

Cedar Crest College
BIO 118/218, Human Anatomy and Physiology
Lecture Syllabus, Spring 2010

Instructor: Mrs. Judith Malitsch

Office: Miller 23; **Office Hours:** M 4-5, W 1-4, R 2-3 and by appointment.

Telephone: 610-606-4666, Ext. 3605; Administrative Assistant, Mrs. Susan Marin, Ext. 3378

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Meeting Times/Places/Important Dates:

Lecture (SCI 136): MWF 12:00-12:50

Labs: (SCI 102) T 1-4 (218), 7-10

W 4-7, 7-10

R 8-11, 1-4, 4-7, 7-10

Spring Break: 3/8 – 3/12

Easter Break: 4/2-4/5; On Tuesday, 4/6, follow a Monday schedule

Course Withdrawal Deadline: 4/13 @ 4 PM

Classes End: 5/5 on a Friday Schedule

Final Exams: TBA 5/6-5/12

From The Provost's Office: "Your obligations for this course include attendance at the final exam. Do not make travel arrangements until the final exam schedule is published; if you must make plans early, you should schedule your travel after the last final exam day."

BIO 118/218 Human Anatomy and Physiology II

4 credits (lecture and lab)

This course is a continuation of the comprehensive, medical study of the human body. It fulfills the Natural Science requirement for the Liberal Arts Curriculum and requirements/electives for clinical and biology majors, pre-professionals, and anyone else interested in an understanding of their bodies. This course will continue to emphasize an integration of structure and function of the human body with clinical applications and physiological problem solving. The anatomy and physiology of the endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including metabolism and nutrition), urinary (including fluid and electrolyte balance) and reproductive systems (including growth and development) will be covered. Studies will include homeostasis, clinical tests, cytology, histology, pathology, and pathophysiology
Prerequisites: BIO 117, BIO 217 or instructor's permission; Lecture three hours, laboratory three hours.

Our objectives in this course will be to:

1. Learn, understand, and appreciate the anatomical and physiological design of the human body.
2. Learn, understand, and appreciate the intimate relationship between structure and function.
3. Learn, understand and appreciate the interrelationships of the body systems.
4. Learn, understand and appreciate the concept of homeostasis, how it is achieved and keeps us functioning as normally as possible. Without homeostasis, our bodies experience a pathological condition.
5. Remember that A&P is a 'cell idea'.

These objectives will be accomplished in the following chapters/lab exercises:

Textbook: Chapters 16-29

Lab Book: Exercises 27-44

Learning Outcomes/Assessment:

1. Students will demonstrate knowledge of anatomical and medical terminology.
Assessment: Four exams with objective questions and application essays, class discussion.
2. Students will develop their critical thinking skills by relating function to structure for every aspect of the human body and continue to ask the question, “*What is the purpose of the design*”?
Assessment: Four exams with objective questions and application essays, clinical applications, journal assignments.
3. Students will improve their scientific reasoning in the application of the scientific method to anatomical and physiological problems on the cellular level.
Assessment: Four exams with application essays, class discussion.
4. Students will develop metabolic, physiological pathways.
Assessment: Flowcharts, class participation and application essays.
5. Students will demonstrate competency in recognizing and outlining homeostatic relationships within/among the endocrine, cardiovascular, immune, respiratory, digestive, urinary, reproductive systems.
Assessment: Exam application essays, clinical journal assignments, class participation.
6. Students will demonstrate technological competency and information literacy.
Assessment: Internet assignment and Scientific/Professional journal assignment
7. Students will enhance their clinical knowledge of anatomy and physiology and personal health/wellness, especially of women’s health issues.
Assessment: Class discussion, Community/CCC seminars, workshops
8. Students will become familiar with the most recent technological advances and pharmaceutical therapies for managing pathophysiological states.
Assessment: Four exams, videos and corresponding worksheets, professional journal research.
9. Students will appreciate the normal anatomical and physiological design of the human body by studying disease states.
Assessment: Four exams, clinical videos with application questions.
10. Students will relate their course knowledge in direct application to their health careers, majors, lifestyles and personal choices involving health and wellness.
Assessment: Class discussion, Scientific/Clinical journal research and writing assignments.

General Course Outline:

1st Semester (BIO 117/217)

Introduction
The Human Body
Chemistry: Aspects of
Metabolism
The Cell
Tissues
The Integumentary System
The Skeletal System
The Muscular System
The Nervous System
Special Senses

2nd Semester (BIO 118/218)

Endocrine System
Cardiovascular System
Lymphatic System
Immune System
Respiratory System
Digestive System
Nutrition & Metabolism
Urinary System
Fluids & Electrolyte Balance
Reproduction
Development

Required Textbooks:

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 (**BIO 118**)

Marieb, Elaine N., Mitchell, Susan J. 2009. *Human Anatomy and Physiology Laboratory Manual. Cat*, 9th Ed. Update. Pearson Benjamin Cumming, San Francisco, CA (**BIO 218**)

Rust, Thomas G., 1986 *A Guide to Anatomy and Physiology Lab*, 2nd Ed.
Southwest Educational Enterprises, Boerne, TX (**BIO 118**)

Leboffe, Michael J. 2003. *A Photographic Atlas of Histology*, Morton Publishing Co.,
Englewood, CO (**BIO 218**)

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

Policies:

Attendance:

You are expected to **attend lecture regularly**. Attendance will be documented in each lecture with a sign-in sheet. Please make an effort to be on time for class. Excessive, disturbing tardiness violates the classroom protocol code. Extended absences should be addressed through the Dean of Students. Lecture attendance produces better grades!

Laboratory attendance is MANDATORY by college policy (**10% test grade reduction/absence; zero for missed practical tests**). Refer to your laboratory syllabus for specific policies and procedures.

Preparation for Class:

Preview the text material before class. Use the power point slides to follow the lecture along with the many diagrams. Suggested items to have to maintain organization: (1) notebook (2) folder for handouts (3) highlighter (4) colored pens/pencils. *Keep lecture notes/handouts separate from lab notes/handouts.* Lecture will be more physiologically (less anatomically) oriented. You will be responsible for material not presented in its entirety in class. You will be informed of this information.

You are also responsible for the following information:

- ✓ Visit www.cedarcrestonline.net for the eCompanion component of this course. All power point presentations, websites and other information can be found under *content* and *document sharing*. A brochure is provided to help you navigate the website.
- ✓ Information covered in lecture
- ✓ Information brought out in discussions as noted
- ✓ Information in the text as indicated
- ✓ Information in assigned readings, articles, and handouts
- ✓ Content of audiovisuals both in class and on assignment
- ✓ Anything missed as a result of tardiness and absences.

Tests/Assignments:

You must be present for all tests. Any adjustment/make-up must fulfill 3 requirements:

1. Notification is **on or before** the day AND time of the exam.
2. There is documentation from the Dean of Student's office.
3. Tests must be completed within one week of the absence.

Failure to comply with the above 3 requirements will result in a 'O' for the missed test. Make-ups may not necessarily correspond to the regular test format. They may also be scheduled during the week of Final Exams.

IF YOU ARRIVE LATE FOR A TEST, YOU FORFEIT THAT TIME IN TAKING THE TEST.

Extra paper, food, cell phones or other technological devices and guests are not allowed during tests. Any infraction will result in a ZERO for the test. *Test Etiquette* applies on all tests. This means that you may not place any requests or comments on the tests. Any violation of *Test Etiquette* will be penalized.

FINAL EXAM TIMES CANNOT BE REARRANGED (Departmental Policy) UNLESS 3 OR MORE EXAMS OCCUR WITHIN A 24 HOUR PERIOD. ANY EXCEPTION MUST BE PETITIONED AND REVIEWED BY THE DEPARTMENT OF BIOLOGICAL SCIENCES. YOU CANNOT TAKE THE EXAM EARLY BECAUSE OF TRAVEL PLANS OTHER COMMITMENTS. DO NOT MAKE ANY VACATION OR TRAVEL PLANS UNTIL YOU KNOW THE FINAL EXAM DATE. FAILURE TO BE PRESENT FOR THE FINAL EXAM WILL RESULT IN AN AUTOMATIC ZERO FOR THE EXAM GRADE.

Assignments must be word-processed (unless indicated otherwise), 12 font, Times New Roman, double spaced, proper margins, solid black ink (a printer low on ink is NOT an acceptable excuse), collated/**stapled** in order and on time. If these prerequisites are not followed, the assignment will be penalized. Late assignments (handed in after the class period) will be penalized 10% per day including weekends or by an indicated point system. Emailed assignments will not be accepted.

Grading: You will receive a single grade for this course.

Your Grade = 50% of your lecture grade + 50% of your laboratory grade

*** Nuclear Medicine, Nursing, Nutrition, and the LAC require a minimum grade of 'C'. A minimum grade of C- is acceptable for Majors in the Departments of Biological Sciences.**

1. **Lecture Component: Your lecture grade is an average of the following:**
Four major lecture tests (not cumulative); Test #4 will occur during the final exam period. A lecture test format document (study guide) will precede each test.

Quizzes averaging as a lecture test grade. All quizzes will occur on Wednesdays immediately at the beginning of class. Quiz dates will be posted on the web.

Comprehensive Final Exam (Comprehensive exception with A- lecture average)

A web assignment and 1 Professional Journal Reading Enrichment:

- These assignments will count as TWO individual grades.
- For the journal assignment use a professional or scientific journal in your career path (not *Newsweek*, *Time* etc.) and NOT a web abstract. **If you are not sure of your source, ASK ME.** The article must be about **HUMAN A&P**.
- Time limit for the article: **(2007-present)**
- **Summarize** your article. Make sure that you understand it.

- **Include** at least 2 paragraphs discussing the clinical implication/application of your article using your text, notes, or other reference sources or add further research related to your article from another citation. The purpose of this section is to extend the article beyond the boundaries of the journal and your realm of knowledge.
- Include all sources or references, including your textbook
- You should not have to exceed 3-4 pages maximum; do not use any plastic covers.
- **DO NOT HAND IN THE XEROXED ARTICLE** unless I request it.
- Type in 12 font, double spaced, Times New Roman. Reference your article using proper bibliographic format. (as stated above)
- **Due Dates:** Web Assignment- February 5
Journal Article- March 26

Bonus Seminars/Opportunities will count as extra points added directly to your lecture grade. These opportunities can be self-designed, **notifying me of your intent** or attended through the CCC community and/or the Department of Biological Sciences. Points awarded will depend upon the opportunity, generally in the range of 1-3 points. **A maximum of 3 bonus percentage points are allowed.** *Bonus points should never be substituted for course knowledge-you must continue to prepare for each test.*

2. **Laboratory Component: Your lab grade is an average of the following:**

Three non-cumulative lab practical exams as per laboratory instructions;
218 will have additional grades.

3. **Grading Scale: A-F (with +, -)***

A	93, 94, 95, 96, 97, 98, 99, 100	C+	77, 78, 79
A-	90, 91, 92	C	73, 74, 75, 76
B+	87, 88, 89	C-	70, 71, 72
B	83, 84, 85, 86	D+	67, 68, 69
B-	80, 81, 82	D	60, 61, 62, 63, 64, 65, 66
		F	Below 60

*Attendance and participation are always considered, especially in borderline cases.

**A minimum of 73% is required for majors in nuclear medicine, nursing, nutrition, and the LAC. Only one course overall is allowed to be repeated in the nursing curriculum.

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

I fully support the **Cedar Crest College Honor Code, Academic Standards of Integrity and Classroom Protocol Code** as stated in the *Student Handbook*. Cheating will result in a zero for the test/assignment. If necessary, code violations should be brought to my attention. Violations may also result in removal from class, a forfeit of all bonus points and 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 & Judicial Board. There will be zero tolerance for disruptive, disrespectful behavior. Security will be called in the event such behavior occurs.

I fully support the College's policy on plagiarism as described in the *Student Handbook*. Based on the severity of the offense, students may be required to redo an assignment or receive a zero for the assignment. Cases will be reported to the Provost as necessary

Students with **documented** disabilities who may need academic accommodations should discuss these needs with their professors during the first 2 weeks of class. Students who wish to request accommodations should contact the advising center.

Need to Know:

1. All students must have CCC email for course communication and it is your responsibility to check it regularly.
2. Promptness, respect and courtesy are expected in all aspects of the course.
3. Laboratory coats (not shirts, smocks or jackets) and closed-toe shoes are required in A&P laboratories. Food and beverages (including anything bottled) are not permitted in the laboratory. Please report all breakage to your lab professor.

Due to the hazards in lab, safety regulations, and abiding by the classroom protocol code establishing a learning environment for all registered students, children are not permitted to be in the lab.

4. Please silence all cell phones during class unless there is an impending situation. Guests, food, drinks, wrappers, cell phones, palm pilots, blackberries or any other electronic devices are not allowed during tests. It is highly recommended that students DO NOT sit close to each other during tests.
5. To insure greater security and safety for students at night who study in the Science Center:
 - A. Always carry your college ID.
 - B. Make an effort to come with a study partner.
 - C. Notify Campus Security (dial 'O' on any campus phone) for any help or assistance.
 - D. Use the "escort service" (Campus Security) if needed.

The SC Building hours are: Sunday thru Friday 7 AM -10 PM, Saturday 7 AM - 6 PM

6. **Morgan Dorsey** is the IA for the Spring Semester. Taking advantage of her knowledge and help will insure success. Tutors (free!!) are available through Academic Services, Curtis 109, Ext. 3484. Sign up for a tutor ASAP! For your benefit, reference books are located in SCI 102. Please do not remove them.
7. As you study, remember to organize, summarize, create the big picture and recite! Make sure you know the pathways! Write out the pathways-drawing really helps! Study and review at every opportunity.

*If you don't understand, ASK; when in doubt, ASK
Best Wishes for a Successful Semester in A&P!
-Mrs. Malitsch*

BIO 118/218 Human Anatomy & Physiology II

Lecture Outline - Spring 2010

Test Dates: Friday, February 12
Friday, March 19
Friday, April 16
Final Exam, TBA

<u>Topics</u>	<u>Text Chapters</u>
Endocrine System	16
Blood	17
Cardiovascular System: ECF Review, General Plan of Circulation Circulation Pathways	} Reference Pages in 19 19
Heart Anatomy & Blood Flow	18
Cardiovascular System: Cardiac Physiology Blood Vessel structure Physiology of Circulation Applications	18, 19
Lymphatic System	20
Immune System	21
Respiratory System	22
Digestive System	23
Metabolism	24
Urinary System	25
Fluids/Electrolytes	26
Reproductive System: Spermatogenesis, Oogenesis, Physiology, Cycles, Applications, Pregnancy, Development, Prenatal Testing, Infertility (as time permits)	27, 28, 29

This outline is a guideline for the order of topics and is not carved in stone. Tests will occur on the designated dates. Information for the indicated test dates is not pre-determined but will depend upon how much we have covered. Since this course is a requirement for healthcare professions or a highly recommended elective for pre-professional programs, we must assimilate a certain amount of information. However, I always encourage a free exchange of questions and comments. Topics will include discussions of medical terminology, homeostasis, medical tests, clinical applications, pathological conditions and pharmaceuticals.