lab) study tool linked to the [www.MyA&P.com](http://www.MyA&P.com) website. You must register using the access code in your lab manual. This site contains five modules that are excellent for reviewing lab. Also, be sure the lab book's CD-ROM for the videos, practice quizzes and histology atlas and supplement

**A lab practical review session will be held on the Sunday preceding the first lab exam in the cycle.** To help you schedule time for these lab exam review sessions, please note the following dates for these review sessions: **SEPTEMBER 20, OCTOBER 25 and NOVEMBER 29.** Further details regarding times will be announced in lab and through emails. You can plan on these review sessions occurring during late afternoon, approximately 4PM however, this time is subject to change.

**Evaluation/Grading:**

- **There will be three (3) non-cumulative practical exams.** Each *practical* will consist of *stations* with thought questions pertaining to a model, slide, specimen and a *handout* with multiple choice questions, pathways and short answer questions. The Honor Code must be followed during all lab work and tests.
- **Your lab grade is then 50% of your final course grade.**
- You are responsible for **EVERYTHING** discussed in lab. Take notes!

**Cedar Crest:** The professors within the Department of Biological Sciences support the campus-wide policies as described in the *Student Handbook*.

We fully support the Cedar Crest College **Honor Code, Academic Standards of Integrity and the Classroom Protocol Code** as stated in the *Student Handbook*. Cheating during exams will result in a zero. If necessary, violations should be brought to the attention of the instructor. Violations may result in removal from lab and be formally addressed by the appropriate individuals: Dr. Carol Pulham (Provost), Dr. John Cigliano (Chair), Dr. Denise O'Neill (Acting Dean of Students), Christine Nowik (Director of the Academic Services), and the Honor and Judicial Board. There will be zero tolerance during lab and 'open lab times' for disruptive and disrespectful behavior. Security will be called in the event such behavior occurs.

Students with documented disabilities who may need academic accommodations should discuss these needs with their professors during the first two weeks of class. Students with disabilities who wish to request accommodations should contact the Advising Center.

## Need to Know:

- All students must have CCC email for laboratory communication and in the event of an emergency. Check it daily.
- ALWAYS bring your lab manual **and guides** to class.
- **Everyone must wear a lab coat**, not an oversized shirt, apron or disposable microbiology coat, and closed toe shoes; wear gloves/goggles when necessary. Tie back any long hair while in the lab. Clean your lab tables after each exercise with the bleach solution in the spray bottles on the lab tables. Wash your hands frequently.
- Laboratory equipment, slides, specimens, models etc. must not be removed from SC 102.
- Cell phones, digital cameras and other electronic devices are not allowed in lab. If there is an impending situation that warrants cell phone availability, please discuss this with your professor before lab begins. **The use of digital cameras for photography during lab class is prohibited.**
- Due to the hazards in lab and abiding by the classroom protocol code establishing a learning environment for all registered students, children are not permitted to be in the lab. Food and beverages (including anything bottled) are not permitted in the lab.
- If you don't understand instructions, **ASK**; whenever you are unsure, **ASK**.

With the evolving health care field and your chosen career paths, we have a responsibility to provide you with the highest quality course in A&P. To that end, you will be engaged in a rigorous and thoroughly comprehensive course designed to make you observe, think and analyze. Therefore, it is important and in your best interest that you maintain a positive attitude to succeed and in the process realize that time, effort and perseverance are required and as a result, you will be knowledgeable, successful and qualified in your career path.

- Our *open lab policy* and philosophy provide you with opportunities to review lab exercises and prepare for tests. Open labs will be posted on the door of Room 102. Open lab times will change during practical exam weeks and to accommodate BIO 111 practical exams. Check the lab for any posted notices regarding other necessary lab closures and check email for any announcements.

Whenever you are in the lab studying, SIGN IN and SIGN OUT on the clipboard in the lab and always bring your student ID. If you need assistance or help, use any campus telephone to dial "O" to reach a Safety & Security Officer. While off campus, call 610-437-4471 and ask for assistance. **If any lab equipment is found to be missing, lab privileges will be terminated and the lab will be locked over the weekends.**

*Science Center Hours: Sunday - Friday 7:00 AM – 10:00PM*  
*Saturday 7:00 AM – 6:00 PM*

- Seek the help of our very knowledgeable IA, Morgan Dorsey (note the IA handout)  
Seek the help of a tutor (FREE) through the Academic Services, Ext 3484, Curtis 109.

**BIO 117 HUMAN ANATOMY AND PHYSIOLOGY LABORATORY SCHEDULE  
FALL 2009**

<b>DATE</b>	<b>LAB EX.</b>	<b>GENERAL REFERENCE INFO.</b>	<b>TOPICS</b>
Aug. 25, 26, 27, 28	1, 2	Chap. 1 (text) Guide: 109-113	Introduction Anatomical Terminology Organ Systems Body Membranes
Sept. 1, 2, 3, 4	3, 4	Chap. 3 Guide: 1-2, 14	Microscopy Cytology Mitosis
Sept. 8, 9, 10, 11	6, 7	Chap. 4,5 Lab Reference 9, 17 Guide: 2-14, 25-38	Histology ( <i>PAL</i> ) Integumentary System
Sept. 15,16, 17, 18	5,6,7,8	Chap. 3,4,5	Membrane Transport Histology Review/Membranes
<b>Sept. 22,23, 24, 25</b>	<b>****</b>	<b>****</b>	<b>LAB EXAM I</b>
Sept 29, 30, Oct. 1, 2	9,10,11,	Chap. 6,7,8	Skeletal System
Oct. 6, 7, 8, 9	11,12,13, 15	Chap. 6,7,8	Skeletal System Muscular System Intro
Oct. 14, 15, 16, 20	15	Chap. 9,10	Muscular System
Oct. 21, 22, 27, 30	15	Chap. 9,10	Muscular System
<b>Oct. 28, 29, Nov. 3,6</b>	<b>****</b>	<b>****</b>	<b>LAB EXAM II</b>
Nov. 4,5, 10, 13	17,19	Chap. 11-14	Nervous Tissue & Brain Dissection
Nov. 11,12, 17,20	21,22 23,24	Chap. 11-15	Spinal Cord Anatomy, Nerves Reflexes/Testing, General Sensation Eye Anatomy/Dissection
Nov. 18,19, 24, Dec. 4	24, 25,26	Chap. 11-15	Eye /Ear Anatomy Sensory Testing
<b>Dec. 1, 2, 3, 8</b>	<b>****</b>	<b>****</b>	<b>LAB EXAM III</b>

**NOTE: NO LABS** on 10/13 (Fall Break), 10/23 (President's Inauguration) and 11/25, 26, 27(Thanksgiving). The labs cycle *Tuesday through Friday* until Fall Break; then the lab cycle changes to *Wednesday-Thursday-Friday-Tuesday* until after the week of 10/19 in which the labs will cycle *Wednesday-Thursday-Tuesday-Friday* until Thanksgiving where the Friday lab is bumped another week. **Using a calendar, circle your lab dates above and make sure you follow your lab day. No excuses for not knowing lab dates. The last lab class is Lab Exam III; there is no separate lab final. Lab Review Dates: 9/20, 10/25, 11/29.** Specific, selected reference information taken from Marieb (textbook), Guidebook (Rust), and the Photographic Anatomy book (aka cadaver book) will be listed on your other lab handouts.