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Spring 1-2016

### BIOH 201N.00: Human Anatomy and Physiology I

Colin B. Henderson

*University of Montana - Missoula*, [colin.henderson@mso.umt.edu](mailto:colin.henderson@mso.umt.edu)

Lori J. Mitchell

*University of Montana - Missoula*, [lori.mitchell@mso.umt.edu](mailto:lori.mitchell@mso.umt.edu)

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## BIOH 201N- ANATOMY AND PHYSIOLOGY - COURSE POLICIES

### **Course Objectives:**

This course will provide you with conceptual and practical knowledge of the anatomy and physiology of the human organism. Through coordinated lecture and laboratory exercises you will first learn the fundamentals of cellular anatomy and physiology. That will be followed by intensive study of the anatomy and normal physiological processes, and integration of the following organ systems: integument, skeleton, muscles, and the central and peripheral nervous system. For each system you will learn the important anatomical features, their normal function and the consequences of aging and disease.

### **Expected Outcomes:**

Successfully completing this course with a B or better will mean that you are able to discuss the following important principles and how they govern organization and function of the body:

- 1) What we know of the structure and function of the human body is based on science.
  - You will be able to describe the scientific basis for your understanding of anatomy and physiology.
  - Presented with new information you should be able to judge whether it is scientifically sound.
- 2) Life depends on the continual input of energy to maintain body organization and function.
  - You will be able to describe the processes for energy transfers within the human body.
- 3) Structure and function of the body are closely linked. You cannot understand the physical organization of the body and its organ systems without understanding what they do and how they interact both physically and functionally.
  - You will be able to describe the cellular basis for life and how cellular processes govern physiology of development, growth, and normal function.
  - You will be able to demonstrate practical knowledge of human gross anatomy, including proper naming and physical relationships among the different structures in the body.
  - You will be able to describe the normal physiological function of different body systems. Given observations of particular anatomical and physiological status, you should be able to objectively describe those observations and their consequences to normal body function.

### **Course Requirements:**

There are no pre-requisites for enrollment in BIOH 201N. You are required to enroll for the laboratory (BIOH 202) concurrent with enrollment in BIOH 201N. The study of human form and function requires exposure to information from a practical as well as a conceptual approach. Consequently, regular attendance at all lab and lecture meetings is required to successfully complete this course. The class is structured so that if you complete all assignments, with an appropriate level of effort, you can pass this course. This means that in addition to attending class, you must commit yourself to at least eight (8) hours of intensive, individual study, plus an extra two to four hours in open labs each week. You must also accept the responsibility to ask

questions if you do not understand the concepts. If absence from lab or lecture is necessary due to illness, it is your responsibility to notify the instructor and to obtain notes from another student.

**Grading:**

Your course grade will be determined by your performance in the lecture and lab, according to the following schedule:

<b>Lecture Assessment</b>	<b>Points Possible</b>	<b>Lab Assessment</b>	<b>Points Possible</b>
Lecture Exam 1	40 points	Lab Exam 1	50 points
Lecture Exam 2	40 points	Lab Exam 2	50 points
Lecture Exam 3	40 points	Lab Exam 3	50 points
Quizzes & Assignments	50 points	Lab Exam 4	50 points
Final Exam	80 points	Quizzes	50 points
<b>Total possible for Lecture</b>	<b>250 points</b>	<b>Total possible for Lab</b>	<b>250 points</b>

In addition to regular exams and quizzes, there will be periodic assignments or lecture quizzes that will contribute an additional 2 percent toward your final grade. While this is a small percentage, these assignments if completed accurately and on time, can make a difference in borderline totals.

Lecture and lab scores will be combined and final grades assigned as follows:

90-100%	A
80-89%	B
70-79%	C
50-69%	D
<50%	F

**Examinations:**

The lecture and the laboratory are each worth 50% of your final grade. Do not take either lightly. Midterms and lab exams cover only the new materials presented since the previous exam.

**Lecture Exams and Quizzes:**

The lecture exams will be drawn from lecture and assigned reading. Lecture exams will be 40 multiple choice questions worth two and one-half points each. The final exam is comprehensive. Details of the final exam will be presented near the end of the semester.

There will be ten 5 point quizzes given through the semester in lecture. These will be unannounced and will cover recently discussed material. Quizzes will be given at the beginning of class; makeups will not generally be allowed so be on time.

**Laboratory Exams and Quizzes:**

Laboratory examinations are based on the use of actual specimens, and therefore must be taken during the assigned laboratory time. Because they are difficult to set up, makeup exams for lab exams are generally not given. Each exam is 50 questions that may include hands-on as well as Powerpoint-based questions. Each exam may include up to 10 percent review material from any of the previous exams.

Laboratory quizzes will be given each week during the first 10 minutes of class. If you are tardy and miss the quiz, you will not be allowed to take it and will receive a 0 for that quiz. A total of 15 quizzes are given and the five (5) lowest quiz grades will be dropped at the end of the semester. These 5 drops make allowance for unforeseen circumstances that cause you to perform poorly, be late, or miss a lab. No makeups will be allowed on quizzes until these 5 opportunities have been used.

**Make-up Exams:**

Make-up exams and lab quizzes will only be given under specific circumstances as outlined in the student conduct code. In general you may seek a makeup only if personal/medical event, work related absence, or university responsibility caused you to miss class. Then only if:

- 1) permission is granted in advance by the instructor, or
- 2) a written excuse is provided by medical, university or work staff. The burden of proof is on the student, so you must document and prove a justifiable excuse.

No shows on the day of the exam will automatically be given a grade of 0. If you participate in university athletics or other activities, and must be absent from an exam, you must arrange for the makeup prior to your departure. You must also schedule the makeup to be completed within **one week** after the missed class, unless you receive specific extension from the instructor.

**Dropping and Change of Grading Option:**

University policies on drops, adds, changes of grading option (pass/no pass, audit) will be strictly enforced. These policies are described in the UM Catalog ([www.umt.edu/catalog/acpolpro.htm](http://www.umt.edu/catalog/acpolpro.htm)).

**You should specifically note that after the 30th day of the semester, such changes are NOT automatically approved. They may be requested by petition, but the petition MUST be**

**accompanied by documentation of extenuating circumstances.** Requests to drop a course or change the grade basis to benefit grade point average will not be approved. The faculty senate guidelines concerning incomplete grades will be followed.

**Student Conduct and Responsibilities:**

Attention to critical dates for dropping this class is the student's responsibility. Students wishing to drop the class after the drop deadline will need a documented, justifiable reason for doing so. Dropping or change of grading option after deadlines for fear of a bad grade or to protect your GPA is not justifiable reasons. The principles and policies embodied in the Student Conduct code will be adhered to in this course.

Cheating or any other forms of academic dishonesty will not be tolerated. If you are observed cheating, you will be given a failing grade for the class and will be referred to the Dean of Students for possible further disciplinary action. Personal Integrity is fundamental in health practice so you must commit now to absolute honesty in this class.

**Accommodations:**

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students (DSS). If you think you may have a disability adversely affecting your academic performance, and you have not already registered with DSS, please contact DSS in Lommasson 154. I will work with you and DSS to provide an appropriate accommodation.

**Finally, a word about cell phones.** These devices have become an essential part of student lives, but they are a serious distraction in class. Please turn off all cell phones in class and refrain from receiving and making calls in the class room. If you have special circumstances that require monitoring calls, you must clear them with me and ensure that your phone is on silent mode during class.

## Course Schedule, BIOH 201/202, Spring 2016

DATE	TOPIC	ASSIGNMENT
<b>WEEK 1</b>		
<b>JANUARY 25</b>	Introduction; Attributes of living Organisms <b>Self-Study:</b> Basic chemistry—matter, energy, atoms, molecules	Chapter 1 See Study guide in MyLabs
<b>26</b>	<b>Lab 1: Navigating the Organism</b>	
<b>27</b>	Cellular Anatomy and Physiology:	Ch 2:62-66, 81-96
<b>28</b>	<b>Lab 1: Navigating the Organism</b>	
<b>29</b>	<b>Chemistry tutorial (optional; 2 hours)</b>	
<b>WEEK 2</b>		
<b>FEBRUARY 1</b>	Cellular Anatomy and Physiology:	Ch 2:62-66, 81-96
<b>2</b>	<b>Lab 2: Cells and Tissues</b>	
<b>3</b>	Cellular membranes	Ch 3:63-81 / Review 81-95
<b>4</b>	<b>Lab 2: Cells and Tissues</b>	
<b>5</b>	<b>Chemistry tutorial (optional; 2 hours)</b>	
<b>WEEK 3</b>		
<b>8</b>	Cellular Physiology:	Ch 2:67-79, 96-110
<b>9</b>	<b>Lab 3: Integument</b>	
<b>10</b>	<b>LECTURE EXAM 1: science, chemistry, cellular physiology</b>	
<b>11</b>	<b>Lab 3: Integument</b>	
<b>12</b>		
<b>WEEK 4</b>		
<b>FEBRUARY 15</b>	<b>PRESIDENTS DAY HOLIDAY</b>	
<b>16</b>	<b>Lab 4: Intro to Bones; Upper Limb</b>	
<b>17</b>	Cell life and death/Organizing cells into tissues	CH 2:110-111; 66-67; Ch 4:144
<b>18</b>	<b>Lab 4: Intro to Bones; Upper Limb</b>	
<b>19</b>	<b>LAB EXAM 1: Language of Anatomy to Integument (LAB 1-3)</b>	

<b>WEEK 5</b>			
	22	Integument: anatomy of skin	Ch 5:148-160
	23	<b>Lab 5: Lower Limb; Joints</b>	
	24	Integument: skin functions and physiology	Ch 5:160-165; Ch 3:95-109
	25	<b>Lab 5: Lower Limb; Joints</b>	
	26		
<b>WEEK 6</b>			
	29	Skeletal system: bone and cartilage tissues	Ch 6:172-176 Ch 4:124-133
<b>MARCH</b>	1	<b>Lab 6: Skull</b>	
	2	Skeletal system: growth and development	Ch 6:176-189 Ch 7:242-247
	3	<b>Lab 6: Skull</b>	
	4		
<b>WEEK 7</b>			
	7	Skeletal system: homeostasis, disease	Ch 6:185-191
	8	<b>Lab 7: Spine; Movement</b>	
	9	<b>LECTURE EXAM 2: cellular membranes – skeletal system</b>	
	10	<b>Lab 7: Spine; Movement</b>	
	11		
<b>WEEK 8</b>			
	14	Muscular system: physiology	Ch 9:284-293
	15	<b>Lab 8: Intro to muscles; Muscles of Upper Limb</b>	
	16	Muscular system: skeletal muscle anatomy, development	Ch 9:275-284, 311-316
	17	<b>Lab 8: Intro to muscles; Muscles of Upper Limb</b>	
	18	<b>LAB EXAM 2: Intro to Bones to Skull (LAB 4-7)</b>	
<b>WEEK 9</b>			
	21	Muscular system: graded response, metabolism	Ch 9:293-305 Ch 13:515-516
	22	<b>Lab 9: Muscles of Upper Limb 2</b>	
	23	Muscular system: exercise, smooth muscle	Ch 9:293-311
	24	<b>Lab 9: Muscles of Upper Limb 2</b>	
	25		
<b>WEEK 10</b>			
	28	Nervous system: organization, physiology	Ch 11:386-395
	29	<b>Lab 10: Muscles of Lower Limb</b>	
	30	Nervous system: resting, action, graded potentials	Ch 11:395-314
	31	<b>Lab 10: Muscles of Lower Limb</b>	
	<b>APRIL 1</b>		
	<b>APRIL 4 – APRIL 8</b>	<b>SPRING BREAK</b>	
<b>WEEK 11</b>			
	<b>APRIL 11</b>	Central nervous system: brain	Ch 12:441-451
	12	<b>Lab 11: Axial &amp; facial muscles</b>	
	13	<b>LECTURE EXAM 3: Muscular system – nerve physiology</b>	
	14	<b>Lab 11: Axial &amp; facial muscles</b>	

	15	<b>LAB EXAM 3: Intro to Muscles to Lower Body (LAB 8-11)</b>	
<b>WEEK 12</b>			
	18	Central nervous system: brain higher functions	451-460
	19	<b>Lab 12: Brain</b>	
	20	Central nervous system: protection	Ch 12:460-466
	21	<b>Lab 12: Brain</b>	
	22		
<b>WEEK 13</b>			
	25	Central nervous system: brain higher functions	451-460
<b>MAY</b>	26	<b>Lab 13: Spinal Cord</b>	
	27	Central nervous system: spinal cord	Ch 12:466-479
	28	<b>Lab 13: Spinal Cord</b>	
	29		
<b>WEEK 14</b>			
	<b>MAY 2</b>	Peripheral Nervous System (PNS)	Ch 13:485-493, 512-520
	3	<b>Lab 14: Peripheral Nervous System</b>	
	4	Autonomic Nervous system	
	5	<b>Lab 14: Peripheral Nervous System</b>	
	6	<b>LAB EXAM 4: Brain to PNS (LABS 12-14)</b>	
<b>FINAL EXAMS</b>			
		<b>PLEASE NOTE THAT YOU MUST ATTEND THE FINAL FOR THE SECTION IN WHICH YOU ARE ENROLLED.</b>	
	9		
	10	Tuesday: 10:10—12:10; Sec. 00	
	11		
	12	Thursday: 10:10—12:10; Sec. 10	
	13		