Welcome to Human Anatomy!

Except for those destined for medical or dental school, it is assumed that students in this course will not enroll in additional anatomy courses. Thus, it is necessary for this course to provide students with a sufficiently complete discourse on anatomical sciences to prepare them for a variety of career trajectories in the allied health professions. Even though the course is open to all majors, it is intended primarily to prepare nursing students for the board (NCLEX) exam they must pass to become certified. This exam sets the standard for the level of difficulty of this course. There is no part of the NCLEX exam that specifically tests your knowledge of anatomy, but anatomical proficiency is requisite for correct responses to its highly practical, situation-oriented questions. Ultimately, this proficiency will be expected equally by your patients and the physicians you assist, regardless of the particular health professions career you choose.

Fluency in anatomy, like any language, does not come in the course of a semester. Instead, it comes with continued use. By the end of the semester, successful students will acquire a level of professionalism and be able to correctly answer highly technical questions involving all organ systems. Much of this may seem to quickly slip from memory, but it will remain sufficiently familiar to be quickly recalled as it is needed. It will form the basis for the fluency you will develop with practice as a medical professional.
Intentionally Blank
Professor:

Peter Houde, Ph.D. Anatomy, Howard University College of Medicine
Office: Foster Hall Rm 259
Telephone: 646-6019
phoude@nmsu.edu
Office Hours: Friday 4:00-5:00 PM or by appointment

Class Web Site:

http://biology-web.nmsu.edu/~houde/biol353.html - check frequently for:
  announcements of changes in schedule and exams
  copies of exams from previous years
  copies of all handouts distributed in class

Prerequisites:

A minimum grade of "C" in Biol 211G
either Chem 111 or Chem 110G

Required Materials:

Any of a large number of text books in human anatomy will serve adequately for this class. The one adopted for the class is a good one for the cost, and it is available from the University Bookstore but you may be able to obtain it online for considerably lesser cost - especially if you purchase only the text book without bundled materials. You may elect to substitute other references for reasons of preference, availability, or price; but if you do, then it is incumbent on you to determine and keep pace with equivalent reading assignments.

Adopted Text:

"Human Anatomy, by E. N. Marieb, P.B. Wilhelm, and J. Mallat. 8th Ed. (Earlier editions differ, but are adequate.) Pearson (ISBN-13: 9780134243818; ISBN-10: 0134243811). You need only the text book, not all the bundled materials – particularly if you obtain the digital “app” below. The atlas accompanying the text may be useful, but avoid purchasing MasteringA&P, MYA&P, and PAL 3.0 which may be bundled with the text. Some students find the Anatomy Coloring Book helpful.

Adopted Digital “app”:

It is strongly recommended that you purchase the Essential Anatomy 5 “app” (or an equivalent version) by 3D4medical.com. These will run on a variety of digital tablets, smart phones, and laptops. This is superior to the Atlas and DVD that may be bundled with the text, and it is much less expensive.

Other Recommended and Optional Materials:

Multicolored pens or pencils are highly recommended. Photography and tape recording of lectures is always permitted – you don’t have to ask.
Other Electronic Resources:
There are a variety of free or proprietary interactive anatomy “apps” made primarily for tablets in addition to the above. They vary considerably in quality and flexibility. Try biodigital.com for a free but lesser muscle module.

Internet access to MasteringA&P, MYA&P, and PAL 3.0 may be bundled with new copies of the course textbook, but these are not recommended for this course.

The internet also offers a variety of valuable free resources, including Gray’s Anatomy 20th (the best!) and 40th editions. Please see the course web page for links. However, beware that the internet is not reliably authoritative, especially sites not listed on this course’s web page.

Exams and Grading – Lecture Course only

Lecture exams are scheduled for Monday nights 7:00-8:30 PM. There will be four midterm written exams and one comprehensive final written exam covering lecture material. The format of written exams is multiple choice. Each midterm exam generally concentrates on new material since the previous exam. However, exam 2 covers the entire skeletal system, and exam 3 integrates many details of the skeletal system as they relate to movements and origins and insertions of muscles. The final exam is comprehensive. Samples of previous year’s exams are available online at the course website.

Grades will be calculated as follows:

- First Written Exam: 12.5%
- Second Written Exam: 12.5%
- Third Written Exam: 12.5%
- Fourth Written Exam: 12.5%
- Final Written Exam: 50%

Numerical averages will minimally be assigned letter grades as follows:

- "A" 90.0-100%
- "B" 80.0-89.9%
- "C" 70.0-79.9% (minimal passing score for S/U option)
- "D" 65.0-69.9%
- "F" 64.9% and below

"-" will be used to denote a letter grade that is achieved by curving of the numerical average, IF curving is employed

Absolutely no make up exams will be given. A single midterm exam may be missed with a written physician's excuse at the instructor's discretion. A midterm exam may be rescheduled to an earlier date or time if a student is absent on university business and notifies the instructor at least two weeks in advance. The final exam cannot be missed under any circumstances.
Withdrawal

Every semester, a few students stop attending classes and/or labs and stop taking exams but never withdraw from class. If you choose to withdraw from this class then you must do so yourself. Failure to take exams can result in nothing but a failing grade. The last day to withdraw with a “W” is Monday, October 17th.

Students with Disabilities

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) covers issues relating to disability and accommodations. If a student has questions or needs an accommodation in the classroom (all medical information is treated confidentially), contact:
Trudy Luken
Student Accessibility Services (SAS) - Corbett Center, Rm. 244
Phone: 646 6840 E-mail: sas@nmsu.edu Website: http://sas.nmsu.edu/

Discrimination

NMSU policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status. Furthermore, Title IX prohibits sex discrimination to include sexual misconduct, sexual violence, sexual harassment and retaliation. For more information on discrimination issues, Title IX or NMSU's complaint process contact:
Gerard Nevarez, Title IX Coordinator, or Agustin Diaz, Title IX Deputy Coordinator
Office of Institutional Equity (OIE) - O'Loughlin House, 1130 University Avenue
Phone: 646.3635 E-mail: equity@nmsu.edu Website: http://www.nmsu.edu/~eeo/

Other NMSU Resources

NMSU Police Department: (575) 646-3311 www.nmsupolice.com
NMSU Police Victim Services: (575) 646-3424
NMSU Counseling Center: (575) 646-2731
NMSU Dean of Students: (575) 646-1722
For Any On-campus Emergencies: 911

Academic Dishonesty

Academic dishonesty or malicious damage of laboratory materials will be punishable by a final letter grade of "F". If you are in doubt of your responsibilities, then please consult the Academic Misconduct section of the Student Code of Conduct in the current Student Handbook, on-line at
http://deanofstudents.nmsu.edu/student-handbook/1-student-code-of-conduct/3-academic-misconduct.html

Classroom Etiquette

Please be respectful of your classmates and instructor. If you must arrive late or leave early, then please sit quietly near the door. Cell phones, radios, and audible pagers must be disabled in the lecture room and during exams. Text-storing electronic devices (including calculators) such as laptop computers may be used during class but not during exams. Any behavior that is disruptive or distracting to other
students is not allowed. A student may be barred from attending class for repeated disruptive behavior (including ringing of cell phones). The instructor reserves the right to assign seating to any individual during lectures, laboratories, and exams.

Communication with the Instructor
The most reliable way to contact the instructor is via e-mail. NMSU now requires that all e-mail correspondence between instructors and students is conducted using your assigned nmsu.edu address. Nevertheless, you can configure this account to forward e-mail to another address.

Disclaimer

The instructor reserves the right to modify any part of this syllabus during the semester as considered necessary to achieve course objectives. Any necessary changes to the syllabus (or to the course schedule) will be announced in class and you are responsible for being aware of them.
Lecture Schedule 2:30-3:35 M W F Foster Hall Room 231 (section M01, CRN 51704)

Please note: The instructor reserves the right to modify this syllabus during the semester at his discretion to enhance the quality of instruction. Announcements of changes will be made in class.

dates topic reading assignment
8/17 Overview of Course and Syllabus
8/19, 8/22 Anatomical Relationships, Anatomical Regions Chpt 1
8/24 Histology Chpt 4
8/26, 8/29, 8/31, 9/2 Skeleton Chpts 6, 7
9/5 Labor Day Holiday
9/7, 9/9 Skeleton Chpts 6, 7
9/12 MONDAY 7:00-8:30 PM FIRST WRITTEN EXAM covers all material up to and including skull
9/14 Skeleton Chpt 8
9/16 Joints Chpt 9
9/19, 9/21 Joints Chpt 9
9/23 Skeletonomuscular System Chpts 10, 11
9/26, 9/28, 9/30 Skeletonomuscular System Chpt 11
10/3 MONDAY 7:00-8:30 PM SECOND WRITTEN EXAM covers all of skeleton (cumulative) and joints only
10/3, 10/5, 10/7 Skeletonomuscular System Chpts 11
10/10 Body Cavities, Digestive System Chpt 23
10/12, 10/14 Digestive System Chpt 23
10/17 MONDAY last day to drop class with a "W"
10/17 Digestive System Chpt 23
10/19, 10/21 Respiratory System Chpt 22
10/24 MONDAY 7:00-8:30 PM THIRD WRITTEN EXAM covers skeletonomuscular system
10/24, 10/26, 10/28 Blood, Heart Chpt 18, 19
10/31, 11/2, 11/4 Cardiovascular Vessels Chpts 20
11/7 Lymphatic System Chpts 21
11/9, 11/11 Urinary System Chpt 24
11/14, 11/16 Reproductive Systems Chpts 25
11/18 Endocrine System Chpt 17
11/21-11/25 ~THANKSGIVING HOLIDAY~
11/28 MONDAY 7:00-8:30 PM FOURTH WRITTEN EXAM covers digestive, respiratory, and circulatory systems
11/28 Nervous tissue, Central Nervous System Chpts 12, 13, 16
(Eye & Ear read only)
11/30 Autonomic Nervous System Chpts 14, 15
Peripheral Nervous System
12/2 Integumentary System Chpts 5
12/7 WEDNESDAY 1:00– 3:00 PM COMPREHENSIVE FINAL EXAM
Supplemental Syllabus Material for Laboratory Students Only

Laboratory Instructors:

Sherri Buerdsell  email sherri@nmsu.edu
Nina Dropcho email ndropcho@nmsu.edu
Office Hours: to be announced
Telephone: 646 3611

Co-requisite Course:

Human Anatomy Laboratory must be taken concurrently with Human Anatomy Lecture (Biol 353 section M01). All policies stated above in the Biol 353 syllabus apply equally to Biol 353L.

Required Materials:


Dissecting Tools: Students are required to provide their own tools to perform dissections. Nevertheless, not everyone needs to possess their own set of tools, since dissections are performed by pairs of students.

Recommended Materials:

Lab Notebook: Any hard copy or electronic notebook suitable for taking notes and making drawings or taking photos. These will be invaluable in preparation for practical exams since laboratory materials cannot be accessed outside of class times.

Protective Clothing: You may wish to purchase a lab coat. Laboratory gloves will be provided.

Exams and Grading:

There will be two midterm practical exams that are not over-lapping in scope and one comprehensive final practical exam. The format of practical exams is short answer.

In addition, there will be unannounced quizzes most weeks. The quizzes will cover new material assigned for the day to ensure that students read assignments before coming to lab. Quizzes will also cover material from previous labs. Approximately 10 quizzes or assignments will be administered. Students who leave lab early without completing assignments will be penalized by forfeiture of the week's quiz. In other words, your attendance for the entirety of the lab period will figure in the calculation of your grade.

Separate numerical grades will be calculated for the lecture and laboratory portions of the course, as follows:

Grades will be calculated as follows:

- First Midterm Practical Exam 20%
- Second Midterm Practical Exam 20%
- Quizzes (combined) 20%
- Final Practical Exam 40%

Numerical averages will minimally be assigned letter grades as follows:

- "A" 90.0-100%
- "B" 80.0-89.9%
- "C" 70.0-79.9% (minimal passing score for S/U option)
- "D" 65.0-69.9%
- "F" 64.9% and below

"." will be used to denote a higher letter grade that is achieved by curving IF grades are curved
Absolutely no make up practical exams will be given. By virtue of their nature, practical exams cannot be rescheduled or made up. A single midterm practical exam may be missed with a written physician's excuse at the instructor's discretion. The final practical cannot be missed under any circumstances. Excuse from quizzes is at the discretion of the Teaching Assistants. Unexcused absences from practical exams and quizzes are scored as zero.

Pregnancy

Exposure to formaldehyde in the laboratory may be hazardous to developing fetuses. If you are, think you might be, or become pregnant, then you are invited to either take this class during another semester or to make alternate arrangements with the professor to satisfy the laboratory part of this class.

Indemnity

Students are financially responsible for damage to laboratory apparati, models, and specimens (not including cat dissections).

Laboratory Etiquette: These rules may be enforced by forfeiture of lab quiz grades.

1. Eating, drinking, and smoking are prohibited in the lab.

2. Proper attire must be worn to protect your body from preservatives during dissections. Shoes should enclose the feet; sandals are inappropriate. Legs should be protected by full length pants or skirt. Long hair should be tied back out of the way. It is inadvisable to wear contact lenses. Laboratory gloves will be provided. Pregnant women may wish to wear respiratory protection, take this class during another semester, or make alternate arrangements with the professor to fulfill the laboratory part of this class.

3. Report all accidents, regardless of how trivial, to the Instructor immediately. Towels or tissues soiled by human blood are not to be disposed of in the normal trash, and should instead be treated as hazardous waste.

4. Sharp objects such as scalpel blades, needles, and broken glass must be disposed of in special waste receptacles for "sharps".

5. Preserved animal parts from dissections must be disposed of as hazardous waste.

6. Students are expected to come to each lab prepared and must have already read the assigned exercises in the lab manual covering that day's work. This includes the first lab.

7. It is strongly recommended that you prepare labeled drawings of anatomical models and your dissections, as these will be an invaluable study guide while you are unable to be in the lab.

8. Students are financially responsible for damage to microscopes, slides, and models.

9. Your work space and dissecting pan must be cleaned up after each lab.

10. Students may not attend lab sections other than that for which they are scheduled without permission from Teaching Assistants of both sections.

11. Specimens or their parts and models, may not be removed from the lab at any time.

12. Students will not be granted access to the laboratory at any time other than that scheduled or in the absence of an instructor.

13. When dissecting muscles, be careful not to damage arteries, veins, and nerves that you will need to study in later weeks.

14. No guests, family, children, or pets are allowed in the laboratory.
Laboratory Schedule

*Please note:* The instructor reserves the right to modify this syllabus during the semester at his discretion to enhance the quality of instruction. Announcements of changes will be made in class.

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Big Tips for Success

This may be one of the toughest classes you will ever take at NMSU merely because of the sheer volume of material you must memorize. How you study is as important as the amount of time you spend studying. Although all forms of study are potentially beneficial, those that are interactive rather than passive are the most efficient and effective. Here are some strategies to help you cope successfully with this burden and achieve your goals.

1) How well you perform in any given class in any given semester can be strongly influenced by what else is going on in your life at the time. It is inadvisable to take this course while you are overwhelmed with other commitments or excessively distracted by non-academic events.

2) Hit the ground running. The pace is too fast to catch up. Fluency with the material presented in the first few lectures will be absolutely essential for everything that follows.

3) Attend every class. Lecture is your best indication of what will appear on exams. In class you may be presented with material not covered in the textbook. Anything in the textbook that is not covered in class will not appear on exams. Sit where you will be maximally engaged and least likely to be distracted by others. Don’t sit with friends who are likely to talk to you; lecture is not a social event. Those who sit front and center perform best on average.

4) While everything presented in lecture is fair game on exams, you may not be able to master it all. It is better to prioritize what you study and to learn the important things well than to overwhelm yourself with details that you do not learn well. How will you know what to prioritize? Come to lecture. The most important things to prioritize are general concepts that apply to all organ systems (e.g., anatomical directions such as anterior/posterior), large structures, and functionally or clinically important structures. Leave the minutia for last if you still have brain cells to spare. Fear not, you can still score an "A" in this course without learning everything because you can skip some questions on exams.

5) Read assignments before class to introduce and familiarize yourself, but don’t concern yourself with memorizing them in advance. Rely on lecture to clarify and reinforce your readings, not to introduce you to the material or to substitute readings. You cannot pay adequate attention if you are preoccupied with taking notes on completely novel material. On the other hand, don’t expend unnecessary time and effort studying the textbook in great detail before lecture, since the textbook includes at least some superfluous information.

6) Break up material into manageably small groups, memorize the number of units per group and the first initials of each unit. For example, break up a group of 12 muscles into functional groups of 3 or 4 each. Learn the commonalities that apply broadly to each group rather than memorizing the details of each individually.

7) Learn the Latin meaning of anatomical structures; they make good sense and usually describe anatomical structures very well.

Continued on next page
Big Tips, continued

8) Drawing and re-writing notes from memory are effective tools for learning. You can easily check what you missed or misunderstood by comparing the original to what you reproduce. Remember, you don't need to be an artist to satisfy your own studying needs as long as it makes sense to you.

9) Pace your studying. It is not possible to pass this class by cramming for exams. Review the day's lecture the same night. Establish a regular schedule of reviewing previous material.

10) Copy your notes and drawings first from sight, then from memory. It is important to reproduce from them memory as opposed to looking at the answer, because trying to recollect is an important part of memorizing/learning. Increase the interval of time between doing this repeatedly without referring back to your original, from immediately afterwards, to 10 minutes afterwards, to 1 hour afterwards, to the next day.

11) Consult the practice exams that are posted on the course website within the first two weeks of classes to get a sense of the level of expectation. Complete each practice exam 1-2 weeks before each scheduled exam so you have time to see if you answered questions correctly and have sufficient time to ask questions.

12) Teaching is one of the most effective ways to learn. Form study groups, but don't be a passive member. Each person should take turns explaining things to the others. You will not learn as much by having things explained to you as you will by explaining them to others.

13) Go straight to sleep after studying. This will help your brain to put facts into memory. Be sure to get a full night's sleep before exams.

14) The companion laboratory class is intended to facilitate learning of the lecture material through well-proven methods of “hands-on” discovery, visualization, and practice. If you are enrolled in the lab, then get the most from it by being an active participant in dissections. Those who actually perform dissections almost always score highest on practical exams. Laboratory course grades, in turn, are highly correlated with lecture course grades.