

**METX135:
Human Functional Anatomy
Summer 2024**

Lecture: Monday and Wednesday 900am -1230pm in person J Baskin Engr 372

Instructor:

Myra Finkelstein myraf@ucsc.edu
Phone # 831 459-1249
Office hours Wed 1-2pm or by appointment, in person in PSB 444 or via Zoom

TA (also for METX 135L):

Colin McEachen, jmceache@ucsc.edu
Office hours Fridays 2:30-3:30pm in Thimann 217

Myra Finkelstein is also the Instructor for METX 135L

OVERVIEW.

This course is a rigorous systems-based course in anatomy. Lectures will provide an overview of functional anatomy at all levels, from the systems to the tissues as well as more conceptual exercises. The goal is to provide a mechanistic understanding of the different structures in our body as a foundation for human-health oriented studies. The concurrent laboratory section (enrollment in which is mandatory) will place emphasis on nomenclature and recognition of anatomical and histological features. **The materials for lab and lecture largely overlap and reinforce each other**, please work on them as if this were two aspects of the same class.

Course goals:

1. To identify the different structures present in the human body and acquire the vocabulary to adequately describe them. Muscular-skeletal anatomy will be emphasized, but all the organ systems will be covered.
2. To learn about the cellular and extracellular components present in these structures at the microscopic level as a way to understand their physiological function.
3. To learn the interplay between different systems in a healthy body as the foundation for understanding disease states.

This class is very demanding. We will make every effort to present the material in an understandable manner but this class requires a lot of studying. **You need to be prepared to dedicate at least 30h a week to this class** (more if you don't have training in biology) and to make every effort to **keep up with the material** as it is being presented. **This is especially important for the fast pace of the summer session.**

COURSE ORGANIZATION.

METX 135 and 135L, as mentioned above are interlinked and there is mandatory co-enrollment. **METX 135 and 135L will be sharing a canvas course website.**

Lecture structure. Lecture attendance is optional. But note the two exams are in-person.

There will be in-person extra credit learning activities throughout the course (detailed below). Lectures will be recorded and available on Canvas via YuJa within ~24 hours.

The lecture will be used to cover the material students are expected to know for the two exams.

SmartBook assignments are based on the required reading.

Lecture materials on Canvas:

You will find the following materials in the “Modules” section of canvas.

- A list of key terminology or “vocab list”; **Note: NOT all the information in the vocab lists will be on the exams so use as a supplemental resource.**
- For the bone and muscle lectures, I will also post coloring plates from *Netter Anatomy* to use as an additional reference.
- Pre-recorded lectures by Dr. Camps to be used as supplemental study material. **Note: NOT all the information presented in the recordings will be on the exams so use as a supplemental resource.**

RESOURCES: METX 135 and 135L share required resources.

METX 135 is part of the Inclusive Access program. Students get access to connect and the ebook the first day of class and are guaranteed the lowest possible price. Registration is automatic as soon as you click on the first connect assignment.

Billing is automatic through tuition and/or financial aid. METX 135 and 135L share a canvas site and course materials.

We will use Connect for *SmartBook* assignments, which will constitute 25% of your final grade (see below).

You will also use Connect for METX 135L assignments.

If you have any technical issues with Connect or the *SmartBook* assignments, contact 24-hour support or let us know so we can help you:

For technical support or urgent needs, please contact our Customer Experience Group (CXG):

- **Phone: 1-800-331-5094; Live chat/email: <https://mhedu.force.com/CXG/s/ContactUs>**
- **Mon-Thu: 24 Hours, Fri: 12 AM-9 PM, Sat: 10 AM-8 PM, Sun: 12 PM-12 AM (All Times Eastern USA)**

Connect has a number of materials, including virtual dissection and quizzes which will not be assigned for points for the lecture but will be available for you to use to study.

The screenshot displays a Canvas course page with the following sections:

- Course materials:**
 - Rent the book:** Rent a bound print version of your course text.
 - Loose leaf option:** Purchase a discounted loose leaf copy of your course text.
- Read:**
 - Human Anatomy** by Kenneth Saladin, 6e.
 - Practice Atlas for Anatomy & Physiology** (highlighted with a dashed border).
- Resources:**
 - Anatomy & Physiology Revealed**
 - Additional Practice** (dropdown menu)
 - Recorded Lectures**
- Assignments:**
 - SmartBook 2.0 Orientation Video**: Start: Mar 23, 2020 at 12:00 AM PDT Due: Jun 5, 2020 at 9:00 AM PDT
 - Chapter 6: The Skeletal System I: Bone Tissue**: Start: Mar 23, 2020 at 12:00 AM PDT Due: Apr 6, 2020 at 8:00 AM PDT
 - Chapter 7: The Skeletal System II: Axial Skeleton**: Start: Mar 23, 2020 at 12:00 AM PDT Due: Apr 6, 2020 at 8:00 AM PDT
 - Chapter 8: The Skeletal System III: Appendicular Skeleton**: Start: Mar 23, 2020 at 12:00 AM PDT Due: Apr 6, 2020 at 8:00 AM PDT
 - Chapter 20: The Circulatory System II: The Heart**: Start: Mar 23, 2020 at 12:00 AM PDT Due: Jun 5, 2020 at 9:00 AM PDT
- Instructors Only - Training Resources** (folder icon)

Deadlines:

- Add/Swap deadline is Thursday, August 1, 11:59PM
- Drop deadline is Monday, August 5, 11:59PM
- Request "W" Grade - Sunday, August 18 (no tuition reversal)
- Change Grade Option - Sunday, August 25

EVALUATION

Exams will be delivered in person – no exceptions. Make sure to let me know well in advance if you need accommodations.

Your final course grade is based on the following:

- 1) **55% Two exams: *First exam (25%)* and *second exam (30%)*.**
Exams will consist of four different types of questions: multiple choice, classification, matching, and short answers.
 - A study guide and practice exam will be posted on canvas
 - You are allowed to have a one-page sheet (8.5x11, single sided) during exams (refer to study guide for detailed formatting requirements)
- 2) **30% SmartBook assignments – no late assignments accepted** but you can miss 10 points (~1 assignment) and still get full credit. See detailed schedule below
 - Failed responses are not counted against you, you just need to keep trying until you get the key concepts right, at which time the assignment is considered complete.
 - Assignments for each lecture have a total of between 5 and 15 points and are calibrated to take about 30-60 min (depending on the number of points).
- 3) **15% Three ‘worksheet’ assignments (5% each). *Due to the accelerated pace of summer, no late assignments accepted.***
 - Worksheet 1 due Thursday Aug 8 at 1159pm
 - Worksheet 2 due Tuesday Aug 20 at 1159pm
 - Worksheet 3 due Monday Aug 26 at 1159pm
- 4) **Extra credit: No late submissions/make-ups**
 - a. **10% added to your total exam score for 4** in-class learning exercises (see detailed schedule below) (full credit = 3pts each) 10pts max allowed out of 12pts possible.
 - b. **~6% added to your final SmartBook assignment score** for completion of all SmartBook assignments
 - c. **1% added to your overall final score**
 - 0.25% syllabus acknowledgement canvas quiz (due July 30 at 1159pm)
 - 0.25% if you receive 10% (full credit) for in class learning exercises
 - 0.5% if ≥ 75% of the class completes the SET survey (end of the session)

Daily Lecture Schedule (may be modified as needed). Lectures will be webcast and available on canvas through YuJa.

Monday July 29

- Introduction and course logistics
- Connect, with *SmartBook*

pages

- Anatomical terms 10-12
- Bone Biology 129-144
- Axial skeleton 153-173

Wednesday July 31

pages

- Appendicular skeleton 182-196
- Joints 203-210
- Bipedality supplemental reading
 - Also 164, 190 196-197
- Terms of movement 210-216
- Introduction to muscles
- In class learning exercise 1

Monday Aug 5

pages

- Muscles of head and neck 266-276
- Muscles of the arm, and hand 292-306
- Muscles of the torso 277-278, 282-284
- Muscles of abdomen 279-281
- Muscles of pelvic floor 285-286
- Muscles of respiration 277-278
- Muscles of leg and abdomen 307-318
- Muscles of the feet 319-321

Wednesday Aug 7

- In class learning exercise 2
- Exam review

Thursday Aug 8: Lecture worksheet 1 due at 11:59pm – will post key morning of Aug 9

Monday Aug 12

Exam 1 – material up through Aug 7

Wednesday Aug 14pages

- Taste, smell 462-466
- Hearing 466-472
- Balance 472-476
- Eye 476-487
- Circuitry 348-350

Monday Aug 19pages

- In class learning exercise 3
- Anatomical elements 402-422
- Peripheral NS 378-387, 423-432
- Autonomic NS 439-452
- CSF 398-401
- Heart 536-548

Tuesday Aug 20: Lecture worksheet 2 due at 1159pm – will post key morning of Aug 21

Wednesday Aug 21pages

- Circulatory system 565-595
- Endocrine system 494-507
- Reproductive system
 - Male 698-711
 - Female 712-722
 - Embryology 726-729

Monday Aug 26pages

- Respiratory 631-643
- Digestive 653-678
- Flora supplemental reading
- In class learning exercise 4
- Exam Review
- **Lecture worksheet 3 due at 1159pm – will post key morning of Aug 27**

Wed Aug 28

Exam 2 – material Aug 14- 26

Schedule of assignments in SmartBook (through Connect):
You can 'miss' 10 points and still receive 100% for your SmartBook score

Exam	Topic	Book chapter	Expected time*	Credit (points)	Due date (1159pm)
NA	Smartbook orientation	NA	5	2	July 31
1	Bone biology	Chapter 6	45	10	Jul 31
1	Axial skeleton	Chapter 7	45	10	Jul 31
1	Appendicular skeleton	Chapter 8	45	10	Aug 4
1	Joints	Chapter 9	20	5	Aug 4
1	Axial musculature	Chapter 11	45	10	Aug 11
1	Appendicular musculature	Chapter 12	60	15	Aug 11
2	Special organs	Chapter 17	60	15	Aug 14
2	CNS	Chapter 15	45	10	Aug 18
2	PNS	Chapter 14	20	5	Aug 18
2	ANS	Chapter 16	20	5	Aug 21
2	Heart	Chapter 20	45	10	Aug 21
2	Circulatory	Chapter 21	20	5	Aug 21
2	Endocrine	Chapter 18	45	10	Aug 25
2	Reproductive	Chapter 26	45	10	Aug 25
2	Respiratory	Chapter 23	30	5	Aug 27
2	Digestive	Chapter 24	60	15	Aug 27

How to succeed in this course:

1. Come to every lecture.
You will get more out of the lecture if you are there in person with very little to distract you,
2. Review the assigned textbook reading before each lecture.
The lecture should make sense after reviewing textbook; if not, please ask questions during lecture.
3. Study frequently, regularly, and efficiently

Good ideas:

- Keep up with the material. The Smartbook assignments should help in this regard, but set aside time after each class to study.
- **Study for lecture and lab as if they are one class.** Make the connections between the two. To that end, you can compare vocab lists and worksheets.
- Study in a group (you can do that remotely as well) and take turns teaching the topics from lecture to the group or quizzing each other
- Draw, color structures, write lists, anything you do actively helps much more than reading
- Use a detailed atlas, like Netter's Atlas of Human Anatomy.
- Ask for help as soon as you need it.

Instructor Evaluation:

At the end of week 1, I will submit an anonymous survey to monitor the quality of instruction and ask for suggestions for improvement.

At the end of the course, you will be asked by email to evaluate the class instructor and the Teaching Assistants formally. **PLEASE TAKE THE TIME TO FILL IT OUT**, your feedback is really important for the continued improvement of this class. **The whole class will receive 0.5% extra credit towards their final grade if $\geq 75\%$ of the class completes the SET survey.**

Disabilities

I am more than willing to meet the special needs of students with disabilities. Please contact me so that appropriate academic adjustments or accommodations can be made.

Plagiarism and cheating: The University's policy on academic honesty will be observed in this class. Plagiarism is the conscious or inadvertent failure to identify the contributions of others. Cheating is falsely passing off the work of others as your own. Neither will be tolerated evidence of either will result in persecution to the furthest extent of the law.

Title IX

The university cherishes the free and open exchange of ideas and enlargement of knowledge. To maintain this freedom and openness requires objectivity, mutual trust, and confidence; it requires the absence of coercion, intimidation, or exploitation. The principal responsibility for maintaining these conditions must rest upon those members of the university community who exercise most authority and leadership: faculty, managers, and supervisors.

The university has therefore instituted a number of measures designed to protect its community from sex discrimination, sexual harassment, sexual violence, and other related prohibited conduct. Information about the Title IX Office, the online reporting link, applicable campus resources, reporting responsibilities, the UC Policy on Sexual Violence and Sexual Harassment and the UC Santa Cruz Procedures for Reporting and Responding to Reports of Sexual Violence and Sexual Harassment can be found at titleix.ucsc.edu Links to an external site..

The Title IX/Sexual Harassment Office is located at 105 Kerr Hall. In addition to the online reporting option, you can contact the Title IX Office by calling 831-459-2462.

*******Please note: This syllabus is not a contract. Changes to this syllabus may be made during the course of the quarter.**