

# **Anatomy & Physiology I – Biology 237 – Spring 2016**

**Tuesday/Thursday 9:00-10:15**

January 6, 2016

As I sit here and watch the snow fall, and fall, and fall, I have written this introduction several times and have not got it right. I write and delete and write and delete. I finally realized that that is exactly what I want you to know. I am trying my best because I want to be the right motivator for each and every one of you. Because when it is late at night and you're tired, your head hurts, you have not eaten, and you do not know where you are going to get the energy to study, I want you to know that someone is in your corner pulling for you. I want you to succeed for you. This class is not going to be easy. There will be tumultuous waters along our journey, but together we can navigate through it all.

You are taking this course because you have taken an interest in a health-care field. Our topics will take us very microscopic and cellular. Many times you will question "why do I need to know this?" and here it is, your patient is not a textbook, your patient is someone's mother....someone's child.... someone's friend....or simply someone in need. You hold another person's world in your hands and in that moment you will want to know every miniscule detail about their medical needs to help. Good luck this semester.

Sincerely, Dr. Sanchez

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**Instructor:** Dr. Melanie Sanchez-Dinwiddie, Dr. Sanchez, Dr. Sanchez-Dinwiddie, Dr. Mel

**Contact Information:** email- [MELASANC@UNM.EDU](mailto:MELASANC@UNM.EDU), office- A132, phone- 925-8875

**Office Hours:** I am here for you to succeed. If you need to see me please stop by anytime or schedule an appointment. I will be in my office during the following scheduled times: Monday, Tuesday, or Thursday 1:15-2:30.

**Course Time & Place:** Tuesday & Thursday, 9:00-10:15am. Health Sciences Building, H101.

**Course Description:** An integrated study of human structure and function to include histology, skeletal, muscular, and nervous systems. Lecture: 3 hours. Prerequisites: BIOL 123/124L or BIOL201L and CHEM 111L or CHEM 121.

**Student Learning Objectives:** At the completion of this course you will be able to:

- ❖ Define and use proper anatomical and physiological terminology.
- ❖ Analyze anatomical structure to apply physiologic function. Thus understanding the *unity of form and function*.
- ❖ Apply the concepts of general chemistry and biochemistry to the structure and function of the human body.
- ❖ Relate cellular structure and function to the organ systems of the human body and associate the loss of cellular homeostasis to disease states.
- ❖ Identify histology and predict its function in an organ.
- ❖ Explain and illustrate anatomy and physiology macroscopically and microscopically of the following organ systems or body structures:
  - ◆ Integumentary System
  - ◆ Skeletal System
  - ◆ Muscular System
  - ◆ Nervous System
  - ◆ Sense Organs
- ❖ Use the knowledge you acquire to interpret case studies.

**Required Learning Resources:**

Textbook—You will need access to McGraw-Hill’s ‘Connect.’ There are access codes available in the UNM-Valencia bookstore. With access you will be able to upgrade to a print copy if you wish. These access codes are valid for 2 semesters. Saladin, Kenneth S. *Anatomy & Physiology: The Unity of Form and Function*. McGraw-Hill, 2015.

(Many of you have prior A & P experience, thus have already purchased: Marieb and Hoehn. *Custom Edition for UNM Valencia Anatomy & Physiology 5/e*. Pearson, 2014. This textbook will suffice for this course.)

UNM Learn [learn.unm.edu](http://learn.unm.edu): All course materials will be distributed through Blackboard Learn. You will need reliable and frequent internet access for this course. If you do not have this at home you will have to go somewhere that does. Lack of internet will not be allowed as an excuse for missed assignments.

**Course Policies:**

- **Attendance.** I do not recognize an excused absence versus an unexcused absence. You are either here or not, even if it is a valid excuse. If you have to miss class you are responsible for acquiring the information covered in class. Please refer to your syllabus or contact fellow students for the information you missed. I will be recording attendance at the beginning of class into LoboAchieve. If you arrive after I have recorded attendance you are marked absent.
- **Withdrawal.** If a student drops the course after the deadline to drop without a grade, Friday, February 5<sup>th</sup>, a grade of W may be given. It will be at my discretion whether a W will be granted. This means by withdrawing you may earn a grade of F or cannot withdraw. Students cannot automatically withdraw after Friday, April 15<sup>th</sup>.
- **University Policy.** You are responsible for knowing all university policies that are in the student catalog. This includes policy on cheating, plagiarism, and grade options. You are responsible for maintaining your scholarship or funding for your education.
- **Students with disabilities.** Qualified students (having appropriate documentation) with disabilities needing academic adjustments should contact the instructor by the end of the 1<sup>st</sup> week of the semester to ensure that your needs are met in a timely manner.

- **Cell phones.** I do not want to see one. Students have failed my courses because of excessive use of a cell phone.
- **Email Netiquette.** In this day and age it is easy to be lax with your email language, grammar, and punctuation. This course is a formal and professional setting and so you should conduct yourself in that manner at all times. When writing an email avoid text and twitter shorthand. For example, never use ‘u’ always write out ‘you.’ Always use an appropriate subject heading; do not leave this blank. Use an appropriate salutation and closing. Some examples are “Dear Dr. Sanchez,” “Good Morning Dr. Mel,” or “Hello Dr. Sanchez-Dinwiddie,” and “Thank you for your time,” “Sincerely,” or “Have a nice day.” When you enter your career of choice appropriate titles are appreciated. Finally proofread and spell check. Having good email netiquette will benefit you as you continue your professional career.
- **Family Educational Rights and Privacy Act (FERPA).** The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) is a Federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's education records. These rights transfer to the student when he or she reaches the age of 18 or attends a school beyond the high school level. FERPA does not allow disclosure of grades over email as it is not possible to authenticate identity through this medium.
- **Study Resources.** The STEM and Learning Center have tutors and resources available to you free of charge. In addition we have a supplemental instructor (SI) assigned to us. Anna Herrera [HERRERAA@UNM.EDU](mailto:HERRERAA@UNM.EDU) is our SI who will be a tremendous resource for you.

**Grading Policy:** The course grade will be determined as follows:

Attendance/Participation	5%	The lowest score of the 4 exams will be dropped. Students with an A- or higher prior to the final exam will not be required to take the exam (these students are required to take all 4 exams and receive 70% or higher). There are no make-up exams.
Web Learning (*Connect/Mastering)	15%	
Case Study Activity (PBL)	15%	
Exam 1-4	45%	
Final Exam	20%	

Grades will be assigned based on the student’s percentage as follows:

100 or higher – A+	87-89.99 – B+	77-79.99 – C+	60-69.99 – D
94-99.99 – A	83-86.99 – B	73-76.99 – C	below 60 – F
90-93.99 – A-	80-82.99 – B-	70-72.99 – C-	

\*If you are using Connect you have LearnSmart assignments due every class except exam and case study days. If you are using Mastering you have Dynamic Study Modules due every class except exam and case study days. Everybody has homework due March 17<sup>th</sup> and May 9<sup>th</sup>.

### ***Bloom’s Taxonomy:***

Dr. Benjamin Bloom was a psychologist who worked on theories of education and learning. He was one of the first to publish a system for the classification of learning objectives. Since that publication (1956) that classification has been modified and improved. The aim of using “Bloom’s Taxonomy” in this course is to achieve a higher level of learning and thought process. As an instructor I will construct the course with Bloom’s Taxonomy in mind. I have provided Bloom’s Taxonomy here. You do not need to memorize this list however, an understanding of the following list will benefit you.

**Cognitive Process****What the Learner Does****Action Verbs for Cognitive Process****Examples**

Recalls or recognizes information: facts, definitions, generalizations.

List, describe (from memory), name, label, repeat, recall, identify, state, select, match, know, locate, recognize, observe, choose, who, what, where, when, cite, define, indicate, memorize, outline, record, relate, reproduce, sort

-List the four biological molecules.  
-Identify the muscles of the forearm.

**Remember**

Constructs meaning by interpretation, classification, comparing, explaining, summarizing.

Arrange, associate, clarify, compare, convert, demonstrate, diagram, discuss, estimate, explain, extend, generalize, illustrate, organize, outline, paraphrase, restate, review, relate, sketch, summarize, translate, transform, similarities and differences, give examples

-Illustrate the four biological molecules.  
-Explain the function of cellular respiration.

**Understand**

Use methods, concepts, principles and theories in new situations; solve realistic problems that require the identification of issues and use of appropriate generalizations and skills.

Apply, calculate, change, collect, compute, construct, demonstrate, develop, employ, graph, illustrate, interpret, investigate, manipulate, modify, operate, practice, predict, prepare, produce, schedule, sketch, solve, use

-Produce a chart of the presence of the four biological molecules in a food sample.  
-Predict the action of a forearm muscle.

**Apply**

Identifies how parts relate to one another or to a larger structure or purpose; considers available evidence to reach a conclusion, inference or generalization.

Analyze, appraise, break down, criticize, debate, deduce, detect, deconstruct, determine evidence and conclusions, discriminate, dissect, distinguish, examine, experiment, focus, find coherence, interpret, investigate, infer, inspect, inventory, map, question, relate, research, select, separate, structure, survey, test

-Interpret the results of an experiment to identify the four biological molecules.  
-Relate the structure of a protein to its function.

**Analyze**

Judges the value of something by setting up criteria, processes, or standards and then determining how closely the idea or object meets the standards.

Coordinate, judge, select/choose, decide, debate, evaluate, justify, recommend, verify, monitor, the best way, what worked, what could have been different, what is your opinion, appraise, assess, conclude, criticize, discriminate, estimate, grade, prioritize/rank, rate, revise, score, support, value

-Evaluate why bone is composed of mostly minerals and not biological molecules.  
-Support your answer.

**Evaluate**

Brings together parts to form a new whole or solve a problem that requires new creative thinking (at least new to the learner).

Create, hypothesize, design, construct, invent, imagine, discover, develop, induce, bring together, compose, pretend, predict, organize, plan, modify, improve, suppose, produce, set up, propose, formulate, solve (more than one answer), arrange, assemble, combine, devise, generate, manage, perform, prepare, dramatize, paint, compose, rearrange, reconstruct, relate, reorganize, revise, argue for, speculate

-Design an experiment to investigate the presence of biological molecules in a food sample.  
-Construct an argument for the necessity of phospholipids in a cell membrane.

**Create**

<b>Week</b>	<b>Date</b>	<b>Class Agenda</b>
1	Tues 1/19	Introduction to Course
	Thur 1/21	Terminology & Directional Terms
2	Tues 1/26	Chemistry
	Thur 1/28	Cells
3	Tues 2/2	Cells
	Thur 2/4	Histology
4	Tues 2/9	Histology
	Thur 2/11	<b>Exam #1</b>
5	Tues 2/16	Integumentary
	Thur 2/18	Bone Tissue
6	Tues 2/23	Skeletal System
	Thur 2/25	Skeletal System
7	Tues 3/1	Case Study #1
	Thur 3/3	Case Study #1
8	Tues 3/8	Joints
	Thur 3/10	<b>Exam #2</b>
10	Tues 3/22	Muscle
	Thur 3/24	Muscle
11	Tues 3/29	Muscle
	Thur 3/31	Nervous Tissue
12	Tues 4/5	Nervous System
	Thur 4/7	Nervous System
13	Tues 4/12	Case Study #2
	Thur 4/14	Case Study #2
14	Tues 4/19	<b>Exam #3</b>
	Thur 4/21	Nervous System
15	Tues 4/26	Nervous System
	Thur 4/28	Sense Organs
16	Tues 5/3	Sense Organs
	Thur 5/5	<b>Exam #4</b>
	Tues 5/10	<b>Final Exam 9-11am</b>