Biol 218 & 218L ✧ Human Anatomy and Physiology II ✧ 2010 Syllabus

A&P II Lecture and Lab Course Information ✧ Spring 2010 ✧

A&P Lecture (Dr. Ross): Mon., Wed., and Fri. at 11:00–11:50 am in room AH 153.

A&P Laboratory:

- Wednesday at 2:00–4:50 pm in room AH 107 (Dr. Ross).
- Thursday at 2:00–4:50 pm in room AH 107 (Dr. Sauser).

Lecture and Lab are corequisites and must be taken concurrently.

- BIOL 217–218 is a ***Group I Biology elective*** (applicable to the Biology Major). All eight credits of the sequence should be completed for the course to apply toward the Biology major or Biology minor.

The Biol 217–218 two-semester course sequence offers a comprehensive study of human anatomy and physiology at the cell, tissue, and organ system levels of organization. If you take A&P, you need to take ***both semesters***. The second semester topics include the cardiovascular, immune, digestive, respiratory, urinary, and reproductive systems. The laboratory course requires each student's active participation as a subject and the dissection of preserved mammalian specimens. **Successful completion of a CPR course is required for lecture and lab.** (There will be a separate fee for the CPR course.)

The A&P course is designed for pre-pharmacy, pre–nursing, pre–physical therapy and other pre-allied health students as well as students preparing for secondary school teaching in biology.

Students who want the strongest preparation for medical school, dental school, or other graduate school programs in biology should select sophomore level electives such as BIOL 211 Vertebrate Embryology and BIOL 212 Comparative Anatomy as well as upper division biology courses including BIOL 312 (Vertebrate Physiology) instead of the Biol 217–218 sequence. Consult your academic advisor to be certain that Biol 217–218 is the best course selection for you.

- **Prerequisites:** BIOL 111 and 112 (Principles of Biology I and II and their laboratory courses), Biol 217 and Biol 217L (Human A&P I), and Chem 113 (Principles of Chemistry I and lab) are prerequisites for Biol 218 and Biol 218L. Students who have not achieved grades of "C" or better in each of the prerequisite courses are advised to repeat the necessary courses before attempting further course work in biology. *Students who have not successfully completed Biol 217 will not be admitted to Biol 218.* *(If a student has received a "D" in Biol 217 lecture or lab, permission of the student's advisor and the Biology Dept. Chair is required to allow the student into Biol 218.)*

Professor for the Lecture and Lab Course:

Dr. Anna E. Ross, Professor of Biology

Office: AH 111 **Phone:** 321-3436 (Please record a message if I'm not in the office.)

e-mail: aross@cbu.edu **http://www.cbu.edu/~aross**

Office hours: ***Mon., Thurs., and Fri. 2:00-5:30.***

Additional appointment times available upon request (see posted schedule).

Professor for the Thursday Lab:

Dr. Katie Sauser e-mail ksauser@cbu.edu

Required Materials [The same text and lab manual are used for both semesters.]

Text: Shier, Butler, and Lewis**.** 2010. *Hole's Human Anatomy and Physiology*, 12th ed. McGraw-Hill Book Co. ISBN 9780077276188 [11th ed. 2007 ISBN 9780073213644. Either the 11th or 12th edition is acceptable… but page number references in class will be to 12th ed.]

Laboratory Manual: Marieb, Elaine and Susan Mitchell. 2008. *Human Anatomy and Physiology Laboratory Manual: Cat Version*. Ninth ed. update. ISBN: 9780321535979. The included PhysioEx CD is required. (Access to on line Practice Anatomy Lab and the "myA&P" companion website are included with the lab manual.)

Required Supplement: Ross, Anna E. 2010. *Biology 218 A&P II Lecture and Lab Course Supplement.* Purchase from CBU Print Shop in Kenrick.

Essential References for Both Lecture and Laboratory: [Same as for Fall semester]

- Medical Dictionary. Choose a comprehensive Medical Dictionary such as Stedman, Thomas L. 2005. *Stedman's Medical Dictionary* (28th ed. with CD) $45 Lippincott Williams & Wilkins. ISBN 9780781733908
- Van De Graaff and Crawley. 2007. *A Photographic Atlas for the Anatomy and Physiology Laboratory*, 6th ed., Morton Publishing Co., Englewood, CO. ISBN 9780895826985 $25.

WWW Resources: ***http://www.cbu.edu/~aross/APII/AP218home.htm***

Student Responsibilities

A cooperative and open atmosphere is expected during all class and lab meetings. Students are encouraged to work together and to study together. Lecture and laboratory topics will often overlap, and some use of lab time to review lecture material is expected. The lab room (AH 107) will be available during posted hours so that you can review lab materials and complete class assignments. ***You will want to spend ~2 hrs./week in AH 107 in addition to class and lab sessions. .***

- No wireless devices (cell phones, pagers, PDAs or calculators), no programmable calculators, and no devices with ear plugs are allowed during exams, quizzes, labs, or classes. Students are encouraged to use laptop computers during class or lab but only for directly course-related tasks and, of course, not during exams or quizzes.

Laboratory attendance is required. *In a laboratory course, there is simply no substitute for "being there." Much of the benefit of the lab course is derived from your active participation during the scheduled lab meetings. You will learn more by working with your classmates doing the lab than can be assessed by any quiz or exam. In fact, your active participation in lab is so important that no quiz or exam scores could possibly be high enough to compensate for missing the actual experience of being present in the laboratory.* ***Therefore, you must complete all of the labs to pass the course.***

Lecture attendance is required. Success in the lecture course will require your active participation during class. Class meetings depend upon the questions raised by students. You are responsible for information presented during all class and laboratory sessions. If you are ever absent, *contact a classmate immediately* because you will be held responsible for announcements regarding quizzes, exams, changes in lab protocols, etc. Unexcused absences will lower your grade. Excessive absences are grounds for automatic failure.

Laboratory sessions will require the entire scheduled period. You will be responsible for cleaning up before you leave lab. Therefore, do not expect to be out of lab before the scheduled time. You will need to read the relevant text material and the appropriate lab material *before* you come to class or lab. You will need your textbook and all lecture handouts during all class meeting. You will need your textbook, your lab manual, and other lab materials with you during all lab meetings.

The course has been structured to afford you every opportunity to develop your ability to learn, to master the required material, and to demonstrate your success in these endeavors. Students who choose to enroll in this course are seeking rigorous pre-professional preparation. This course will provide the level of preparation you require. Nevertheless, you need not feel intimidated by the demanding career path you have selected. I am here to help you overcome any difficulties you may have with the course material and to help you do your best work.

Exams and Grades

Your grade will be determined by your own achievement. There is no curve.

- Grading scale:
  90.0–100% = A, 80.0–89.9% = B, 70.0–79.9% = C, 60.0–69.9% = D, below 60.0% = F.

The last day to review your previous lecture exams is the last day of class.

- **Makeup exams or quizzes will only be available under extraordinary circumstances.**
- *If you miss a lab quiz or a lecture or lab exam without prior arrangement and you fail to contact the professor (within one hour of the scheduled class or lab) to schedule a specific time for a make up quiz or exam, it is likely that you will not be eligible for a makeup quiz or exam and you will receive a zero for the missed quiz or exam.*
- It may be impossible to make up a missed lab exam (i.e., lab midterm and lab final).
- Ordinarily, a student will be granted **no more than one** make up lecture exam or lab quiz for the course.
- If you request a makeup lecture exam and if you are given permission to take a make up lecture exam, you must take the make up exam before the next scheduled class meeting. Ordinarily, no make up lecture exam will be available after graded exams have been returned to the class.
- If you request a makeup lab quiz and if you are given permission to take a make up quiz, you must take the make up quiz before the next scheduled lab meeting.
- Ordinarily you will be required to complete any missed lab work before you are considered eligible for a possible make up quiz.
- **Missed lab work must be made up and verified by the professor before the next lab meeting.** You will not be eligible to take the next quiz until you have completed the missed work. This applies for excused as well as unexcused absences.
- Ordinarily, there will be no makeups for exams or quizzes missed because of unexcused absence or lateness (but you will be required to complete any missed lab work).
- University attendance policy will be enforced for both the lecture and lab courses. This policy applies regardless of your quiz and exam scores.
- **If you need special consideration, please ask.**

An honor system is in effect for all lecture and lab exams and lab quizzes. It is considered a violation of the CBU Code of Conduct (cheating) to receive or give assistance during an examination or quiz. **In this course, students may not keep exams or quizzes and students may not have copies or notes containing exam or quiz questions (this includes Moodle quizzes). ☆ In this course, the use of old or current quizzes, lecture or lab examination questions or answers is considered a violation of the CBU Code of Conduct.** A student in violation of the code of conduct faces one or more of the following possible reprisals: a zero score on the quiz or exam, an "F" for the course, expulsion from the course with no permission to repeat, or expulsion from CBU.

Grades and Evaluation in the Lecture Course:

Five lecture exams plus an objective *comprehensive* final exam will be given. Each exam will count 100 points. No exam may be dropped. Completion of several Worksheets will be required. ***Makeup lecture exams will only be available under extraordinary circumstances*** *(see box above).* ✧ *If you miss an exam without prior arrangement you must notify the lecture professor within one hour of the scheduled exam time, otherwise you will not be eligible for a makeup exam and you will receive a zero for the missed exam.*

Lecture exams will cover the topics indicated on the attached schedule unless specific changes are announced in class. Each exam will cover material from lecture, discussions, worksheets, and the text. It is expected that material studied in laboratory will also be incorporated into your responses on lecture exams. Exams will consist of objective, short answer, and specific essay questions. Exam questions may require well-labeled diagrams and will always require **detailed** and **precise** responses **employing the specialized terminology introduced in the course**. All questions on the comprehensive final lecture exam will be objective. You will need to present proof of current CPR certification by the last day of class to pass the lecture course.

Online Lecture Quizzes: There will be one 5-point online quiz for each text chapter (10 quizzes for A&P II). These quizzes are administered and graded through Moodle. Each online quiz consists of 10 multiple choice &/or T-F questions and will only be available for a few days. Once begun, an online quiz must be completed within 30 minutes. You must complete each online quiz by yourself. No answers are accepted past the 30 minute time limit, but you may consult your notes, text, and supplement during the quiz. Online Quiz questions are selected at random from a large set of questions for each chapter. You may attempt each quiz twice. Each attempt will be a different selection of questions on that chapter. You may not possess written or printed Moodle questions or answers.

Grades and Evaluation in the Laboratory Course:

Eleven lab quizzes will be given; each will count 10 points. Lab quizzes will consist of practical and short answer questions on the topics covered during the previous lab session. This material will include information from the text as well as the lab materials.

- Your lowest lab quiz grade will be dropped. *You may not drop a quiz missed because of absence.* Lab quizzes will begin at 2:00 p.m. If you are late without having made prior arrangement, you may receive a zero on that week's quiz.
- ***Makeup lab quizzes will only be available under extraordinary circumstances*** *(see previous page)*

In case of either an excused or an unexcused absence, missed lab work must be made up and verified by the lab professor before the next lab meeting. **If you need special consideration, please ask.**

The lab midterm and lab final exams will each count 100 points. The midterm covers all lab topics from the first part of the course. The final covers all lab topics following the midterm exam. Lab exams will consist of short answer and practical questions covering physiological principles, lab procedures, and structures and their functions. It may be impossible to make up a missed lab exam.

- *Makeup lab exams will only be available under extraordinary circumstances (see box above).*

Worksheets and readings are available on \\facstaff\biology. You are responsible for completing these and checking the worksheets and lab review sheets (answer keys are on \\facstaff\biology).

You must complete all of the labs to pass the course. If you attend all the labs and complete all the work, your lab grade will be determined by averaging your 10 best quiz and exam scores. If you are absent from any lab, you must make up the lab work and have the lab professor verify that the work is complete before the next scheduled lab meeting. If you have missed any labs and do not complete the make up lab work, you will receive an "F" for the lab course regardless of your quiz and exam scores.

Teacher Education Program

The Biol 217, Biol 217L–Biol 218, Biol 218L course sequence includes the following knowledges and skills required for teacher licensure by the Tennessee Department of Education:

Understanding of how scientists and technologists create, describe, disseminate, and refine new knowledge within their disciplines.
Ability to apply scientific methods in appropriate situations.
Ability to identify and demonstrate the processes of science common to the scientific fields, including observing, investigating phenomena, interpreting findings, and communicating results.
Ability to use basic problem solving skills such as identifying, postulating and evaluating, planning and acting, and assessing results.
Understanding the structure and function of the human body.
Ability to operate laboratory instrumentation, including the compound and stereoscopic (dissecting) microscopes.
Understanding of and ability to use the metric system of measurement.
Understanding of cell theory, structure of the cell, and cellular reproduction and genetics, including the progressive and developmental structure of living things.

Keep a Record of Your Lab Exam and Lab Quiz Scores:

(You can check your scores on Moodle.)

- **BIOL 218 Lecture course**

  10 Moodle Quizzes @ 5 pts. ea.: 14.___ 15.___ 16.___ 17.___ 19.___ 20.___ 21.___ 22.___ 23.___ 24.___

  Lecture Exam 1 _____/100
  Lecture Exam 2 _____/100
  Lecture Exam 3 _____/100
  Lecture Exam 4 _____/100
  Lecture Exam 5 _____/100

  Total of 10 Moodle Quizzes @ 5 pts. ea. _____/50
  Comprehensive Lecture Final _____/100
  Total Course Points _____/650
  Lecture Grade = % Points earned of possible 650.

- **CPR Course** passed (or student already has certification valid through May 2010).
  - **CPR Certification:** _____

- **BIOL 218L Laboratory Course**
  - Midterm Lab Exam _____/100
  - Final Lab Exam _____/100

  Lab Quizzes (drop one Quiz)

  Lab Q#1 _____/10
  Lab Q#2 _____/10
  Lab Q#3 _____/10
  Lab Q#4 _____/10
  Lab Q#5 _____/10
  Lab Q#6 _____/10
  Lab Q#7 _____/10
  Lab Q#8 _____/10
  Lab Q#9 _____/10
  Lab Q#10_____/10
  Lab Q#11_____/10

  - Best 10 Lab Quizzes _____/100
  - Total Lab Course Points _____/300
  - Lab Grade = % Points earned of possible 300.

✧✧ *A&P II Lecture and Lab Schedule* ✧ *Spring 2010* ✧✧

2010 Dates	***Lecture Topic (Text Ch.)***	***Lab#***	***Wed. or Thurs. Laboratory*** *Marieb Ex. & other materials*	***Text Chs. for Lab***
Jan 11 M 13 W 15 F	Blood ***(14)*** Blood ***(14)*** Blood ***(14)***	**[1]**	Ex. 29A, 29B Blood and Hematology. DVD and hands-on.	14. Blood
Jan 18 M 20 W 22 F	***Holiday*** Blood, Heart ***(14-15)*** Cardiovascular Sys. ***(15)***	**[2]**	Ex. 29A, 29B, 33A Blood and Blood Pressure. **LAB QUIZ 1**	14. Blood
Jan 25 M 27 W 29 F	Cardiovascular Sys. ***(15)*** Cardiovascular Sys. ***(15)*** Cardiovascular Sys. ***(15)***	**[3]**	Ex. 30, 31, 33A, 33B Cardiac Anat. & Function. Dissection, DVD, Biopac **LAB QUIZ 2**	15. Cardio-vascular System
Feb 1 M 3 W 5 F	Cardiovascular Sys. ***(15)*** **Lecture Exam 1** (Chs. 14-15) Lymphatic Sys. ***(16)***	**[4]**	Ex. 32, Diss Ex 4 Vascular Anat., Lymphatic Sys. Dissection, DVDs, **LAB QUIZ 3**	15. Cardio-vascular Sys. 16. Lymphatic Sys.
Feb 8 M 10 W 12 F	Lymphatic Sys. ***(16)*** Lymphatic Sys. ***(16)*** Lymphatic Sys. ***(16)***	**[5]**	Ex. 32, Diss Ex 4, Ex 35A Vascular and Lymphatic Sys. Dissection, DVDs **LAB QUIZ 4**	15. Cardio-vascular Sys. 16. Lymphatic System
Feb 15 M 17 W 19 F	Lymphatic Sys. ***(16)*** Digestive System ***(17)*** Digestive System ***(17)***	**[6]**	Ex. 38, Diss Ex 7 Digestive System. DVD, dissection, histology **LAB QUIZ 5**	17. Digestive System
Feb 22 M 24 W 26 F	Digestive System ***(17)*** Digestive System ***(17)*** Digestive System ***(17)***	**[7]**	Ex. 39A, 39B and Suppl. Hydrolysis **LAB QUIZ 6**	17. Digestive Sys. (18. Nutrition and Metabolism)
Mar 1 M 3 W 5 F	**Lecture Exam 2** (Chs. 16-17) Respiratory System ***(19)*** Respiratory System ***(19)***	**[8]**	**MIDTERM LAB EXAM** (100 points) Autopsy DVD's	
Mar 8–12	*Spring Break* -- Holiday		*Spring Break* — No labs this week.	
Mar 15 M 17 W 19 F	Respiratory System ***(19)*** Respiratory System ***(19)*** Urinary System ***(20)***	**[9]**	Ex. 36, Diss Ex 6 Respiratory System. Dissection & Histology	19. Respiratory System
Mar 23 M 24 W 26 F	Urinary System ***(20)*** Urinary System ***(20)*** **Lecture Exam 3** (19-20)	**[10]**	Ex. 37A, 37B Respiratory Function Biopac, etc. **LAB QUIZ 7**	20. Urinary System
Mar 29 M 31 W Apr 2 F	Water and Electrolytes ***(21)*** Water and Electrolytes ***(21)*** ***Holiday***		***Easter Holiday Thurs.*** — No A&P labs this week.	20-21. Urinary System
Apr 5 M 7 W 9 F	***Holiday*** Water and Electrolytes ***(21)*** Water and Electrolytes ***(21)***	**[11]**	Ex. 40, Diss Ex 8 Anatomy of the Urinary System **LAB QUIZ 8**	20-21. Urinary System

✧✧ *A&P II Lecture and Lab Schedule* ✧ *Spring 2010* ✧✧

2010 Dates	***Lecture Topic (Text Ch.)***	***Lab#***	***Wed. or Thurs. Laboratory*** *Marieb Ex. & other materials*	***Text Chs. for Lab***
Apr 12 M 14 W 16 F	Reproductive System ***(22)*** Reproductive System ***(22)*** Reproductive System ***(22)***	**[12]**	Ex. 41A, 41B Urine Composition and Tests **LAB QUIZ 9**	22. Reproductive System
Apr 19 M 21 W 23 F	**Lecture Exam 4** (Chs. 21-22) Human Development ***(23)*** Human Development ***(23)***	**[13]**	Ex. 42, 43, Diss Ex 9 Reprod. Anat. Dissection, models, histology, etc. **LAB QUIZ 10**	22. Reproductive System
Apr 26 M 28 W 30 F	Human Development ***(23)*** Human Genetics ***(24)*** Human Genetics ***(24)***	**[14]**	Ex 44, 45 Human Development. DVDs **LAB QUIZ 11**	23-24. Human Development Genetics
May 3 M	**Lecture Exam 5** (Chs. 22-24)			
May 5–11	Comprehensive **Lecture Final** (100 points)		**FINAL LAB EXAM** (100 points)	

Please note:

- ✓ Lab Exam dates will not be changed.
- ✓ The *Course Supplement*, handouts, and information on \\facstaff\biology will specify additional lab topics and materials where necessary.