

Cedar Crest College
BIO 118, Human Anatomy & Physiology II
Laboratory Syllabus and Operational Procedures
Spring 2010

Professor's Name: _____
Lab Section: _____
Office: _____
Telephone: _____
Email: _____
Availability: _____

BIO 118 Laboratories: Tuesday: 7-10
Wednesday: 4-7, 7-10
Thursday 8-11, 1-4, 4-7, 7-10

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

This laboratory component is an experiential course integrating the structure and function of the human body with clinical applications. Laboratory exercises will involve the following systems: Endocrine, Cardiovascular, Lymphatic, Immune, Respiratory, Digestive, Urinary and Reproductive enhanced by microscopy, dissections, observations of human organs and models and clinical observations and physiological assessment. Aspects of metabolism and development will also be included. *Pre-requisite:* BIO 117

II. Course Objectives: In a hands-on approach of experiences, students will develop a coherent understanding of the human body through the use of slides, models, posters, specimens, experiments 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/Assessments:

- Students will demonstrate knowledge of anatomical and medical terminology and engage in direct applications to their health careers and their own health and wellness.
Assessment: Oral review, class discussion, lab practical exams.
- Students will demonstrate anatomical knowledge of the endocrine glands, heart, blood vessels, and the lymphatic, respiratory, digestive, urinary and reproductive systems.
Assessment: Review of models, dissections (sheep heart, fetal pig, sheep pluck, and pig kidney), human organs, cadaver photo study, lab practical exams.
- Students will demonstrate knowledge of the cellular importance of the anatomical and physiological design of the human body and its relationship to disease/disorder states.
Assessment: Cytological and histological studies, lab practical exams.
- Students will demonstrate knowledge of physiology and the understanding that function is determined by structure.
Assessment: Review of models and dissections, class discussion, experiments, lab practical exams
- Students will develop critical thinking and analytical skills.
Assessment: Physiological experiments, flowcharts of physiological pathways.

IV. Laboratory Course Topics:

- Endocrine System
- Cardiovascular System
- Lymphatic/Immune System
- Respiratory System
- Digestive System/Metabolism
- Urinary System
- Reproduction/Development

V. Required Texts:

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 8th 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. *Color Atlas of Anatomy, A Photographic Study of the Human Body*, 6th Ed. Lippincott Williams & Wilkins Publishers, Inc., NY.

Optional: Medical Dictionary

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-exam 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 an exam 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's lab class or lab practical exam unannounced. If you report unannounced, an automatic penalty (10% for a lab class, ZERO for an exam) 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, notebook, organizing folder, highlighter, and colored pens/pencils (optional for drawings) **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 either written work, laboratory 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 sheets (answer keys are provided for the review sheets).

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 utilized 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 website. If you are not already registered, 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 to use your lab book's CD Rom for the videos, practice quizzes and histology atlas and review supplement.

Evaluation/Grading:

- **There will be three non-cumulative practical exams.** Each *practical* will consist of **stations** with thought questions pertaining to a model, slide, specimen or laboratory activity **and a handout** with multiple choice questions, pathways and short answer questions. The Honor Code must be followed during all lab work and on all exams. Success on exams will depend upon your weekly preparation, participation and review which should include study time spent in the lab outside of class time.
YOU MUST COME INTO THE LAB TO STUDY.
- **A lab practical review session will be held the weekend before 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: **FEBRUARY 20 (Saturday), APRIL 5 (Monday), and APRIL 25 (Sunday).** These review sessions will be held from 4-7 PM. The lab will be closed from 1-4 on these dates to prepare for the review sessions.
- Your lab grade is then 50% of your final course grade.
- You are responsible for EVERYTHING discussed/announced in lab.

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 grade for the exam. When necessary, code 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 Advising Center), 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 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. During inclement weather, if the college is open, we will have lab and the attendance policy is in effect.
- ALWAYS bring your lab manual and guides to class.
- **Everyone must wear a lab coat**, not an oversized shirt, jacket or scrubs, **at all times** and closed-toe shoes; wear gloves/goggles when necessary. Tie back long hair while in the lab. Clean your lab tables after each exercise with the bleach solution in 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 encourage you to 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 SC 102. Open lab times will change during practical exam weeks and to accommodate BIO 112 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 the lab telephone to dial "0" 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/SC 102 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 times and lab practical review sessions on the IA handout.
Seek the help of a tutor (free) ASAP through Academic Services, Curtis 109, Ext. 3484.

BIO 118 ANATOMY AND PHYSIOLOGY LABORATORY SCHEDULE, SPRING 2010

DATE	LAB EX.	GENERAL INFORMATION	TOPICS
Jan. 19, 20, 21	27	Chap. 16 (text) Guide: 45, 72, 79 85-86, 97-100	Endocrine System Anatomy
	28A 32		Endocrine Physiology (Video) Begin Blood vessel Study
Jan. 26, 27, 28	29A 32	Chap. 17 Guide: 14 Chap 19	Blood Smear Study: Activities 2,3 Blood Pathology: Activity 8 Continue Blood Vessel Study
Feb. 2, 3, 4	29A 32	Chap. 17	Hematology: Total RBC count, Glucose Testing & Activities 1,4,5,6,7 Continue Blood Vessel Study
Feb. 9, 10, 11	30, 32	Chap. 18, 19 (Parts 1&3) Guide: 39-41	Heart Anatomy Blood Vessels
Feb. 16, 17, 18	32, 33A, 35A <i>Fetal Pig Dissection Observation</i>	Chap. 19, 20	Blood Vessels Special Circulation Patterns Cardiovascular Physiology, Pulse Ox Lymphatic System
Feb. 23, 24, 25	*****		LAB EXAM I
Mar. 2, 3, 4	36	Chap. 22	Respiratory System Anatomy
Mar. 16, 17, 18	37A	Chap. 22	Respiratory System Physiology
Mar. 23, 24, 25	38	Chap. 23	Digestive System Anatomy
Mar. 30, 31; Apr. 1	39A(selected info)	Chap. 23, 24	Digestive System Physiology (Handout)
Apr. 7, 8, 13	*****		LAB EXAM II
Apr. 14, 15, 20	40, 41A	Chap. 25	Urinary System Anatomy & Physiology Urinalysis
Apr. 21, 22, 27	42, 43, 44	Chap. 27, 28	Reproductive System: Anatomy Embryonic Development
Apr. 28, 29, May 4	*****		LAB EXAM III

NOTE: NO LABS March 8-12 (Spring Break) and Apr.6 (Monday schedule due to Easter break). The labs cycle *Tuesday through Friday* until the 4/7cycle when the Tuesday lab is bumped to the following week due to the Easter break. So, 2 different labs will be running each week after 4/7. Using a calendar, circle your lab dates above and make sure that you follow your lab day. **No excuses for not knowing your lab dates. The last lab class is Lab Exam III. There is no separate final exam for lab. Lab Review Dates: 2/20, 4/5, 4/25.** 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.