Biology 20 Functional Human Anatomy (51194)
Course Description and Syllabus Spring 2016
State Center Community College District Reedley Community College

I. Introduction and Course Description

Course Number: 51194
Units: 4 units: 3 lecture hours, 3 lab hours per week
Time & Location:
Lectures:
Tuesday 06:00PM - 08:50PM,
Life Science, Room 17
Lab:
Thursday 06:00PM - 08:50PM,
Life Science, Room 17

Lecturer: **Joseph Yen Lin, M.S**.
Office: Office hours in LFS #6
Phone: **559-638-0300** ext **3407**
Friday: Virtual office hours at 1:30-2:30
Mon/Wed- 1:00-2:00
Tues/Thursday 3:00-4:00
E-mail: joseph.lin@reedleycollege.edu

Course Description: Primarily for students majoring in health-related professions, this course is a prerequisite for the Nursing and Physical Therapy programs, satisfies a major requirement for those students majoring in Kinesiology or Public Health, and satisfies other major requirements for Biology majors. It is taught in a traditional lecture and laboratory format in combination with additional online content; lectures will utilize Powerpoint and a variety of multimedia presentations. Laboratory will be largely hands-on and team-based, utilizing a variety of resources including Powerpoint, multimedia, prepared microscope slides, models, and human and animal specimens. Human structure and function will be the major focus of the class, providing a basic understanding and working knowledge of the human body with emphasis on the structure of each major system. This course requires an excellent grasp of the English language, the **discipline to commit many facts to memory**, and a **great deal of study time**. **A minimum of 9 hours per week study time outside of lecture and lab is critical to passing this course**. **ATTENDANCE AT ALL LABS IS REQUIRED.**
DISSECTION OF A CAT/PIG IS A REQUIREMENT OF THIS COURSE.

II. Prerequisites

- Eligibility for Math 101, English 125, and English 126.
- SUBJECT PREREQUISITES: Biology 1 or 5. **NOTE!** Anatomy (Biol 20) and Chemistry (Chem 3A or 1A) are prerequisites for Physiology (Biol 22).

III. Required Textbooks and Materials

Course Fee: N/A
Internet Access: extremely important (see Materials on Blackboard and Internet: MasteringAandP below)
Textbooks:

Lecture: Available in bookstore:

a. Martini, Timmons, & Tallitsch, Human Anatomy, 8th Edition, Pearson Benjamin Cummings.
b. Lab Manual for Human Anatomy , 2nd Edition, by Eckel
c. Lab Manual Rentals are NOT acceptable or allowed.
d. Drawing paper or sketchbook

Lab: Latex gloves (you may wish to have a lab coat and protective glasses as well)
ANATOMY COLORING BOOK by Kapit and Elson; LABORATORY MANUAL; S. A. Foletta,

Ph.D./Wiley

Optional: A Photographic Atlas of the Human Body, Tortora, 2nd ed.
Visual Analogy Guide to Human Anatomy, Krieger

Materials on Blackboard: Several **critical** items are available on Blackboard for this course. Within "Syllabus" you will find this syllabus and schedule. Within "Course Documents" you will find my **lecture outlines**, **study lists, interactive PowerPoints,** and (possibly) Lecture Exam Reviews (LER).

Internet: Mastering A and P is OPTIONAL but RECOMMENDED
CODE: MAPLIN2016

Please use your student ID code to register in case there are other students with your same name. This "homework" IS

REQUIRED for the course but is available for increased understanding of the material and for extra credit that can be used to increase your total grade percentage. It is **YOUR RESPONSIBILITY** to check online to see when the "homework" is due and TURN IT IN ON TIME. I WILL NOT CHANGE THE DUE DATES or give individual student's work special consideration. At the end of the course I will take your overall percentage for all of the homework and apply it to the total extra credit points (see below) so it is in your best interest to do the assignments.

IV. Examinations and Major Assignments

Overall & Lecture:

3 Lecture Exams	300 points
Final Exam	200 points
Laboratory	500 points
Total points	**1000**

Laboratory:

Exam Lab 1-6	100 points
Exam Lab 7-9	100 points
Exam Lab 10-12	100 points
Mastering A&P Extra Credit Due 5/10	50 points
10 Lab Reviews	120 points
6 Quizzes	60 points
Lab Sketches	20 points

Lecture Exams:

Three midterms and one comprehensive final will cover the topics listed in the schedule below. The questions are multiple-choice, true/false, or matching. There are no essay or fill-in-the-blank questions. The comprehensive portion of the final will only be 20% of that exam; the other 80% will cover the final topics. LER will be posted (or not) at my discretion and should ONLY be used as a study guide, not as an indication of the exact questions on the tests. **A missed exam results in a grade of 0 (zero) with NO EXCEPTIONS.**

Lab Practical's:

Four practical exams will be given with 30 seconds per question and several questions (2 to 4, depending on the particular exam) per station; the exam dates are listed on the schedule below. You will be asked to pick the answer from a given list and fill in the ovals on your scantron. At the end of the exam you will be allowed 5 additional minutes to check answers, but there will be only one student allowed at each station. **YOU MUST TAKE THE LAB PRACTICAL ON THE DAY IT IS GIVEN. NO EXCEPTIONS. PAL 3.0 and interactive PowerPoints**, which use pictures of some of the models in lab, are available on the computers in lab and on MasteringAandP and Blackboard. **Pictures from them may be used on a Lab Exam instead of a model or slide.** You will find a "Biology 20 Model Study Guide" in the laboratory, which contains study lists of structures that you are required to know and the models associated with them. Additional structures may be added to these lists.

Lab Sketches:

Scientific drawings are an important part of the science of biology and all biologists must be able to produce good quality scientific drawings regardless of your artistic ability. Drawings not only allow you to record an image of the specimen observed, but more importantly, they help you to remember the specimen as well as the important features of the specimen. You will be required to look at a large number of models during this course and you are much more likely to remember them if you have to draw each one. Drawing a model requires you to pay attention to detail so that you can re-create it on the sheet. While doing this, your brain is recording these same features in such a way that you can recall them if necessary (for example in an exam). Simply observing pictures of

specimens in a book or on a computer screen is less effective when it comes to remembering and understanding what you observed.

Lab Quizzes:
Eight five-point quizzes will be offered following certain laboratory sessions that will consist of 5 to 10 questions covering the material covered in the previous lab session. The quiz will be offered at the beginning of the lab session and will be a powerpoint presentation using the same paradigm as the lab exams (lists and 30 seconds per question). If you are late to class you might miss some questions though you will be allowed to finish the quiz (bring Quizstrips). Any student entering the classroom after the first 10 minutes have passed will have missed the opportunity to take the quiz.

Absence Policy:

> **Lecture:** Attendance is not mandatory, but if you are absent from class, it is **your responsibility** to check on announcements or schedule changes made while you were away. In addition, I reserve the right to give a pop quiz and you may miss them if you are tardy or absent. Make up quizzes, possibly verbal or harder than those given in regular class time, will only be given for **excused** absences (an email or a phone message prior to the quiz) and the excuse must be for a valid reason (see Excused Absence below).
>
> **Lab: <u>ATTENDANCE AT ALL LABS IS MANDATORY</u>.**
> Regular roll will be taken and excessive (4) unexcused absences may cause you to be dropped from the course.
> ***IF YOUR NAME FAILS TO APPEAR ON THE OFFICIAL CLASS ROSTER, YOU WILL NOT BE
> ALLOWED TO ATTEND***.**
>
> **Excused Absence:** In order to be considered for an excused absence one must have documented proof from a reliable professional; "being sick" is NOT an excuse or an extreme case.

Study Expectations:
It is usually expected that students will spend approximately 2 hours of study time outside of class for every one hour in class. Since this is a 3-unit class, you should expect to study a minimum of 9 hours outside of lecture and lab each week; some students may need more outside study time. From past experience, a **minimum of 12 hours per week study time outside of lecture and lab is critical to passing this course**. You should consider 15 hours per week before exams.

For free tutoring on campus, you can reach them by at the student services. In addition, our campus has developed SupportNet to connect students with specific campus resources promoting academic success. I have agreed to participate in this program and may refer you to it if I believe you need the services provided by SupportNet to succeed in this course.

<u>V. Grading</u>

To calculate your grade, total all points earned and divide that number by the total points available (1,000). **<u>Course</u> <u>grades are non-negotiable</u>**; **because extra credit points and exam curves are offered the grading scale will not be adjusted; I DO NOT round up your grades to the next letter grade.** The final course grade is based on:

90 - 100%; A 80 – 89.99%; B 70 – 79.99%; C 60 – 69.99%; D < 59.99%; F

I **<u>WILL NOT</u>** give an individual student separate extra credit at the end of the course to increase their percentage grade. I do not mind correcting honest mistakes so do not hesitate to contact me regarding them, but do NOT ask for special treatment. Do not contact me to request that I "give" you a higher grade: you earn the grade you receive in this course.

How to be Successful in this Course

A. If you should experience difficulty understanding the material presented in the course, it is **your responsibility** to see either your lab TA or me at the earliest possible time. Do not wait until the final weeks of the course.

B. This course requires that you become familiar with and understand a great deal of information about the human body. In any college course, you are expected to spend **2-3 hours per class hour outside the lecture and lab studying: that translates to 6-9 hours per week for this course, excluding test study time.** Some of the work, especially for the labs, should be completed prior to the class. This includes the extra credit, which is purposely assigned ahead of lecture.

C. **Listen in lecture and take good notes using my outlines from Blackboard** (you may use a tape recorder during lecture if you wish). Organize your notes and redo them if necessary after lecture. **Review your notes frequently, not just before a test**. PDFs of my powerpoints will be made available after I lecture on the subject.

D. Do your reading assignments **prior to the lecture** on that particular topic. Read your labs **prior to the lab** period and partially complete the lab report to verify your answers during the lab.

E. Keep a **vocabulary list of all terms** mentioned in lecture, in bold print in the text, or listed at the end of each chapter. Know the **meaning** of each of these terms and the **correct spelling**.

F. **Spend some time studying each day**. You are learning a new language; immerse yourself in it! Review notes for 15-30 minutes at one time. The best way to absorb book chapters is to read for one to two hours at a time. Don't try to complete your study hours all in one sitting or on the same day, as your efficiency will drop dramatically. Review an additional 3-5 hours a day prior to examinations.

G. Form study groups to work together. Make your own review sheet or, if you work in a study group, have each person make a review sheet for a chapter and teach each other.

H. Use all materials available (text, lab notebook, PAL, interactive powerpoints, model keys, internet sites, etc.); if one study method does not work try another! Use as many ways to access your memory as possible (auditory, visual, kinetic, etc.).

I. Stay healthy and get adequate sleep!

VI. Course Goals and Primary Learning Outcomes

Course Goals:

Upon successful completion of this course, students will:

1. Integrate and apply basic knowledge of general terminology, structure function relationships, histology, and gross anatomy to the following major human anatomical systems: integument, musculoskeletal, nervous, endocrine, cardiovascular, lymphatic and immune, respiratory, digestive, urinary, and reproductive.
2. Gain knowledge and experience in the basic methods, instrumentation and quantitative analytical skills used in anatomy.
3. Develop critical thinking and communication skills, both oral and written, for purposes of conveying anatomical information to both professional clinicians and the lay public.
4. Develop intellectual independence, basic scientific literacy and an appreciation for the connections between society and the study of anatomy.

Primary Learning Outcomes:

Upon completion of the course, students should be able to:

1. Identify the basic structure and function of each human system at the macroscopic and microscopic levels.
2. Use correct terminology to communicate anatomical structures and features.
3. Critically analyze and deductively reason out clinical information as it relates to human organs and organ systems.
4. Define and identify structure-function relationships in the human body.
5. Use the process of dissection to investigate anatomical structure; use the microscope to investigate anatomical or histological structure.
6. Learn how to study and interpret anatomical and histological models, sections, and preparations.
7. Learn procedures that are standard practice in an anatomy laboratory.
8. Be aware of laboratory safety concerns and how to apply safe practices in the laboratory; understand and follow safety procedures.
9. Be able to obtain desired information about human structures, functions, or pathology using common references.

VII. Assignment and Examination Schedule

Sketches; due at beginning of following lab (no exceptions or late submissions)

VIII. Subject to Change Statement

This syllabus and schedule are subject to change in the event of extenuating circumstances. If you are absent from class, it is **your responsibility** to check on announcements made while you were absent.

IX. Course Policies & Safety Issues

Professional Behavior is expected at ALL TIMES. Please respect other students, your TAs, the laboratory materials, and me. No food, cellular phones, pagers, or profanity at any time! I am aware that emergencies arise, but place your electronics on silent or "manner" mode. Disruptive behavior that interferes with the teaching and learning processes will be cause for appropriate penalties as described under "College Policies" below.

Food and/or liquids in the laboratory may result in deduction of points. You will be given a Safety Rules sheet to sign in the lab, which delineates further safety procedures that you MUST follow. OTHER COURSES USE THE MODELS AND THE LAB. PLEASE BE RESPONSIBLE. Do not use pencils to point out structures on the models. Please remember to clean up the lab after every exercise, as areas left dirty or messy at the end of the period will result in those student groups being **docked 5 points** for every offense.

Cheating and Plagiarism: **I DO NOT TOLERATE CHEATING. PERIOD. Most of you are entering into the health care field and could harm or seriously injure other human beings if you do not know the basic information in this course.** The University policy reads, "Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or

deceptive means. Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material (i.e., their intellectual property) so used as one's own work." **Penalties for cheating and plagiarism range from a 0 or F on a particular assignment, through an F for the course, to expulsion from the university**.

Students with Disabilities: Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities at the RC / Madera campus or contact me.

TENTATIVE SYLLABUS

Wk	Dates	Lecture (Book Chapter) Exams in bold.	Dates	Lab (Manual Chapter) Exams/quizzes in bold.
1	Jan 12	Introduction to the course Unit 1: Introduction to Anatomy (1) **MasteringA&P**	Jan 14	No lab. **Please bring your lab manual to every lab below.**
2	Jan 19	Unit 1: Foundations: The Cell (2) Foundations: Tissues and Early Embryology (3) **MasteringA&P**	Jan 21	**Lab 1: DO NOT TURN IN RS** The Language of Anatomy Organ System Overview Operation and Care of Microscope The Cell: Anatomy and Division
3	Jan 26	Unit 1: The Integumentary System (4) Surface Anatomy & Cross-Sectional Anatomy (12) **MasteringA&P**	Jan 28	**Lab 2:** Classification of Tissues The Integumentary System Classification of Covering and Lining Membranes **Quiz #1 (covers Lab 1)**
4	Feb 2	**Lecture Exam #1,** Unit 2: The Skeletal System: Osseous Tissue & Skeletal Structure (5) The Skeletal System: Axial Division (6) **MasteringA&P**	Feb 4	**Lab Exam #1, Labs 1 & 2, 100 points** **Lab 3:** Overview of the Skeleton: Classification & Structure The Axial Skeleton
5	Feb 9	Unit 2: The Skeletal System: Appendicular Division (7) The Skeletal System: Articulations (8) **MasteringA&P**	Feb 11	**All Labs: Lab 4:** The Appendicular Skeleton The Fetal Skeleton **Quiz #2 (covers Lab 3)**
6	Feb 16	Unit 2: The Muscular System: Skeletal Muscle Tissue & Muscle Organization (9) The Muscular System: Axial Musculature (10) **MasteringA&P**	Feb 18	**Lab 5:** Articulations & Body Movements, emphasis: knee, shoulder, hip Microscopic Anatomy & Organization of Skeletal Muscle **Quiz #3 (covers Lab 4)**
7	Feb 23	Unit 2: The Muscular System: Appendicular Musculature (11) Unit 3: The Nervous System: Neural Tissue (13) **MasteringA&P**	Feb 25	**Lab 6:** Gross Anatomy of the Muscular System **Quiz #4 (covers Lab 5)**
8	Mar 1	**Lecture Exam #2, Testing Center, 10/8-10/10, 3 day window, Unit 2 (100 points)** Unit 3: The Nervous System: Spinal Cord & Spinal Nerves (14) The Nervous System: Sensory & Motor Pathways of the Spinal Cord (15) **MasteringA&P**	Mar 3	**Lab Exam #2: Labs 3 – 6, 100 points**
9	Mar 8	Unit 3: The Nervous System: The Brain & Cranial Nerves (16) The Nervous System: Autonomic Nervous System (17) **MasteringA&P**	Mar10	**Lab 7:** Histology of Nervous Tissue Gross Anatomy of the Brain and Cranial Nerves **Quiz #4 (covers Lab 6)**
10	Mar 15	Unit 3: The Nervous System: General & Special Senses (18) The Endocrine System (19) **MasteringA&P**	Mar 17	**Lab 8:** Spinal Cord, Spinal Nerves, & Autonomic Nervous System Functional Anatomy of Endocrine Glands **Quiz #5 (covers Lab 7)**
11	Mar 29	**March 21-25 Spring Break** **Lecture Exam #3, Testing Center, 10/29-10/31, 3** **day window, Unit 3 (100 points)** Unit 4: The Cardiovascular System: Blood (20) The Cardiovascular System: The Heart (21) **MasteringA&P**	Mar31	**Lab 9:** Blood Anatomy of the Heart Anatomy of Blood Vessels **Quiz #6 (covers Lab 8)** **Blood typing**
12	Apr 5	Unit 4: The Cardiovascular System: Vessels & Circulation (22) The Lymphoid System (23)	Apr 7	**Lab Exam #3: Labs 7-9, 100 points**

		MasteringA&P		
13	Apr 12	Unit 4: The Respiratory System (24) The Digestive System (25) **MasteringA&P**	Apr 14	**Lab 10:** **Pig/Cat dissection (First day to start dissections)** The Lymphatic System & Immune Response Anatomy of the Respiratory System Anatomy of the Digestive System
14	Apr 19	Unit 4: The Urinary System (26) The Reproductive System, male (27) **MasteringA&P**	Apr 21	**Monday Labs: Lab 10** **Lab 11: Pig/Cat dissection** Anatomy of the Urinary System Anatomy of the Reproductive System
15	Apr 26	Unit 4: The Reproductive System, female (27)	Apr 28	**Pig/Cat dissection**

16	May 3	Unit 4: The Reproductive System: Embryology and Human Development (28)	May 5	**Lab 12:** **Pig/Cat dissection**
17	May 10	Course Review	May 12	**Lab 12:** **Pig/Cat dissection** Surface Anatomy **Quiz #6 (covers Lab 11)**
18	May 17	**Comprehensive Final Exam**	May 19	