

BIOLOGY 203
HUMAN ANATOMY AND PHYSIOLOGY
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FALL SEMESTER, 2011

Textbook: *Seeley's Anatomy & Physiology*, 9th ed., by Rod Seeley, Cinnamon VanPutte, Jennifer Regan, and Andrew Russo **or** *Anatomy and Physiology*, 8th edition, by Rod R. Seeley, Trent D. Stephens, and Philip Tate

Supplements: *Human Anatomy and Physiology Biology 203 Lecture Notebook 2010-2012*, by Marilyn M. Shannon
Laboratory Guide for Biology 203 Human Anatomy and Physiology 2010-2012, by Marilyn M. Shannon

Optional: *Anatomy and Physiology Revealed* CD's. The first and second volumes, "Skeletal and Muscular Systems," and "Nervous System," are useful for Biology 203. The other two are useful for Biology 204.

Introduction

Welcome to Biology 203! Biology 203, Human Anatomy and Physiology, is the first semester of a large, challenging two-semester introduction to the structure--anatomy--and function-- physiology-- of the human body. The course will continue as Biology 204 during the Spring semester. The course objectives are:

- 1) to impart basic factual information concerning the structure and function of the human body,
- 2) to develop understanding of the basic concepts and processes that underlie dynamic bodily functions,
- 3) to develop the critical thinking skills needed to apply basic facts and concepts to the dynamic structural-functional interactions of the human body.

Lecture/Recitation

The lecture/recitation forms one part of the course, simply called "the lecture." The lecture portion emphasizes physiology; that is, the function of the body. Most of the basic physiology that you need to learn will be presented during the lectures. You will be invited to ask questions and to respond orally as physiological processes are presented. While you will find attending the lectures essential to your success in the course, the course also requires considerable out-of-class study. You are welcome to audiotape the lectures, a practice that many students find helpful. Videotaping is not permitted.

Laboratory

The lab classes are completely hands-on. They emphasize anatomy, giving you direct experience with a large variety of full-size anatomical models and some preserved specimens, as well as the option to observe a human cadaver. Lab policies are explained in the first few pages of your Biology 203 *Laboratory Guide*, and will be reviewed during your first lab class.

Out-of-Class Helps

Below is a list of resources that have been put in place to help you achieve success in this course. You are encouraged to take advantage of as many of these as possible.

Biology 203-204 website: [Users.ipfw.edu/shannon](http://users.ipfw.edu/shannon) contains back-up copies of course materials, including the syllabus, *Notebook*, *Lab Guide*, Study Organizers, and the PowerPoint illustrations. It contains links to the textbook web sites and to photographs of lab models. The “*News You Can Use*” section is updated often, and communicates times, dates, places, changes and corrections as they occur. Cumulative grades and the current grading scale may also be accessed here.

Lecture Study Organizer: The Lecture Study Organizer is a short but essential guide that summarizes what you need to learn from each chapter in our textbook. It assigns chapter questions, useful illustrations, and practice questions. It begins with recommendations for how to study for this course. Especially as you begin this course, you should reread the study recommendations frequently. It is available at users.ipfw.edu/shannon.

Supplementary Instruction (lecture) and Tutoring: Peer-led weekly "SI" sessions will be conducted by student leaders who have successfully completed the course in the recent past, and who are attending each lecture/recitation again this semester. The time and dates are posted at users.ipfw.edu/shannon. Tutoring is also available through “The Spot” in Kettler Hall G-21; www.ipfw.edu/casa 481-5419). There is no cost for either.

Practice lecture test questions: A handout with sample lecture test questions will be provided in lecture before each lecture test. While these will not be the same as the actual test questions, they will give you a better sense of the coming test than the practice questions included at the end of each chapter. These will not be available on the web.

Open lab: “Open labs” will be conducted weekly by trained Supplementary Instruction (SI) leaders. The open labs provide you with the opportunity to get into the lab for extra hand-on time with the models and materials in the lab.

Sample lab practical questions: A set of practice lab practical questions will be set up during the review labs before each lab practical so that you know what to expect.

Tests

There will be four lecture tests, two laboratory practical exams, and eight lab quizzes scheduled during the semester.

Lecture Tests: Each of the four lecture tests will contain 50 multiple-choice items. Since the lectures will emphasize physiology, the lecture exams will test (1) factual information, (2) your ability to understand physiological processes, (3) and your ability to apply factual information and physiological concepts; that is, critical thinking skills. The final lecture test (Lecture Test 4) will not be cumulative.

Lab Practicals: The two 60-item practicals will test your ability to recognize and name anatomical structures that you have seen in the laboratory. No lecture material will be covered on these tests, nor will they be cumulative. The practicals will require use of your "active" memory, since you will need to *recall* and *write* the correct name of a structure, rather than merely to recognize the name, as on a multiple-choice test.

Lab Quizzes: Eight 8-item lab quizzes are scheduled during the semester, four before the first lab practical and four before the second lab practical. Each will cover material from the previous week, and like the lab practicals, they will test your active memory, as you will be asked to recall and write the names of anatomical structures exhibited in lab.

Grades

Your grade is based completely on points accumulated through the lecture tests, lab practicals, and lab quizzes. Each test or quiz will be graded on a 90-80-70-60 basis, with 90% the lowest A, 80% the lowest B, 70% the lowest C, and 60% the lowest D. A possibility for lowering this scale a bit exists but should not be assumed. Except for the quizzes, your raw scores will be converted to percentages, and the percentage scores will then be used as points which will be accumulated to form the basis of assigning grades. Grades from lab quizzes will be used as raw points which will be added to your overall points. Each of the eight lab quizzes is worth 8 points, but your lowest lab quiz from each half of the semester will be dropped, so that you can gain a total of 48 points from the lab quizzes. These quiz points are not bonus points.

Lecture Exam 1	100	Lab Practical 1	100
Lecture Exam 2	100	Lab Practical 2	100
Lecture Exam 3	100	Lab Quizzes	<u>48</u>
Lecture Exam 4	100	Total possible points	648

You will always know exactly what your current grade is in the course, because if necessary, the scale will be lowered with each test rather than at the end of the semester. The cumulative grading scale and your scores will be posted on the Biology 203/204 website as soon as possible after each exam (<http://users.ipfw.edu/shannon>).

A 90-80-70-60 scale of the cumulative points is used to determine grades. At the end of the semester, 583 points will ensure an A; 518 points a B; 454 a C; and 390 a D. (This may be lowered after a particular test, but if so, the current points will be posted.)

A consistent performance throughout the semester will result in a better grade than a "miracle finish" at the end of the semester, since no greater weight is put on points gained late in the semester rather than early.

Last Day to Withdraw or Change to Audit-- Friday, October 28

Students who are doing poorly in any university course may choose to drop that course and receive a grade of W, or they may choose to change to a grade of "Audit." However, after 5 p.m. Friday, October 28, 2011, only a serious reason, acceptable after review by the Dean, will justify a grade of W. After this date, you cannot drop due to poor performance. This is a university-wide policy to which the instructor cannot make exceptions.

3-Digit I.D. Number and Assigned Seat Number for Tests

You will be assigned your own three-digit I.D. number for use on every test throughout this course. All your lecture grades will be transferred by computer to a master grading program. Only your three-digit I.D. number, not your name, will be used by the computer to post your grades. Therefore, two practices are essential to your grade:

>First, know your number and darken it in on every machine-gradable test answer sheet. (It will be given to you privately in lab during the third week of class.)

Record your three-digit I.D. number here: ____ ____ ____

>Second, always check the grades posted on my website to make sure your score is posted by your I.D. number. You will need to let me know immediately if your number is incorrect, missing, or duplicated accidentally by another student.

A free point, worth 2% on each lecture test, will be given automatically to all students whose tests do not require individual handling to correct technical errors.

At the time you receive your 3-digit I.D. number, you will also receive a seat number which is used to take all lecture tests. Attendance will be taken from your presence in your assigned seat. Record your seat number here: _____

There will also be assigned seating in lab for each lab practical.

Academic Honesty

A conscientious effort will be made by your course coordinator and your lab instructor to ensure that all tests are carefully proctored and that your grade will not be exceeded by someone who chooses to act dishonestly in Biology 203. Academic dishonesty, whether giving or receiving test information during a test, will result in a failing grade for the entire course. See also the Student Handbook, which states that when such events occur, the students' major department chair and the dean of their school must receive a letter concerning the incident, and they may choose to drop the students from their program.

Make-up Test Policy

If you must miss any lecture test or lab practical for any reason, and if you wish to take a make-up test, you must leave me a voice-mail or e-mail message *before* the test is missed. If more than one test or practical is missed, make-up test arrangements for a second make-up will require the Biology Chair's approval, and you must provide evidence of extenuating circumstances for *both* missed tests.

Lecture Tests: The large number of students in Biology 203 makes individually scheduled make-up tests impossible. Therefore, make-up exams for all missed lecture tests will be given on Thursday, December 1, or Friday, December 2, during established office hours or at another mutually convenient time. All make-up lecture tests consist of a mix of multiple choice, fill-ins, labeling, and short essays.

Lab Practicals: Lab practicals need to be taken the same week they are scheduled, if they cannot be taken at the assigned time. Due to the lab space and time required to provide these tests, an incomplete grade to be completed during the next time the course is offered will be the only option offered for make-up lab practicals after the week of the scheduled practical.

Lab Quizzes: No make-ups are permitted for lab quizzes, even in another lab class during the same week it is scheduled. Any lab quiz not taken at the scheduled time will result in a score of 0. However, your lowest lab score for each half of the semester will be dropped.

BIOLOGY 203 LABORATORY SCHEDULE

- Lab 1 Tuesday- Friday, August 23-26
Introduction to Human Anatomy. Lab Guide pages 2-7.
Note: This information will be tested on Lecture Exam I.
- Lab 2 Tuesday- Thursday, August 30-September 1, and Friday, September 9:
Introduction to Bones and Muscles. Lab Guide pages 8-11.
(No class for Weekend students due to Labor Day Weekend holiday)
- Lab 3 Tuesday- Thursday, September 6-8, and Friday, September 16
The Pelvic Girdle and Lower Limb. Lab Guide pages 12-17.
Quiz 1 over Lab Guide, pages 8-11.
- Lab 4 Tuesday-Thursday, September 13-15, and Friday, September 23:
Bone and Joint Anatomy. Lab Guide pages 18-23.
Quiz 2 over Lab Guide, pages 12-17.
- Lab 5 Tuesday- Thursday, September 20-22, and Friday, September 30:
The Pectoral Girdle and Arm. Lab Guide pages 24-29.
Quiz 3 over Lab Guide, pages 18-23.
- Lab 6 Tuesday-Thursday, September 27-29 and Friday, October 7:
The Forearm, Wrist and Hand. Lab Guide pages 30-35.
Quiz 4 over Lab Guide, pages 24-29.
- Lab 7 Tuesday- Thursday, October 4-6; Friday, October 14:
Review and cadaver observation. Lab Guide pages 8-35.
- Fall Break: Monday and Tuesday, October 10 and 11**
- Optional Open Lab** for all students **Wednesday, October 12**, 8:00-11:50 a.m., 1:00- 4:50 p.m., and 5:30- 7:20 p.m.; and **Thursday, October 13**, 9:00 a.m.- 12:50 p.m., 2:30- 4:20 p.m., and 6:00- 7:50 p.m. in SB 377.
- Lab 8 Tuesday- Friday, October 18-21:
LAB PRACTICAL 1. Any and all boldfaced material from Lab Guide pages 8-35 will be covered on a write-in test using mostly bones and models. This test will have 60 items and will last 55 minutes. Your instructor will announce your starting time.

Lab 9 Tuesday- Friday, October 25-28:

The Brain, Cranial Nerves and Spinal Cord. Lab Guide pages 36-41.

Lab 10 Tuesday-Friday, November 1-4:

The Eye; The Ear. Lab Guide pages 42-51.

Quiz 5 over Lab Guide pages 36-41.

Lab 11 Tuesday-Friday, November 8-11:

The Skull and Muscles of the Head and Neck. Lab Guide pages 52-59.

Quiz 6 over Lab Guide pages 42-51.

Lab 12 Tuesday-Friday, November 15-18:

Vertebral Column, Rib Cage, and Muscles of the Back and Abdomen; The Peripheral Nerves. Lab Guide pages 60-68.

Quiz 7 over Lab Guide pages 52-59.

Optional Open Lab for all students Tuesday, November 22, 9:00 a.m.-4:50 p.m. and 6-7:50 p.m.

Thanksgiving Break November 23-25

Lab 13 Tuesday-Friday, November 29 - December 2:

Review; Cadaver Observation. Lab Guide pages 36-68

Quiz 8 on Lab Guide pages 60-68.

Lab 14 Tuesday-Friday, December 6-9:

LAB PRACTICAL 2. Any and all bold-faced material from Lab Guide pages 36-68 will be covered on a write-in test using mostly bones and models. This test will have 60 items and will last 55 minutes. Your instructor will announce your starting time.

203 Laboratory Class Times and Locations

All labs meet in SB 377 *except* for Tuesday 3:00, Tuesday 6:00 p.m., Thursday 2:30, Thursday 6:00 p.m. and Friday 3 and Friday 8:00 p.m., which have labs scheduled in both SB 377 and SB 369. (If you are scheduled at one of these times, check your registration to find if your lab is in SB 377 or SB 369.) University policy prohibits students from attending any labs for which they are not registered, unless they have the express permission of the laboratory instructor. In case you must miss a lab, the schedule below can be used to help you arrange for a make-up lab. *You may not arrange for a make-up quiz, and you may not enter a lab when a quiz is being given.*

Lab Time	Location	Instructors
Tuesday, 9:00-10:50 a.m.	SB 377	Yvonne Gicheru
Tuesday, 11:00-12:50	SB 377	Alexandra Okihiro
Tuesday, 1:00-2:50	SB 377	Alexandra Okihiro
Tuesday, 3:00- 4:50	SB 377	Sharif Abu Hayat
Tuesday, 3:00- 4:50	SB 369	Jaclyn Nguyen
Tuesday, 6:00-7:50	SB 377	Alexandra Okihiro
Tuesday, 6:00-7:50	SB 369	Sara Miller
Wednesday, 8:00-9:50 (a.m)	SB 377	Sharif Abu Hayat
Wednesday, 10:00-11:50	SB 377	Sharif Abu Hayat
Wednesday, 1:00-2:50	SB 377	Yvonne Gicheru
Wednesday, 3:00-4:50	SB 377	Elizabeth Syster-Clevenger
Wednesday, 5:30-7:20	SB 377	Yvonne Gicheru
Thursday, 9:00-10:50 a.m.	SB 377	Janet Minton
Thursday, 9:00-10:50 a.m.	SB 369	Stella Snyder
Thursday, 11:00-12:50	SB 377	Janet Minton
Thursday, 2:30- 4:20	SB 377	Pearl Pfiester
Thursday, 2:30- 4:20	SB 369	Stella Snyder
Thursday, 6:00-7:50	SB 377	Janet Minton
Thursday, 6:00-7:50	SB 369	Stella Snyder
Friday, 3:00-4:50 p.m.	SB 377	Laura Steele
Friday, 3:00-4:50 p.m.	SB 369	Elizabeth Syster-Clevenger
Friday, 8:00-9:50 p.m.	SB 377	Marilyn Shannon
Friday, 8:00-9:50 p.m.	SB 369	Elizabeth Syster-Clevenger

BIOLOGY 203 LECTURE SCHEDULE

Tuesday-Thursday afternoon, 1:30-2:45 p.m., LA 159

Tuesday-Thursday evening, 4:30-5:45 p.m., LA 159

Tuesday and Thursday, August 23, 25

Introduction to Physiology; Cells 1. Text reference: Chapters 1 and 3.

Tuesday and Thursday, August 30, September 1

Cells 2; Tissues 1. Text reference: Chapters 3 and 4.

Tuesday and Thursday, September 6, 8

Tissues 2; Integumentary System. Text reference: Chapters 4 and 5.

Tuesday and Thursday, September 13, 15

**Completion/ review of Introduction through Integumentary System.
LECTURE TEST 1 (Thursday) over Introduction through Integumentary
System, and anatomical terms from Lab 1.)**

Tuesday and Thursday, September 20, 22

Skeletal System 1; Skeletal System 2. Text reference: Chapter 6.

Tuesday and Thursday, September 27, 29

Muscle 1 and 2. Text reference: Chapter 9.

Tuesday and Thursday, October 4, 6

Muscle 3; Completion, Review of Skeletal and Muscular Systems.

No class Tuesday, October 11 (Fall Break)

Thursday, October 13

LECTURE TEST 2 over Skeletal System and Muscular System.

Tuesday and Thursday, October 18, 20

**Introduction to Nervous System; Action Potentials. Text reference:
Chapter 11.**

Tuesday and Thursday, October 25, 27

**Synapses; Spinal Cord and Brain as an Organ. Text reference: Chapters
11, 12 and 13.**

Tuesday and Thursday, November 1, 3

Brain Functions and ANS 1; ANS 2. Text Chapters 13 and 16.

Tuesday and Thursday, November 8, 10

General and Chemical Senses; Completion/review of Nervous System through Chemical Senses

Tuesday and Thursday, November 15, 17

LECTURE TEST 3 (Tuesday) over Nervous System through Chemical Senses.

Balance and Hearing. Text reference: Chapter 15.

Tuesday, November 22

Vision. Text reference: Chapter 15.

No class: Thanksgiving holiday, Thursday, November 24

Tuesday and Thursday, November 29, December 1:

Endocrinology; Blood 1. Text reference: Chapters 17 and 19.

[Thursday or and Friday, December 1, 2: Make-up lecture tests. If you have missed Lecture Tests 1, 2, or 3, you should have already arranged to take a hand-gradable make-up test at a scheduled time.]

Tuesday and Thursday, December 6, 8

Blood 2, Completion/review. Text reference: Chapter 19.

Thursday, December 15 (*Subject to confirmation of time and place by Registrar's Office, final will be in LA 159 at the same time that you usually meet.*)

FINAL EXAM. This test will cover material from Vision through Blood. It will not be cumulative.

WEEKEND BIOLOGY 203 LECTURE SCHEDULE
5:00-7:50 p.m., LA 159

Friday, August 26

Introduction to Physiology; Cells 1. Text reference: Chapters 1 and 3.

Friday, September 2:

No class, Labor Day weekend

Friday, September 9

Cells 2; Tissues. Text reference: Chapters 3 and 4.

Friday, September 16

Integumentary System, Completion, review. Text reference: Chapter 5.

Friday, September 23

LECTURE TEST 1 (first hour) over Introduction through Integumentary System, and anatomical terms from Lab 1. Skeletal System 1. Text reference: Chapter 6.

Friday, September 30

Skeletal System 2; Muscular System 1. Text reference: Chapters 6 and 9.

Friday, October 7

Muscle 2, Completion, review. Text reference: Chapter 9.

Friday, October 14

LECTURE TEST 2 (first hour) over Skeletal System and Muscular System. Introduction to Nervous System. Text reference: Chapter 11.

Friday, October 21

Action Potentials; Synapses. Text reference: Chapter 11.

Friday, October 28

Spinal Cord and Brain as an Organ.; ANS. Text reference: Chapters 12, 13, and 16.

Friday, November 4

Brain Functions; General Senses and Chemical Senses. Text reference: Chapters 13, 14, and 15.

WEEKEND BIOLOGY 203 LECTURE SCHEDULE, continued
5:00-7:50 p.m., LA 159

Friday, November 11

Balance and Hearing; Completion, review

Friday, November 18

LECTURE TEST 3 (first hour) over Nervous System through Chemical Senses.

Vision. Text reference: Chapter 15.

Friday, November 25

No class: Thanksgiving holiday weekend.

Friday, December 2

Endocrinology; Blood 1. Text reference: Chapters 17 and 19.

[Thursday or and Friday, December 4, 5: Make-up lecture tests. If you have missed Lecture Exams 1, 2, or 3, you should have already arranged to take a hand-gradable make-up test at a scheduled time.]

Friday, December 9

Blood 2, Completion, review. Text reference: Chapter 19.

Friday, December 16 (5:00-6:30 p.m. in LA 159)

FINAL EXAM. This test will cover material from Vision through Blood. It will not be cumulative.