

Human Anatomy (Biology 230)

Section 40702

Fall 2023 Course Syllabus

Instructor: Dr. Marie McMahon, Ph.D.

Class Times: MW 1:00pm to 5:15pm, Rm S6-209.

Office Phone (voicemail): (619) 388-7497

Office Hours: MW 11:00am to 12:30pm

Email: mmcmahon@sdccd.edu

Faculty Website: <https://sdmiramar.edu/faculty/marie-mcmahon>

Course Prerequisites: A passing (or credit) grade of "C" or better in BIOL 107 or equivalent.

Text and Materials: Any college level "Human Anatomy" textbook. Anatomy Lab Manual (McMahon, Fall '23) from Mira Mesa Copy Center, 9363 Mira Mesa Blvd.; ph. (858) 578-0941.

Deadlines: Important dates for adding or dropping a class: See Fall Schedule for more information.

Sept 1, 2023 Last day to add with instructor's permission and to drop without receiving a "W"

Sept 1, 2023 Last day to drop and be eligible for a refund and/or non-resident tuition.

Oct 27, 2023 Last day to file a petition for Pass/No Pass Option.

Oct 27, 2023 Last day to withdraw from the course with an option of "W" grade.

Scope of Course: Biology 230 is the study of Human Anatomy, using a systemic approach. The lectures cover functional anatomy within specific systems. The lab sessions are a "hands on" experience in identifying anatomical structures both macroscopically with our naked eyes (gross anatomy) and microscopically. The progression of topics through this course will build on the levels of organization:

Cells > Tissues > Organs > Organ Systems > Organism

The 4 primary tissues of the human body, Epithelium, Connective, Muscular, and Nervous, are studied in detail. How they contribute to the structures of the human body will be studied throughout this course and the following topics are specifically covered in this order:

- a. Anatomical Terminology
- b. Histology (Microscopy)
- c. Integumentary System
- d. Skeletal System
- e. Articular System

- f. Musculature System
- g. Nervous System
- h. Sensory System
- i. Circulatory System
- j. Respiratory System

- k. Digestive System
- l. Endocrine System
- m. Urinary System
- n. Reproductive System

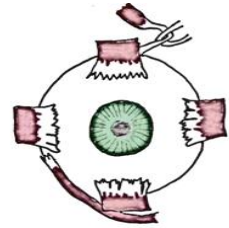
Student Learning Outcome (SLO) for this Course. Students should be able to:

- ❖ Describe and identify the structure and function of the four primary tissues of the human body. The additional objectives below support this central SLO stated.
- ❖ Identify macroscopic (gross) and microscopic (histological) anatomical structures of the human body.
- ❖ Understand how the concepts of structure (anatomy) contribute to the function of living systems.
- ❖ Identify the importance of current research and integrate this with the information we discuss in class.
- ❖ Become familiar with an interactive learning environment where we step away from 'rote' memorization and find meaning in the new material (often Greek and Latin words) we are learning.

This course can be challenging and demanding, requiring a lot of time and persistence. It is always possible to do very well in this course. It is my job to ensure a reasonable pace with clear and comprehensible delivery. Furthermore, Anatomy is enjoyable! I want every student to succeed in this course, so we must all do our part in order for that to happen. Here are some helpful tips you may want to think about:

- Attend lecture and labs, take notes and be prepared to think about the issues presented in class.
- Stay caught up with lecture & lab material. Study every day in order to avoid cramming.
- Create a study group as early as possible and discuss class issues with other students.
- Answer questions in the study guide and don't hesitate to ask me questions – that's why I'm here.
- Organize yourself and try to work out a system of studying that is effective for you. It may take trying a few different methods. Don't be afraid to change a study method if it is not working for you.

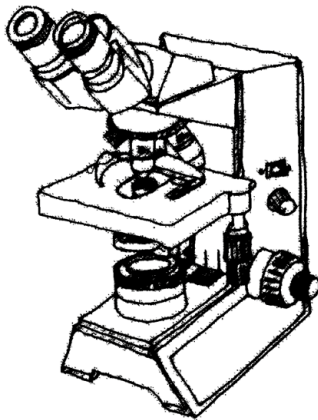
Spelling: Students in this class will be *expected to spell correctly and points will be deducted for spelling errors* in the lab exams. But have no fear... Spelling Insurance is available for laboratory exams for those who wish to participate. The guidelines are as follows:



For any word you wish to have 'covered', it must be **hand written** and spelled correctly 25 times on a piece of paper and submitted to me before the exam. You can use columns and both sides of the paper. Please include your Name on the first page of your Spelling Insurance and please staple multiple papers together.

Lectures: 1:00pm to 1:55pm MW

The lecture content presents the functional anatomical aspects of this course. Many of the concepts introduced and discussed in lecture are reinforced during the laboratory practical sessions that immediately follow lecture.



Exams – there will be **5 lecture** exams (65 to 85pts) and the final (90pts) is *not cumulative*. Exams are based on material covered in lecture, and are a mixture of multiple choice, fill in, matching and short answer/essay question. They are returned to me after the class has had an opportunity to review them. A 50 question scantron is needed, the back of an old scantron is fine. Exams will be taken in person on days set by the class schedule (below). All features of the exam process will be clearly explained each time to reduce anxiety and stress!

Quizzes – will be based on the recent topics completed during a specific section. They are multiple choice and 10pts each. The lowest quiz score will be dropped. You will need a scantron for quizzes.

Class Activity and Study Guide Questions – Class activities may be given at 1:00pm and are only be available to students who **arrive on time to class!** No Exceptions :) The *Study Guide Questions* are designed to help direct students to the fundamental issues presented in lecture. An understanding of the study guide questions will be very helpful in preparing the student for the lecture exam that corresponds to that section.

Class Materials – Essentially all the class resources you need will be made totally available to all students on the instructor's Website: <https://sdmiramar.edu/faculty/marie-mcmahon>



Laboratories: 2:05pm to 5:15pm MW

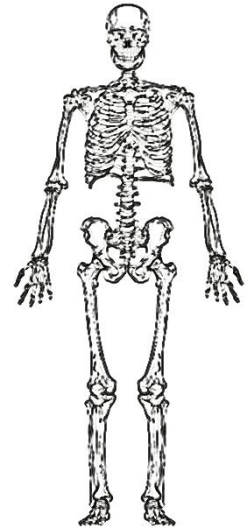
The laboratory component is for instruction of anatomical features with a 'hands on' approach and an opportunity for students to use microscopes to examine tissue slides (histology), as well as preserved materials including cadavers, models and diagrams.

Lab Exams – there will be 5 major Laboratory Practical exams (the 1st one is 50 pts, all others are 100pts).

In-Lab Work Assignments – there will be lab assignments to be completed and periodically handed in for points during the practical laboratory component of the class. **Any assignment turned in late will be penalized 10%, and a further 10% for every additional day it is late.**

General Policies

Lecture Make Up Exams – If, due to illness or an emergency you miss an exam, there will be an opportunity to make-up a Lecture exam. There may be a 10 % penalty applied to any grade on a make-up exam, regardless of the reason for missing the exam. These make up exams will be different than the original. *Always try to let me know of a "situation" (work, family, health, etc.) that may arise beforehand if possible, so that something fair can be worked out.* We can collaborate and resolve issues, easy!



There are No Make Up Exams for Lab Practicals – Please do not miss a lab exam as there will be **no** opportunity to make up any missed lab exams because they require extensive time and an entire lab to set up, once they are over, they are removed and no longer accessible! If you miss a lab exam you will receive zero for it.

Attendance Policy – Anything over two absences (which includes arriving late and leaving early) will result in students being dropped from the class: Note: **It is also your responsibility to drop the course.** Organize yourself so that you are not late for lectures, labs, exams and quizzes. If you arrive late for any exam or quiz, you will not be given extra time and you might not be allowed to take it at all, depending on how disruptive it is for the class, myself included.

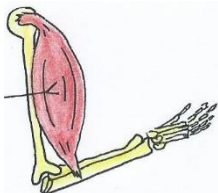
Please note: There will be 10 points deducted from a student's total point any time that their phone rings or they send or read text/email/phone messages or use unauthorized technology during class. So ...

Please turn off or silent your cell phones/technology while in class.

Sending, reading text or using devices is not allowed in class. Thank You!



Academic Integrity – Integrity and honesty are essential to many realms, including the academic process, thus **it is imperative that the work you submit is your own.** Students found cheating will receive an **F (zero)** for that assignment or exam. This can affect your performance in the entire course. "Cheating" includes but is not limited to: revealing test questions or soliciting another person to reveal test questions, copying another person's work or allowing someone to copy your work, using unauthorized materials, such as notes, books, computers, tablets, phones, etc.



Conduct and Behavior – Any significant issues of concern or disruptive behavior will not tolerated, those students will be asked to leave the classroom in accordance with our **BP 3100 policy**. If anything is going on that I can help with, let me know so we can do our utmost to find the best solution.

Disability Services – Any student with a disability who may need academic accommodation or advice should contact the instructor and the Disability Support Programs and Services (DSPS) Office during the first week of class. Refer to the Miramar College 2023-24 Catalog for more information.

Other Info that may be useful:

| | |
|-------------------------------|---|
| Student Services | https://www.sdmiramar.edu/campus/counseling |
| Health Center | https://www.sdmiramar.edu/campus/healthcenter |
| Academic Support and Tutoring | https://www.sdmiramar.edu/campus/asc |

Grading Policy – The final grade is based solely on the total number of points accumulated from quizzes, tests, assignments activities and exams. The lecture and lab components are combined for one total. The grades are calculated as a percentage of your scores over the total available points, as follows:

90-100% = A; 80-89% = B; 70-79 = C; 69-55% = D; ↓ 54% = F

There is **no** extra credit work. There is already enough to learn in this course without the *extra* work!

Student Facilities – There are tutors, Anatomy Models and Microscopes available for anatomy students at the **Academic Success Center**, located in the Library and Independent Learning Center (ILC) room L-101. These facilities are here for you as students to use – please take advantage of them.

Laboratory Health, Safety and Responsibilities – During the first lab meeting, students will be given a handout explaining the department's policies and guidelines regarding safety in the laboratory and breakage of lab materials. The students will discuss those procedures in class with the instructor. Before the second lab class begins, all students must sign the required form stating that they understand and accept the department's Lab Safety policies. Good lab practices, such as responsible handling of equipment, models, slides and chemicals, in addition to appropriate cleaning up after all labs, are expected of every student. Points will be awarded for good lab etiquette and class participation.



Student Care of the Microscopes and Anatomy Lab Models – Taking good care of the lab equipment is very important. This is particularly relevant for the **Microscopes** and the **Anatomical Models** in our lab.

- *There are explicit instructions for the proper storage and use of the microscopes in the lab manual and on the door of the microscope cabinets. These must be followed by all students.*
- *Each anatomy model in our lab has a unique number on it and has an exact space where it sits in the model cabinets. At the end of each lab session, all models must be placed back in their correct space.*

At the end of each lab session, the instructor will check to ensure that all Microscopes and Anatomical Models are put away properly. Up to 20 points may be involved for proper care of equipment.

Student Grade Recording

All points from lecture and lab are combined into one total. It is easy to calculate and to keep track of your current percentage grade in this class, and I can help create an individual grade sheet for any student. Updated grade sheets will be routinely presented to class (with anonymity). The total points available in this class is estimated to be from 900 to 1,000 pts.

Lecture Schedule* for Human Anatomy (CRN: 40702), Fall 2023

| Week | Date | Lecture Topic <i>*Tentative</i> | Chapter in Text |
|-------------|------------------|--|------------------------|
| 1 | M 8/21 | Introduction; Review Cells. Anatomical Position, Body Planes | 1, 2 |
| | W 8/23 | Tissues: Epithelial and Connective Tissues | 3 |
| 2 | M 8/28 | Tissue Histology; Membranes; Fasciae | 3 |
| | W 8/30 | Integumentary System | 4 |
| 3 | M 9/4 | Labor Day Holiday | |
| | W 9/6 | Integumentary System: Accessory Structures; Burns | |
| 4 | M 9/11 | Bone Structure, Development, Growth and Maintenance | 5 |
| | W 9/23 | Exam I: (From Chapters 1, 2, 3 and 4) | |
| 5 | M 9/18 | Bone Terminology, Classification; Axial Skeleton | 5, 6 |
| | W 9/20 | Axial and Appendicular Skeleton: Articulations (Joints) | 7, 8 |
| 6 | M 9/25 | Anatomy and Functions of Skeletal Muscle, Terminology | 9 |
| | W 9/27 | Levers in the Body; Axial and Appendicular Musculature | 10, 11 |
| 7 | M 10/2 | Muscle Action, Origin, Insertion and Innervation | 10, 11 |
| | W 10/4 | Exam II: (From Chapters 5, 6, 7, 8, 9, 11) | |
| 8 | M 10/9 | Nervous System Overview: Neurons and Glial Cells | 13 |
| | W 10/11 | Nervous System: Spinal Cord; CNS and PNS | 14 |
| 9 | M 10/16 | Cranial and Spinal Nerves; Cranial and Spinal Meninges | 15, 16 |
| | W 10/18 | Autonomic Nervous System: Special Senses: Endocrine | 17, 18, 19 |
| 10 | M 10/23 | Special Senses: The Eyes/Vision and Ears/Hearing | 18 |
| | W 10/25 | Exam III: (From Ch 13, 14, 15, 17, 18) | |
| 11 | M 10/30 | Cardiovascular System, The Heart | 21 |
| | W 11/1 | Systemic and Pulmonary Systems; Arteries and Veins | 21, 22 |
| 12 | M 11/6 | Circulatory System: The Lymphatic System | 23 |
| | W 11/8 | Respiratory System | 24 |
| 13 | M 11/13 | Histology of the Respiratory System | 24 |
| | W 11/15 | Exam IV: (From Ch. 21, 22, 23, 24) | |
| | M/W 11/20- 11/25 | Thanksgiving Break | |
| 14 | M 11/27 | Digestive System: The Gastrointestinal Tract | 25 |
| | W 11/29 | Digestive System: Histology/Accessory Structures of G.I. Tract | 25 |
| 15 | M 12/4 | Urinary (Renal) System | 26 |
| | W 12/6 | Male and Female Reproductive Systems | 27 |
| 16 | M 12/11 | Review for Final Exams (Ch. 24, 25, 26, 27) | |
| | W 12/13 | Final Lecture Exam | |

Laboratory Schedule* for Human Anatomy (CRN: 40702), Fall 2023

| Week | Date | Laboratory Exercise | <i>*Tentative</i> | Reading |
|-------------|--------------------|---|-------------------|--------------------------|
| 1 | M 8/21 W 8/23 | Unit 1: Terms, Cells, Microscopy Unit 1: Tissue Histology: Epithelial and Connective Tissues | | Lab Manual Ch. 1 |
| 2 | M 8/28 W 8/30 | Unit 1: Integumentary; Unit 2: Skeletal System Histology Unit 2: Skeletal System and Bone Histology | | Lab Manual Lab Manual |
| 3 | M 9/4 W 9/6 | Labor Day Holiday Lab Practical Exam I: (Unit 1) | | |
| 4 | M 9/11 W 9/13 | Unit 2: Skeletal System and Bone Structures (Bony-Landmarks) Unit 2: Skeletal System and Bone Structures | | Lab Manual Ch. 6 |
| 5 | M 9/18 W 9/20 | Unit 2: Skeletal System and Bone Structures Articulations (Joint Structure) | | Ch. 7 Ch. 8 |
| 6 | M 9/25 W 9/27 | Unit 3A: Human Muscular System Lab Practical Exam II: (Unit 2) | | Ch. 9 |
| 7 | M 10/2 W 10/4 | Muscular System: Histology: Cat Dissection Unit 3B: Cat Dissection, Models, and Cadavers | | Lab Manual |
| 8 | M 10/9 W 10/11 | Cat Dissection, Models, Cadavers Unit 4A: The Nervous System | | Lab Manual Ch. 13 |
| 9 | M 10/16 W 10/18 | Unit 4A: Histology of The Nervous System Lab Practical Exam III: (Units 3A, B and 4A) | | Lab Manual |
| 10 | M 10/23 W 10/25 | Unit 4A: Spinal Nerves and Cranial Nerves Unit 4B: Special Senses; The Eyes and Vision | | Lab Manual Lab Manual |
| 11 | M 10/30 W 11/1 | Unit 4B: Special Senses; Ears and Hearing Unit 5A: Cardiovascular System, The Heart | | Ch. 18, 19 Lab Manual |
| 12 | M 11/6 W 11/8 | Cardiovascular System: Sheep Heart Dissection Lab Practical Exam IV: (Units 4A, B and 5A) | | Lab Manual Lab Manual |
| 13 | M 11/13 W 11/15 | Blood Vessels and the Lymphatic System Unit 5B: Respiratory System | | Ch. 21 Ch. 24 |
| | M/W 11/20 - 11/25 | Thanksgiving Break | | |
| 14 | M 11/27 W 11/29 | Unit 6A: Digestive System Histology Unit 6A: Digestive System Histology (Cat Dissection) | | Ch. 25 Ch. 25 |
| 15 | M 12/4 W 12/6 | Unit 6B: Urinary (Renal) System Unit 6B: Male and Female Reproductive System | | Ch. 26 Ch. 27 |
| 16 | M 12/11 W 12/13 | Review for Final Exams (Units 5A and B, 6A and B) Lab Practical Exam V: (Units 5B, 6A and B) | | |