

BIO 2114 - Anatomy and Physiology

Fall 2010

Sections 1 and 2

Text/Lab: *Human Anatomy and Physiology, 8th ed, 0-8053-9569-5*
Human Anatomy and Physiology Laboratory Manual, Pig Version, 9th ed
update, 0-321-54246-0
Elaine N. Marieb

Instructor:

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Course Description: BIO 194 (4-3-5) introduces the student to an advanced level of anatomy and physiology of the human body. Emphasis is placed on the development of a systematic perspective of the anatomical structures and physiological processes. Topics include peripheral and autonomic nervous systems, cardiovascular, endocrine, immune, respiratory, urinary, and digestive systems.

Lecture

9/28	Introduction; Endocrine (16)
9/30	Endocrine (16)
10/05	Endocrine (16) and Blood (17)
10/07	Blood (17)
10/12	Test 1 - Chapters 16, 17
10/14	Cardiovascular (18)
10/19	Cardiovascular (18); Blood Vessels (19)
10/21	Blood Vessels (19)
10/26	Test 2 - Chapters 18, 19
10/28	Lymphatics (20); Immunity (21)
11/02	Immunity (21)
11/04	Test 3 - Chapters 20, 21
11/09	Respiratory (22)
11/11	Respiratory (22); Urinary (25)
11/16	Urinary (25)
11/18	Test 4 - Chapters 22, 25
11/23	Digestive (23)
11/25	Digestive (23); Reproductive (27)
11/30	Reproductive (27)
12/02	Test 5 - Chapters 23, 27
12/07	Reproductive Case Studies
12/14-16	Final Exams

Grading Scale:**90 - 100 A****80 - 89 B****70 - 79 C****60 - 69 D****below 60 F****Course Grade:**

Lecture Exams	50%
Lab Grade	30%
Final	20%

Lab Schedule – Tuesday – Section 1

- 09/28 Endocrine System and Blood; Endocrine Simulation (27, 29, 28B)
 10/05 Frog Cardiovascular Simulation (34B); Blood Vessels (32)
 10/12 Cardiovascular Dynamics Simulation (33B)
 10/19 Heart (30)
10/26 Lab Practical 1
 11/02 Respiratory (36); Respiratory Mechanics Simulation (37B)
 11/09 Digestive, Urinary, Reproductive (36, 39, 41, 42); Digestion Simulation (39B)
 11/16 Acid-Base Balance Simulation (47)
11/23 Lab Practical 2

Lab Schedule – Thursday – Section 2

- 09/30 Endocrine System and Blood; Endocrine Simulation (27, 29, 28B)
 10/07 Frog Cardiovascular Simulation (34B); Blood Vessels (32)
 10/14 Cardiovascular Dynamics Simulation (33B)
 10/21 Heart (30)
10/28 Lab Practical 1
 11/04 Respiratory (36); Respiratory Mechanics Simulation (37B)
 11/11 Digestive, Urinary, Reproductive (36, 39, 41, 42); Acid-Base Balance Sim
 11/18 (47)
 Digestion Simulation (39B)
11/25 Lab Practical 2

Lab Grade: Your lab grade will be an average of the following three items:

Lab Practical 1

Lab Practical 2

Lab Reports

Exams: Your best in-class test grade will count twice for a total of 6 test grades. Make up exams will not be given during class time. Make up exams will be more difficult (primarily short answer) and should be avoided. Make up exams must be scheduled immediately upon return to class and should be taken no later than the day after return to class.

To calculate any percentage grade:

number of questions you got correct / by total number of questions * by 100

"/" means divide

"*" means multiply

To calculate course grade:

(lecture average * 0.50) + (lab grade * 0.3) + (final exam * 0.2)

Attendance:

The attendance policy is defined in the Augusta Tech Student Handbook (p. 46). If the student misses more than ten (10) percent in any course during a quarter, the student is subject to being suspended from the course(s) involved. All work missed due to tardiness or absences must be made up at the convenience of the instructor. Three (3) tardies equals one (1) absence for the course(s) involved. Once a student is counted as present in class, they are not allowed to leave the classroom without informing the instructor ahead of time.

WITHDRAWAL/DROP POLICY

If you decide to drop this course, you must complete an official drop form through admissions, or email Rebecca Walker (rwalker@augustatech.edu) and Sabrina Sims (ssims@augustatech.edu) in Student Records, as well as the instructor and request a drop. Once the email has been received, you will officially be dropped from the class. If you have questions during the quarter about your continued attendance, please contact me or the dean of the school in which this class is being taught. If you are absent for 3 consecutive class periods you may be administratively dropped.

Consequences of Withdrawal: From the information below you can see that an important date in the withdrawal process is midterm. This quarter midterm is February 9th. If you withdraw after midterm and are failing, then a WF will be entered as a final grade which will impact your GPA the same as an F. The following material is copied from the Augusta Tech 2009 Catalog.

“W” WITHDRAW—Signifies the student stopped attending and/or withdrew before midterm.

“WF” WITHDRAW FAILING—Signifies the student withdrew with a failing grade after midterm. “WF” carries a grade point value of “0.”

“WP” WITHDRAW PASSING—Signifies the student withdrew with a passing grade after midterm.

WORK ETHICS

Students will receive (a) work ethics grade(s) (3,2,1 or 0) each quarter for all course except developmental studies courses. The quarterly work ethics grade will not affect the academic grade point average (GPA) of a student; that is, work ethics grade(s) remain separate from academic grades. Work Ethics grade(s) will be printed on quarterly Student Progress Reports and Transcripts.

The work ethics grade(s) is designed to evaluate and encourage good work habits. Performance factors and indicators include, but are not limited to, quality of work, ability to follow instructions, productivity, dependability, honesty, reliability, attendance and punctuality, attitude, integrity, enthusiasm, interpersonal skills, and initiative.

DISABILITY STATEMENT

If there is a student in this class who may need accommodation due to a disability, please feel free to contact me by phone, email, or office appointment and discuss this with me

STUDENT SERVICES INFORMATION

Counseling, Special Needs, Career Placement, Student Records/Registrar, and Admissions Services are available for all online students. You can find out more details on these services from the Augusta Tech web page (www.augustatech.edu.) under Student Services and Counseling.

* Counseling Services and Special Needs (Amy Laughter) may be reached at 706-771-4068 or email alaughte@augustatech.edu

* Career Services (Donna Wendt) may be reached at 706-771-4017 or email dwendt@augustatech.edu

* Student Records/Registrar (Sabrina Sims) may be reached at 707-771-4035 or email ssims@augustatech.edu.

*Admissions (Brian Roberts) may be reached at 706-771-4027 or email bcrobert@augustatech.edu

ACCREDITATION

Augusta Technical College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, Georgia 30033-4097 Telephone Number: 404-679-4501) to award Associate of Applied Technology Degrees, Diplomas, and Technical Certificates of Credit.

NONDISCRIMINATORY POLICY

As set forth in its student catalog, Augusta Technical College does not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or belief, veteran status, or citizenship status (except in those special circumstances permitted or mandated by law).

Title IX/Title VI Coordinator: Randy Davis, Building 100, Room 129, Extension 4081
Disabilities Services Coordinator: Karissa Wright, Building 1300, Room 241, Extension 4067

COLLEGE HONOR CODE

It is my honor to be an Augusta Technical College student. I pledge to do honor to myself, my classmates, and the College by doing my best and by following the College Honor Code. I will not dishonor myself or the College by lying, cheating, stealing, or doing harm to another person or property. I understand that following an honor code is a reflection of my work ethic which is important to my success on the job and in life.

BIO 2114 Competencies

- I. Describe structural and functional characteristics of the endocrine system.
 - A. Identify the endocrine organs and their location.
 - B. Describe cellular mechanisms by which hormones act.
 - C. List hormones produced by each endocrine gland and cite their physiological effect(s).

- II. Describe the structural and functional characteristics of blood and lymphatic systems.
 - A. Describe composition and characteristics of whole blood.
 - B. Describe morphology and functions of the blood cells.
 - C. Describe pathologies associated with blood.
 - D. Describe the general structure and functions of lymphoid organs.
 - E. Describe the functioning of the lymphatic vessels.

- III. Describe the structural and functional characteristics of the cardiovascular system.
 - A. Describe the gross anatomy of heart and major blood vessels.
 - B. Describe blood flow through the heart.
 - C. Describe the conduction system of the heart.
 - D. Describe the heart valves: structure, location, mechanism of function.
 - E. Compare and contrast arteries, veins, capillaries.
 - F. Describe blood flow, peripheral resistance, and blood pressure.
 - G. Identify major arteries and veins.

- IV. Describe the structural and functional characteristics of the immune system.
 - A. Describe the general nonspecific defenses of the body.
 - B. Describe inflammation, the complement system, and interferon.
 - C. Describe the process of humoral immunity.

- D. Describe the process of cell-mediated immunity.
- V. Describe the structural and functional characteristics of the respiratory system.
- A. Describe the structure and functions of respiratory tract.
 - B. Describe structure and physiology of the lungs
 - C. Describe the processes of external and internal respiration.
- VI. Describe the structural and functional characteristics of the digestive system
- A. Describe the structure and function of each major digestive organ.
 - B. Describe the structure and function of each accessory organ.
 - C. Describe the processes of physical digestion.
 - D. Describe the processes of chemical digestion.
- VII. Describe the structural and functional characteristics of the urinary system.
- A. Describe the structure and function of each major urinary system organ.
 - B. Describe the function of the kidneys in maintaining homeostasis.
 - C. Describe processes of filtration, reabsorption, and secretion in the kidney.
- VIII. Describe the structural and functional characteristics of the reproductive system.
- A. Describe the structure and function of the male reproductive organs.
 - B. Describe the structure and function of the female reproductive organs.
 - C. Describe the process of gamete formation.
 - D. Describe the hormonal aspects of reproduction.