

Anatomy & Physiology 34A Lecture & Lab Course Overview - Fall 2009

Mission Statement: El Camino College offers quality, comprehensive educational programs and services to ensure the educational success of students from our diverse community.

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Ticket #: 1028
Room: LS 113, T & NATS 123, Th
Times: Lec.- T, Th 2:00-3:01 p.m.
Lab – T, Th 3:05-6:15 p.m.

Welcome to the Anatomy and Physiology I lecture and lab! We have an exciting semester planned for you. This is the first semester of the two-semester Anatomy and Physiology lecture and lab course. It is an in-depth course examining major organ systems, their morphology and functions, as well as some of their common pathologies. Topics include an introduction to the human body, chemical and biochemical principles, cell morphology and function, cell division, genetics and histology. In the first semester, the students study the integumentary, skeletal, and muscular systems, as well as the first half of the nervous system. Laboratory investigations include models of the human body and dissection of higher vertebrates, in addition to physiological experiments. The course is designed for science, health-related, pre-nursing (Bachelor of Science in Nursing), and pre-professional majors. Prerequisites for this class are Chemistry 4, Chemistry 20, or Chemistry 21A, or equivalent or concurrent enrollment. I will do my best to make this class as interesting and understandable for you as possible. In return, I expect you to do your best to learn. Please don't hesitate to ask questions about anything you don't understand. I am here to help you to succeed.

Required Lecture & Lab Textbooks and Materials:

1. **Human Anatomy & Physiology**, 8th ed., 2010, by E. N. Marieb and K. Hoehn.
2. **Human Anatomy & Physiology Laboratory Manual**, 9th ed., 2008, by E. N. Marieb
3. BIOPAC Student Kit (needed for 34B)
4. Bound composition notebook with graph paper for lab data.
5. 16 blank scantrons (Form #882).
5. Surgical gloves and dissection kit for use during dissections.

Other Recommended Materials:

1. **The Anatomy Coloring Book**, 3rd ed., 2002, by Kapit and Elson
2. **A Photographic Atlas for the Anatomy & Physiology Lab**, 7th ed., 2007, by VanDeGraff, Morton, and Crawley.
3. Two 3" diameter metal rings and package of 3" x 5" cards for making flash cards. I will occasionally give **extra credit** points for your 3" x 5" flash cards in the prescribed format.
4. Three ring notebook with pockets inside the front and back covers and paper for notes.
5. Lab coat or apron to protect clothes during dissections.

Course Objectives:

Upon successful completion of this course, the student should be able to:

1. Demonstrate mastery of the microscope and be able to identify the cellular structures and tissues for all the systems covered.

2. Demonstrate an understanding of the interaction of chemical and physiological processes in cells and the body systems examined.
3. Identify all major anatomical structures in cells and tissues, as well as the integumentary, skeletal, muscular, and nervous systems.
4. Demonstrate an understanding of physiological processes and how they interact with the morphologies of the above systems.
5. Describe clinical disorders related to the topics discussed, as well as current treatments.
6. Explain how the systems work together as a whole, and methods whereby the body maintains homeostasis.

Student Learning Outcomes: upon completion of this course, students should be able to:

1. Demonstrate proper microscope techniques to view and identify cells and tissues that compose body organs, and explain the characteristics of the cells and tissue types that make them suited to organ function.
2. Given an unlabeled bone x-ray, the student will identify the bone, the bone region injured, and the type of fracture. The student will be able to identify what muscle actions would be affected based on the analysis of the x-ray. The student should also be able to explain how a fracture heals.
3. Identify the vertebral level at which a needle could be safely inserted to do a spinal tap (lumbar puncture), and give the rationale for choosing that level. The student will also be able to name in proper order the tissues and spaces through which the needle must pass to arrive at the space from which the cerebrospinal fluid will be withdrawn for analysis.
4. Identify muscles that would be attached to the tendons on a knee joint model, and whether they are flexors or extensors. The student will also explain how movement occurs at the knee joint, including what actions flexor and extensor muscles have on a joint, and how this relates to the origin and insertion of the muscles. In describing the joint components, the student should be able to differentiate between the functions of the various connective tissues, such as articular cartilage, ligaments, and tendons surrounding a joint.
5. Identify the cranial nerve affected in an accident patient whose skull x-ray shows a fracture line passing through a part of the skull through which the cranial nerve passes, and who is exhibiting symptoms characteristic of damage to the particular cranial nerve.

Lecture Exams: A total of 5 lecture exams and 5 lab practical exams will be given during the semester. Lecture exam questions will be based on material from the lectures, textbook, handouts and presentations, with an emphasis on information from lectures. Lecture exams will consist primarily of multiple choice, matching, diagram labeling, and short answer questions. Make-up lecture exams are strongly discouraged and will be granted only at the discretion of the instructor. If granted, make-up exams will be graded with an automatic 10-point deduction and may consist entirely of essay questions.

Lab Practical Exams: Lab practical exams will be fill-ins and will include the identification of structures, as well as their functions. No make-up exams can be given for lab exams. If some emergency prevents you from taking an exam on the scheduled date, please let me know about your situation beforehand if possible, or call or email me on the day of the exam.

Quizzes: Quizzes will be given about once a week at the beginning of lab. No make-up quizzes will be given. Quiz questions will cover information from the preceding lectures, labs, handouts, presentations, and reading assignments. Quizzes will be primarily multiple-choice matching. We will discuss the answers to each quiz immediately after the quizzes are collected. So, if you arrive after the rest of the class has finished the quiz, you will not be permitted to take that quiz. If you arrive during the quiz, you will be able to take the quiz but you will have to turn it in at the same time as the rest of the class. The purpose of these quizzes is to encourage you to keep up with the material in the class. I really do want each of you to learn as much as you can and to earn the best grade possible.

Lab Manual Requirements: The Human Anatomy & Physiology Laboratory Manual contains exercises, such as diagram labeling, within each lab exercise and additional Review Sheets for the exercises after each exercise. Please show your completed lab exercises to me at the end of each lab and I will check them off. This will be included as part of your lab grade. I will only be spot-checking each manual. It is your responsibility to check your answers with your manual and textbook and compare answers with your lab partners to ensure that you have the correct answers. Naturally, you are also welcome to ask me questions about anything you don't understand.

Extra Credit: You will have an opportunity to earn up to **40** extra credit points for other work to be announced throughout the semester. These points may include an extra credit quiz, completed Anatomy Coloring Book pages, credit for 3" x 5" note cards in the format prescribed below, class participation, and other possibilities. One **10 point** extra credit quiz will be given at the end of the semester. I will also give **5** extra credit points to students who have attended and participated in **all** lectures and labs the entire semester.

Points Possible (does not include extra credit points): Lecture points are worth 50% and lab points are worth 50% of your grade in this class. The breakdown for lecture and lab points is as follows.

Lecture Points			Lab Points		
		My Score			My Score
Exam I:	100	_____	Practical Exam 1	100	_____
Exam II:	100	_____	Practical Exam 2:	100	_____
Exam III:	100	_____	Practical Exam 3:	100	_____
Exam IV	100	_____	Practical Exam 4:	100	_____
Final Exam V:	100	_____	Practical Exam 5:	100	_____
5 Quizzes @ 10 pts	<u>50</u>	_____	5 Quizzes @ 10 pts	<u>50</u>	_____
Totals	550	_____		550	_____

(Note that lab exam scores will include lab homework assignments.)

Grade Scale:

A	90 - 100%	990 - 1100 pts
B	80 - 89%	880 - 989 pts
C	66 - 79%	715 - 879 pts
D	55 - 65%	550 - 714 pts
F	<55%	< 549 pts

Academic Honesty: I encourage all of you to study in groups. We will be working in small groups during labs. Research has shown that most students learn more when they study in small groups. Quizzes and exams, however, are evaluations of how much you personally have learned. Anyone caught talking, looking at another student's paper, or doing anything that might be considered cheating during a quiz, exam, or other work will receive an automatic zero and may be expelled from the class and receive an "F" grade. The cheating incident will also be reported to the Dean for disciplinary action.

Attendance: Regular attendance is required by college regulations and is your only access to additional materials such as handouts, videos, etc. for which you are responsible. Students who attend classes every day usually achieve better grades than those who miss classes. If you miss three lectures or if you miss an exam, you may be dropped from the class. So if you must be absent for some unavoidable reason, please let me know. Also, if you want to add this class, be sure to register before Friday, September 11, 2009.

Withdrawals: If for some reason you must stop attending class, you must go to the Admissions Office and withdraw officially before the deadline on Friday, November 20, 2008. In addition, you must complete a laboratory drop card filed with the lab technician. Failure to do so will result in an "F" grade instead of a "W."

Free Tutoring: Excellent tutors are available free of charge in the Learning Resources Center Tutorial Program in the library. Visit or call (310) 660-3511 to make an appointment.

Disabilities: If you have a specific learning disability, please contact the Special Resource Center at (310) 660-3295 for documentation and let me know ASAP so that we can suitably accommodate your learning needs.

Study Tips for More Powerful Learning:

1. Read the assigned text and lab chapters before class if possible. It will help you to better understand the lecture and lab.
2. Learn the definitions of bold type terms in each chapter, as well as the prefixes, roots, and suffixes inside the back cover of the textbook.
3. Answer the questions at the end of each assigned chapter. Some of these questions will appear on your quizzes and/or exams.
4. Use the CD-ROM included with your textbook to help you review each chapter. It includes helpful tutorials, animations, diagrams, and activities.
5. Complete all exercises and Review Sheets for each lab in your Laboratory Manual. Some of these may appear on quizzes and exams too.
6. Attend every class and take complete lecture notes. It will also greatly help you to visualize anatomical structures and their functions if you refer to the figures in your textbook.
7. Review your notes as soon as possible after class. Students who are auditory learners find it helpful to record the lectures and listen to them again. Students who are kinesthetic learners find that rewriting their notes is helpful. Visual learners are aided by diagrams. To find out what kind of learner you are, go to the VARK website at: <http://www.vark-learn.com/>.
8. Answer the questions in the study guides that are provided for each unit. This will help you to review what we cover in class and aid your understanding of the concepts.

9. Complete the exercises in the Anatomy Coloring Book. I will assign some of the pages for extra credit to help you learn the information.
10. Study in small groups and attend open anatomy labs when they are offered to review.
11. Access my faculty website at: <http://www.elcamino.edu/faculty/msteinberg/> to download class materials, to view lab models, and for links to other A & P class web sites.
12. Use the textbook's website at: <http://www.myaandp.com>. It contains many tutorials, interactive activities, self-tests, etc. Use the code provided in your textbook to access the site.
13. If you have difficulty understanding something, ask me (I don't bite) or see a free tutor at the LRC on campus.
14. Make up **3" x 5" anatomy flash cards** in the following format:
 - a. The first card must be a different color and have your name and student ID number on it.
 - b. You can put anything on your study cards as long as it is handwritten (not typed) and diagrams that are hand-drawn (not photocopied).
 - c. It is helpful to make up definition cards in which you write one word, concept, or question on the front and define the word, explain the concept, or answer the question on the back.
 - d. It is also helpful to make diagram cards in which you draw a diagram and number its parts on one side and write the answer key for the numbered parts on the back.
 - e. All of the cards must be held together by two three-inch rings.
 - f. To obtain extra credit for your cards, they must be in the above format and you must have at least 20 cards that pertain to the material covered on the quiz or exam that day.
 - g. Bring your cards with you to every class so you can turn them in for extra credit when called for.

Anatomy & Physiology 34A Tentative Lecture & Lab Schedule, Fall 2009

(Note: this schedule is approximate and subject to change.)

Date	Lecture Topic	Chapters	Laboratory Topic	Exercises
T, 9/01	Human Body Orientation	1	Anatomy Language & Organ Systems	1 & 2
Th, 9/03	Chemistry Comes Alive, Basic chemistry	2	Scientific Method & Metric Measurements	pp. xii-xix & Handout
T, 9/08	Chemistry Comes Alive, Biochemistry	2	Quiz #1; Molecules of Living Systems (models)	Handout
Th, 9/10	Cell Structure & Function	3	Molecules of Living Systems (wet lab)	Handout
T, 9/15	Cellular Metabolism	3 & 24	Quiz #2; Microscopy & Cells	3 & 4
Th, 9/17	Cell Membrane Transport	3	Cell Transport Mechanisms (wet lab) & PhysioEx computer simulation	5A & 5B
T, 9/22	Cell Communication	3	Quiz #3; Mitosis & Meiosis	4 & Handout
Th, 9/24	*Heredity	3 & 29	*Genetic Inheritance	45 & Handout

Date	Lecture Topic	Chapters	Laboratory Topic	Exercises
T, 9/29	Lecture Exam #1	1-3	Lab Exam #1	1-5
Th, 10/01	Heredity	3 & 29	Genetics & Protein Syn.	Handout
T, 10/06	Tissue: the Living Fabric, epithelium	4	Quiz #4; Tissues: epithelial	6A & 6B
Th, 10/08	Tissue: the Living Fabric, connective tissue, muscular, & nervous tissue	4	Tissues: connective, muscular, & nervous	6A & 6B
T, 10/13	Integumentary System	5	Quiz #5; Integument	7
Th, 10/15	*Bones & Skeletal Tissues	6	*Skeletal Tissue	9
T, 10/20	Lecture Exam #2	4, 5 & 29	Lab Exam #2	6, 7, & Genetics
Th, 10/22	Axial Skeleton	7	Axial Skeleton	10
T, 10/27	Appendicular Skeleton	7	Quiz #6; Appendicular Skeleton	11
Th, 10/29	Joints	8	Joints & Append. Skeleton	13 & 11
T, 11/03	Lecture Exam #3	6-8	Lab Exam #3	9-11, & 13
Th, 11/05	Muscular System	9 & 10	Muscle Tissue & Muscle Models	14 & 15
T, 11/10	Muscular System	9 & 10	Quiz #7; Cat muscle dissection	14 & 15
Th, 11/12	Muscular System	9 & 10	PhysioEx Muscle Physiology	16A & B
T, 11/17	Muscular System	9 & 10	Quiz #8; Cat muscle dissection	15
Th, 11/19	Nervous System Fundamentals	11	Nervous histology & PhysioEx Neurophysiology	17 & 18B
T, 11/24	Lecture Exam #4	9-11	Lab Exam #4	14-17
Th, 11/26	Thanksgiving Holiday		Enjoy!	
T, 12/01	Neurophysiology	11	Human Reflex Physiology	22
Th, 12/03	Central Nervous System, brain	12	Quiz #9; Brain & Cranial Nerves	19, & Handout
T, 12/08	Central Nervous System, spinal cord	12	Sheep brain dissection; Spinal cord & nerves	19 & 21
Th, 12/10	Peripheral Nervous System	13	Quiz #10; General Sensation (wet lab)	23
T, 12/15	Autonomic Nervous System	14	Quiz #11; Review	18B-19 & 21-23
Th, 12/17	Final Lecture Exam #5	11-14	Final Lab Exam #5	

(Note: An asterisk * indicates that the material will be covered on the next exam.)

Anatomy & Physiology 34A Student Information Form

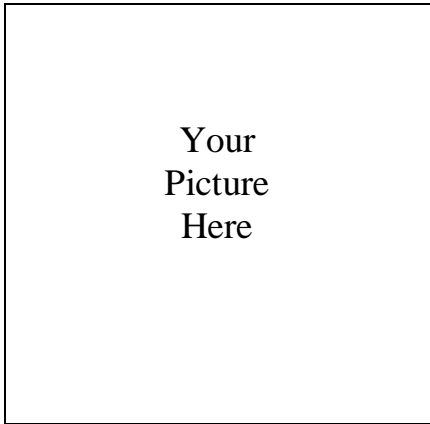
Name:

Phone No.:

Email:

Major:

Main Interests:



Your
Picture
Here

Life Goal(s):

What would you most like to learn about Anatomy & Physiology?

What worries or concerns do you have about this class?

I have read the Course Overview and Lab Safety sheet, and I understand my responsibilities, especially the policies regarding grades, attendance, make-ups, and academic honesty.

Signature: _____