Textbook

Required Supplement

Introduction
Welcome to Biology 203! Biology 203, Human Anatomy and Physiology, is the first semester of a challenging two-semester introduction to the structure and function of the amazing human body. The course will continue as Biology 204 during Spring, 2014. Students who successfully complete the course will be able to

(1) recognize and use the specialized vocabulary of human anatomy and physiology,

(2) understand and apply the principles and processes through which the body maintains life and health (“homeostasis”), and

(3) use critical thinking skills to predict how structure and function interact to maintain homeostasis.

Lecture/Recitation
The lecture/recitation portion of the class emphasizes physiology; that is, the function of the body. Much of the physiology that you need to learn will be presented during the lectures, and you will be invited to respond orally as physiological processes are presented. You will be encouraged to ask questions, to examine relationships between anatomy and physiology, to predict homeostatic responses, and to apply physiological knowledge to homeostatic imbalances. While you will find attending the lectures essential to your success in the course, the course requires considerable out-of-class study.

You are welcome to audiotape, but not videotape, the lectures. Audiotaping is a practice some students find helpful.
Laboratory
The lab classes emphasize anatomy and are completely hands-on. We are fortunate to have teaching labs well provided with a large number of full size anatomical models, real and artificial skeletons and bones, some preserved specimens, as well as human cadavers. Lab policies will be explained during your first lab class, and are also detailed in the introductory pages of your Lab Guide.

> Lab personal protection dress policy: New University “personal protection” regulations require that students in all teaching labs wear closed-toed shoes, long pants and/or long skirt. Short-sleeve shirts covering the same anatomy as a T-shirt are permissible, but not sleeveless shirts, tank tops, or midriff-exposing tops.

Out-of-Class Resources
Below is a list of current resources put in place to help you achieve success in Biology 203. Please take advantage of these!

>Biology 203-204 Website: Users.ipfw.edu/shannon, nicknamed the “green screen,” contains links to course materials including the syllabus, the PowerPoint illustrations, lecture assignments, and the textbook Online Learning Center. The “News You Can Use” section is updated often, and communicates times, dates, places, changes, and corrections as they occur. The grading scale is also available here.

>Biology 203 Lecture Assignments: Available on the Biology 203-204 website, these summarize what you need to learn from each chapter in the text. They assign reading, chapter questions, useful illustrations, and practice questions.

> Seeley’s Essentials of Anatomy and Physiology Online Learning Center: www.mhhe.com/seeleyess8. The Student Edition allows access to a wealth of learning tools for each chapter, such as animations, chapter study guides, and self-quizzes. The Biology 203 Lecture Assignments (above) detail which are useful and what to omit.

>Tutoring: Tutoring is available at “The Spot” in Kettler Hall G-21. It may be scheduled through www.ipfw.edu/casa; or 481-5419. There is no cost for this service.

>Practice lecture test questions: A handout with sample lecture test questions will be available before each lecture test. While these will not be the same as the actual test questions, they will help you know what to expect on the coming test.

>Open lab: Weekly "Open Labs," giving you time to work in the lab outside of your scheduled lab, will be held at times to be announced (see users.ipfw.edu/shannon).

>Practice lab practical questions: Several practice practical questions will be set up during the week before each lab practical so that you may prepare for these tests.
Attendance Policy
Attendance is not directly taken in lab or lecture. However, even when the reason for not attending a class is very necessary, missing even one day of lecture or lab makes it difficult to keep up. If you know in advance that you must miss a class, you may be able to make it up during a different time that week by permission of the instructor.

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. The Student Handbook also 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.

Instructor’s Office Hours, Telephone, E-mail, and Website
I am interested in your success and am available to help you achieve it.

Office Hours:  
Tuesdays  2:45-4:15 p.m. in SB 338  
5:45-6:15 p.m. (after lecture) in LA 159  
Thursdays  2:45-4:15 p.m. in SB 338  
5:45-6:15 p.m. (after lecture) in LA 159  
Friday  Before and after lecture in LA 159  

Office:  Science Building 338 (same floor as the anatomy lab)  
Office telephone:  (260) 481-6314 (office hours and voice mail anytime)  
Home telephone:  (260) 489-1856  
E-mail  shannon@ipfw.edu  
Website:  http://users.ipfw.edu/shannon

Lecture Tests, Lab Practicals, and Quizzes
Four required lecture tests, one optional semi-cumulative lecture test, two lab practical tests, and nine lab quizzes are scheduled throughout the semester. The lecture constitutes close to 60% of your overall accumulated points; the lab contributes about 40% to your overall grade.

>Required lecture tests:  Each of the four required lecture tests is a one-hour, 50-item, multiple-choice test. Each will test mainly physiology, consisting of (1) factual information; (2) your ability to understand physiological concepts and processes; and (3) your ability to apply factual information and physiological concepts using critical thinking skills. The final exam, Lecture Test 4, is a required test. It is not cumulative.
Optional semi-cumulative lecture test: An optional semi-cumulative lecture test, covering the same material as covered on Lecture Tests 1, 2, and 3, will be offered to students who wish to replace their lowest lecture test score with a higher score from this cumulative test. (If this test's score is lower than the first three, it will not be used as part of your accumulated points.) However, the optional test cannot not replace the score from the required, noncumulative final exam. There is no make-up for this test.

Lab practicals: The two 60-item practicals will test your ability to recognize and name anatomical structures as well as functional anatomy that you have learned in the laboratory. No lecture material will be covered on these tests. The practicals will require use of your "active" memory, since you will be required to recall and write the correct name or function of a structure, rather than just recognize the name, as on a multiple-choice test.

Lab quizzes/experiment: Nine lab quizzes and one lab experiment, worth 8 points each, are scheduled during the semester, five before the first practical and five after the first practical. Most will cover material from the previous week, and like the lab practicals, you will be asked to recall and write the names or functions of anatomical structures exhibited in lab. The lab experiment will be graded based on data gathered and written conclusions.

Grades
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 slightly exists but should not be assumed. Except for the lab 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/experiments will be used as raw points which will be added to your overall points; each is worth 8 points. Your lowest lab quiz from each half of the semester will be dropped (but you may not drop the score from the lab experiment), so that you can gain a total of 64 points from the lab quizzes. These quiz points are not bonus points.

<table>
<thead>
<tr>
<th>Test/Quiz</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Exam 1</td>
<td>100</td>
</tr>
<tr>
<td>Lecture Exam 2</td>
<td>100</td>
</tr>
<tr>
<td>Lecture Exam 3</td>
<td>100</td>
</tr>
<tr>
<td>Lecture Exam 4</td>
<td>100</td>
</tr>
<tr>
<td>Lab Practical 1</td>
<td>100</td>
</tr>
<tr>
<td>Lab Practical 2</td>
<td>100</td>
</tr>
<tr>
<td>Lab Quizzes/Expt.</td>
<td>64</td>
</tr>
<tr>
<td>Total possible points</td>
<td>664</td>
</tr>
</tbody>
</table>

At the end of the semester a 90-80-70-60 scale of the cumulative points will be used to determine the final grade. That is, 598 points will ensure an A; 531 points a B; 465 a C; and 398 a D. 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. Because the grading scale and current cumulative point totals are updated after each test, you will always know exactly what your current grade is in this course. You will be able to view your test scores and cumulative points on Blackboard, and will see the current grading scale on users.ipfw.edu/shannon, the course website.

Last Day to Withdraw with a Grade of W--Friday, October 31
After this date, only a serious, documented reason, approved 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 exception.

3-Digit ID Number and Assigned Seat Number for Lecture Tests and Lab Practicals
You will be assigned your own 3-digit ID 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 3-digit ID 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 in lab during the third lab class.)

>Second, always check your score on Blackboard to make sure your score is correctly posted. You will need to let me know immediately if your score is incorrect or missing.

>Record your 3-digit ID number here: __ __ __.

A free point, worth 2% on each lecture test, will be given automatically to all students whose lecture 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 consisting of a letter followed by a number, which is assigned for taking all lecture tests.

>Record your seat number here: ____ ______.

Your lab instructor will also assign you a seat before each lab practical.

Make-up Tests
If you must miss any lecture test or lab practical for any reason, and if you wish to take a make-up, you must leave me an e-mail (shannon@ipfw.edu) or a voice-mail message (260 481-6314) before the test is missed. More than one make-up test will require documentation for both absences, and approval by the Biology Department Chair.
There is no make-up for the Optional Lecture Test.

*Lecture test make-ups:* The large number of students make individually scheduled make-up tests impossible. Therefore, make-ups for all missed lecture tests (except for the Optional Lecture Test, for which there is no make-up) will be given on Thursday or Friday, December 4 or 5, at a mutually convenient time. Make-up lecture tests may consist of a completely different format than the regular tests— a mix of multiple choice, fill-ins, labeling, and essay questions.

*Lab practical make-up policy:* Due to set-up time and space required to provide a lab practical, no make-ups are available. Instead, an incomplete grade to be completed during the next time the course is offered (Spring 2015) is the only option offered for make-up of lab practicals.

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

**University Disability Policy**

If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the director of Services for Students with Disabilities (Walb, Room 113, phone 481-6658), as soon as possible to work out the details. Once the director has provided you with a laminated card attesting to your needs for modification, bring the card to your instructors.
BIOLOGY 203 LECTURE SCHEDULE
Tuesday-Thursday afternoon, 1:30-2:45 p.m., LA 159 or
Tuesday-Thursday evening, 4:30-5:45 p.m., LA 159

Tuesday and Thursday, August 26, 28
Introduction to Physiology. Text Chapter 1
Cells 1. Text Chapter 3

Tuesday and Thursday, September 2, 4
Cells 2. Text Chapter 3
Tissues 1. Text Chapter 4

Tuesday and Thursday, September 9, 11
Tissues 2. Text Chapter 4
Integumentary System. Text Chapter 5

Tuesday and Thursday, September 16, 18
LECTURE TEST 1 over Introduction through Integumentary System,
and anatomical terms from Lab 1.
Skeletal System 1 (Thursday). Text Chapter 6

Tuesday and Thursday, September 23, 25
Skeletal System 2. Text Chapter 6
Muscular System 1. Text Chapter 7

Tuesday and Thursday, September 30, October 2
Muscular System 2. Text Chapter 7
Muscular System 3. Text Chapter 7

Tuesday and Thursday, October 7, 9
Nervous System Introduction. Text Chapter 8
Completion/review of Skeletal, Muscular, Nervous System Intro

No class Tuesday, October 14: Fall Break

Thursday, October 16
LECTURE TEST 2 over Skeletal System, Muscular System, and
Introduction to Nervous System.
Tuesday and Thursday, October 21, 23

Action Potentials.  Text Chapter 8
Synapses.  Text Chapter 8

Tuesday and Thursday, October 28, 30

Spinal Cord and Brain as an Organ.  Text Chapter 8
Brain Functions and Autonomic Nervous System 1.  Text Chapter 8

Tuesday and Thursday, November 4, 6

Autonomic Nervous System 2.  Text Chapter 8
General and Chemical Senses.  Text Chapter 9

Tuesday and Thursday, November 11, 13

Completion/review of Nervous System through Chemical Senses
LECTURE TEST 3 (Thursday) over Action Potentials through Chemical Senses

Tuesday and Thursday, November 18, 20

Balance and Hearing. Text  Chapter 9
Vision.  Text Chapter 9

Tuesday, November 25

Optional Semi-cumulative Lecture Test over previously covered material from Lecture Tests 1, 2, and 3

No class Thursday, November 27:  Thanksgiving Day

Tuesday and Thursday, December 2, 4

Endocrinology 1.  Text Chapter 10
Endocrinology 2, Blood 1.  Text Chapters 10 and 11

[Thursday or Friday, December 4-5:  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 9, 11

Blood 2.  Text Chapter 11
Blood 3; review.  Text Chapter 11

Thursday, December 18 (Subject to confirmation of time and place by Registrar’s Office, final will be in LA 159 at the same time that your lecture section usually meets.)

FINAL EXAM (Lecture Test 4) over Balance and Hearing through Blood. It will not be cumulative.
BIOLOGY 203 LABORATORY SCHEDULE
(All assignments are found in the Lab Guide.)

Lab 1 Tuesday-Thursday, August 26-28
Introduction to Human Anatomy (Lab Guide pages 2-7)
Note: This information will be tested on Lecture Exam I.

Lab 2 Tuesday-Thursday, September 2-4
Introduction to Bones and Muscles (Lab Guide pages 8-13)

Lab 3 Tuesday-Thursday, September 9-11
The Pelvic Girdle and Lower Limb (Lab Guide pages 14-22)
Quiz 1 over last week’s material

Lab 4 Tuesday-Thursday, September 16-18
Bone and Joint Anatomy (Lab Guide pages 23-29)
Quiz 2 over last week’s material

Lab 5 Tuesday-Thursday, September 23-25
The Pectoral Girdle and Arm (Lab Guide pages 30-37)
Quiz 3 over last week’s material

Lab 6 Tuesday-Thursday, September 30-October 2
The Forearm, Wrist and Hand (Lab Guide pages 38-45)
Quiz 4 over last week’s material

Lab 7 Tuesday-Thursday, October 7-9
Review and cadaver observation (Lab Guide pages 8-45)
Quiz 5 over last week’s material

Fall Break: Monday and Tuesday, October 13 and 14

Optional Open Lab for all students Wednesday, October 15, 8:00-11:50 a.m.,
1:00- 4:50 p.m., and 5:30-7:20 p.m.; and Thursday, October 16, 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- Thursday, October 21-23
LAB PRACTICAL 1. Any and all boldfaced material from all previous topics (Labs
2-7, pages 8-45) 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-Thursday, October 28-30
   The Brain, Cranial Nerves I-VI, and Spinal Cord (Lab Guide pages 46-54)

Lab 10 Tuesday-Thursday, November 4-6
   The Eye, The Ear (Lab Guide pages 55-65), Two-Point Discrimination Test
   (handout; worth 8 points) Quiz 6 over last week’s material

Lab 11 Tuesday-Thursday, November 11-13
   Skull, Muscles of Head and Neck, Cranial Nerves VII-XII (Lab Guide pages 66-74)
   Quiz 7 over last week’s material (except Two-Point Discrimination Test)

Lab 12 Tuesday-Thursday, November 18-20
   Vertebral Column, Rib Cage, Muscles of the Back and Abdomen;
   Peripheral Nerves (Lab Guide pages 75-85)
   Quiz 8 over last week’s material

Optional Open Lab for all students Tuesday, November 25, 9:00 a.m.-4:50 p.m.
and 6-7:50 p.m. in SB 377

Thanksgiving Holiday Recess: Wednesday-Friday, November 26-28

Lab 13 Tuesday-Thursday, December 2-4
   Review; Cadaver Observation (Lab Guide pages 46-85)
   Quiz 9 over last week’s material

Lab 14 Tuesday-Thursday, December 9-11
   LAB PRACTICAL 2. Any and all bold-faced vocabulary from Labs 9-13 (pages 46-85) will
   be tested 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 Thursday 2:30 and 6:00 p.m., which have labs scheduled in both SB 377 and SB 369. (If you are scheduled for Thursday 2:30 or 6:00 p.m., 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.

### BIOL 203 Labs

<table>
<thead>
<tr>
<th>Lab Time</th>
<th>Location</th>
<th>Instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, 9:00-10:50 a.m.</td>
<td>SB 377</td>
<td>Regina Shannon</td>
</tr>
<tr>
<td>Tuesday, 11:00-12:50</td>
<td>SB 377</td>
<td>Mahanish Thapa</td>
</tr>
<tr>
<td>Tuesday, 1:00-2:50</td>
<td>SB 377</td>
<td>Mahanish Thapa</td>
</tr>
<tr>
<td>Tuesday, 3:00-4:50</td>
<td>SB 377</td>
<td>Md Ibrahim</td>
</tr>
<tr>
<td>Tuesday, 6:00-7:50</td>
<td>SB 377</td>
<td>Md Ibrahim</td>
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<tr>
<td>Wednesday, 8:00-9:50 a.m.</td>
<td>SB 377</td>
<td>Tazin Fahmi</td>
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<td>Wednesday, 10:00-11:50</td>
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<td>Tazin Fahmi</td>
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<tr>
<td>Wednesday, 1:00-2:50</td>
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<td>SB 377</td>
<td>Mahanish Thapa</td>
</tr>
<tr>
<td>Wednesday, 5:30-7:20</td>
<td>SB 377</td>
<td>Mahanish Thapa</td>
</tr>
<tr>
<td>Thursday, 9:00-10:50 a.m.</td>
<td>SB 377</td>
<td>Tazin Fahmi</td>
</tr>
<tr>
<td>Thursday, 11:00-12:50</td>
<td>SB 377</td>
<td>Chelsea Clyde-Brockway</td>
</tr>
<tr>
<td>Thursday, 2:30-4:20</td>
<td>SB 377</td>
<td>Chelsea Clyde-Brockway</td>
</tr>
<tr>
<td>Thursday, 2:30-4:20</td>
<td>SB 369</td>
<td>Sejuti Naurin</td>
</tr>
<tr>
<td>Thursday, 6:00-7:50</td>
<td>SB 377</td>
<td>Md Ibrahim</td>
</tr>
<tr>
<td>Thursday, 6:00-7:50</td>
<td>SB 369</td>
<td>Regina Shannon</td>
</tr>
</tbody>
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### Weekend College Labs

<table>
<thead>
<tr>
<th></th>
<th>Location</th>
<th>Instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday, 3:00-4:50 p.m.</td>
<td>SB 377</td>
<td>Laura Steele</td>
</tr>
<tr>
<td>Friday, 8:00-9:50 p.m.</td>
<td>SB 377</td>
<td>Marilyn Shannon</td>
</tr>
</tbody>
</table>