

PREREQUISITES

- ANTH 001 (Introduction to Biological Anthropology)

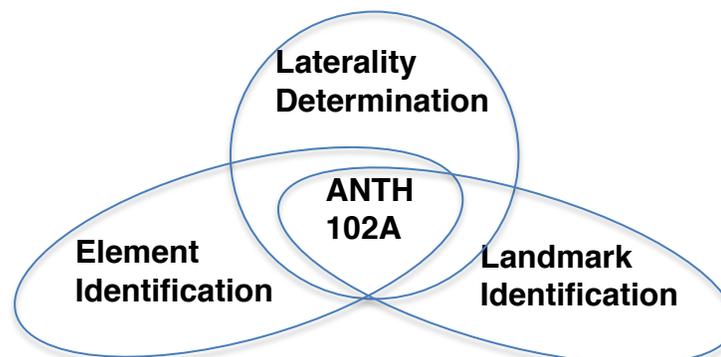
COURSE DESCRIPTION

Presents basic human osteology allowing students to identify skeletal material by element. Emphasizes the dynamic nature of bone by integrating anatomy with a discussion of bone physiology within the context of the human life cycle.

This course introduces students to the study of human osteology, which provides the foundation for forensic anthropology, paleoanthropology, and bioarchaeology, as well as vertebrate anatomy and zooarchaeology. Researchers working within these anthropological subfields focus on a variety of topics to investigate human behavior and adaptation, population history, and forensic identification. The primary goal of this course is to learn to identify skeletal material by element, by fragmentary evidence, and to know the important anatomical landmarks for each skeletal element. Students will learn about human osteology through lectures, readings, pictures, 3D models, and ½ skeleton models. Students will demonstrate their knowledge of osteology through labeled sketches of skeletal elements, regular quizzes, and a final exam.

Learning Outcomes: By the end of the term, students should be able to:

- **Identify Elements:** Identify skeletal elements, including fragmentary specimens, based on overall morphology and osteological landmarks;
- **Determine Laterality:** Determine the laterality (side of the body) of skeletal elements, including fragmentary specimens, based on overall morphology and osteological landmarks;
- **Identify Landmarks:** Name and identify major osteological landmarks.



How to Be Successful in this Class: Learning osteology demands a unique set of study skills, time management skills, and a willingness to ask for help. If there are aspects of this course that prevent you from learning or exclude you, please tell your instructor as soon as possible. Together we'll develop strategies to achieve your goals.

Student Hours for Class Statement: For each credit hour of this 5-week accelerated summer course, students should spend about 6 hours per week engaged in learning and assessment (**30 hours total per week**). For each week, approximately:

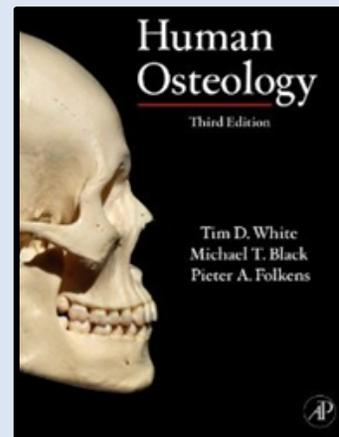
- 7.0 hours attending live classes/open labs or viewing recordings, and reviewing slides/transcripts
- 4.0 hours completing assigned readings and watching optional videos
- 16.0 hours studying bone morphology and landmarks using photos, videos, 3D models, and ½ skeleton models, including drawing and labeling bone sketches
- 3.0 hours completing/submitting assignments, virtual lab quizzes, final exam

COURSE MATERIALS

The **required** e-textbook is:

White, Black, and Folkens (2011). ***Human Osteology (3rd edition)***. Academic Press. (Available as an eText through the UCSC library and as a hardcover from Bay Tree Bookstore)

The Bone Book (Mann 2017) is a suitable alternative.



A **life-sized, disarticulated complete or half skeleton model** is required for use in sketching bones and studying for lab quizzes. You are eligible for a loan from the Anthropology Department of a half skeleton model. Or, you may purchase a skeleton model independently (typically up to \$125 for new and as low as \$85 for used on ebay and Amazon.com).

In addition, free **streaming videos** and **3D virtual models** (Sketchfab and apps, such as “Skeleton 3D Anatomy” and “BoneBox – Dental Lite”) can supplement your learning!

COURSE ORGANIZATION

This intensive 5-week course is divided into 9 modules. It is important that you attend live classes (or view the recordings) and complete the assigned readings, as well as study each new bone group and review previously introduced bone groups before attempting the cumulative **Lab Quizzes**. To efficiently prepare for **Lab Quizzes**, I recommend first completing the associated **Bone Group Sketches**. In addition, the following are required:

- one **Introduction Discussion Forum** post;
- one **Exit Survey**
- one **Attendance at 2 or more live classes or dedicated Student Hours**; and
- one **Final Exam**

Due dates for all **Lab Quizzes & the Final Exam** are hard deadlines. Due dates for bone group sketches are recommended, with a 1-week grace period (except for Bone Groups 8 & 9). **All sketches that are submitted by the recommended deadline will be given priority in grading.** Late work will be graded as soon as possible in the order received.

You are invited to attend Virtual Open Lab (during live class) to ask questions or listen to other student questions. **Each student is required to attend at least 2 Live Class and/or dedicated Student Hours sessions.**

COURSE CONTENT

Content will be introduced as **9 bone groups** and presented through two main venues: **live lecture/labs** (also recorded) and **assigned readings**. In addition, links to free **streaming videos, websites, and apps** will be posted. The instructor will answer questions and provide additional resources via an optional **Lab Discussion Forum**.

Bone Groups: The 9 bone groups are as follows:

- Bone Group 1: Skull Basics & Craniometric Landmarks
- Bone Group 2: Elements of the Skull
- Bone Group 3: Pre-Molar Dentition & Molar Dentition
- Bone Group 4: Vertebrae, Hyoid, Sternum, & Ribs
- Bone Group 5: Shoulder Girdle, Humerus, Radius, & Ulna
- Bone Group 6: Carpals, Metacarpals, & Phalanges
- Bone Group 7: Sacrum, Coccyx, & Os Coxae
- Bone Group 8: Femur, Patella, Tibia, & Fibula
- Bone Group 9: Tarsals, Metatarsals, & Phalanges

Class Recordings: Class recordings, to be hosted via YuJa, are designed to introduce osteological terms, describe bone biology, orient the student, and provide tips for learning and mnemonics. Links to **videos and slides** for each class will be linked. Make sure to watch all of the recordings before starting the associated lab quiz.

Readings: Assigned readings provide images and descriptions of skeletal elements to help you memorize bone morphologies and landmarks and provide tips on siding bones. You may more lightly skim sections on measuring bones, as this will not be tested.

Videos and Websites: Links to optional streaming videos and websites will be posted on Canvas for each module.

ASSESSMENTS

Students can earn credit through 6 venues: 1) Introduction Forum; 2) Attendance; 3) Lab Quizzes; 4) Bone Group Sketches; 5) Exit Survey; and 6) Final Exam. In addition, **Extra Credit** is available. Rubrics are embedded in each assignment. **The lowest Lab Quiz and Bone Group Sketch grades will be dropped.** If 70% of the class takes the mid-course survey by July 4, then the 2 lowest quiz grades will be dropped.

Introduction Forum: The Introduction Forum is worth 1.0% of your overall grade; and is due June 27. For full credit, in 100 to 250 words do the following:

- Introduce yourself (name, pronouns), tell us why you are taking this course, describe your academic/scholarly interests, and one optional “fun fact” about yourself (e.g., dog lover, speaks 4 languages, favorite movie, learning ukulele, etc.)
- Tell us about **one challenge** you will face as you complete this course **and YOUR REAL and FEASIBLE PLAN how you plan to overcome this.**
- In addition, you may provide a “G-rated” photo or link to help us understand.

NOTE: YOU ARE NOT REQUIRED TO DISCLOSE ANY PERSONAL INFORMATION.

Exit Survey: The Exit Survey is worth 1.0% of your overall grade and is due July 23! For full credit, in 100 to 250 words, describe your learning experience. Did your study plan work? What advice would you give to future students?

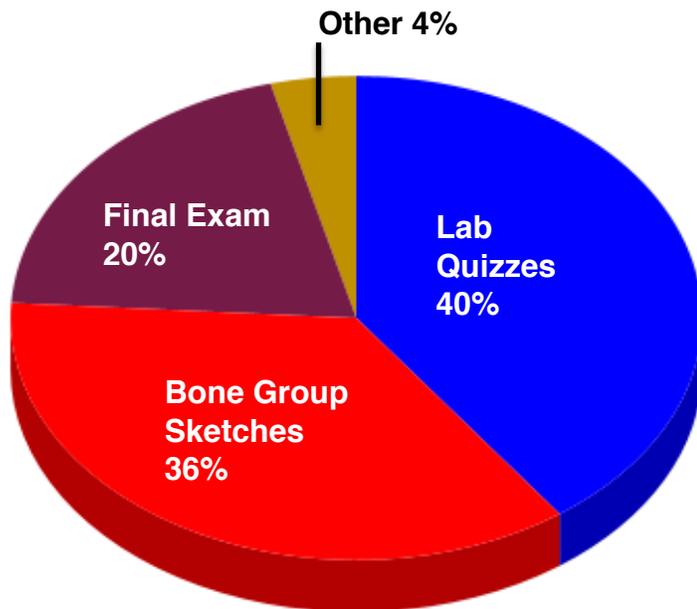
Attendance: Each student is required to **attend at least two Live Class and/or Student Hours session** (2.0% of overall grade). If the Live Class and Student Hour times are not convenient, contact your instructor for an accommodation.

Final Exam: The open-book, cumulative **Final Exam** will consist of ****40 questions**** worth 0.5 points each (20% of your overall grade). Final Exam questions will be in the same format as the Lab Quizzes, but will include different specimens. **The Final Exam will be available from July 20 to July 23 and can only be submitted once.** You will **ONLY have **34 minutes**** to complete the final exam. Be prepared!

Extra-Credit SET: If the **SET** completion rate for the class exceeds 80%, then the **WHOLE class** will get 0.5% extra credit added to their final grade.

COURSE GRADING CRITERIA

Assessment (Category)	Points	Quantity	Total %
Bone Group Sketches	4.0	9	36.0
Cumulative Lab Quizzes	5.0	8	40.0
Live Class/Student Hours Attendance (Other)	1.0	2	2.0
Introduction Forum (Other)	1.0	1	1.0
Exit Survey (Other)	1.0	1	1.0
Final Exam	20.0	1	20.0
SET (Extra Credit)	0.5	1	0.5
Most Popular Bone Sketch (Extra Credit)	0.5	1	0.5
TOTAL	--	--	101.0



Grading Scale:

97-100: A+
 94-96: A
 90-93: A-
 87-89: B+
 84-86: B
 80-83: B-
 77-79: C+
 74-76: C
 70-73: C-
 67-69: D+
 64-66: D
 60-63: D-
 0 – 59: F

COURSE POLICIES

Communications: The instructor will check email daily, Monday through Friday, and generally respond to non-emergency emails within about 24 hours. Please DO NOT expect an immediate response to last minute questions. I expect the same from you.

Student Hours:

- **Instructor's Dedicated Student Hours** are 11am to 12 pm for drop-in and by email appointment. To reserve a time slot, add your name to the **Google Sheet**.

Late Work: The course has been designed to allow for maximum flexibility. However, given the difficult and vulnerable circumstances that many students find themselves in, it is possible that additional flexibility can be warranted. Students who might benefit from extra flexibility should contact the instructor, preferably before any unmanageable deadlines, and together we will develop a strategy to facilitate your academic progress.

Online Behavior: When communicating with your instructor, teaching assistant, and classmates (via email, the Discussion Forums, etc.), please **use proper etiquette and "netiquette"**. As a general rule of thumb, **err on the side of formality and civility**— you will never offend someone by being too formal or kind! Here are other guidelines:

- **Use proper language:** Typos and errors reflect upon you! And this is an academic environment, so please be as professional as possible in your writing. Avoid typing in ALL CAPS; some people read this as aggressive yelling.
- **Address your recipient properly:** Begin emails and Discussion Forum replies with something like "Hello David."
- **Avoid overuse of emoticons and 'texting' writing:** We all love emoticons, but please use restraint. Just a single *tasteful* emoticon could be appropriate.

UNIVERSITY POLICIES

Important Summer Session 1, 2021 Deadlines:

- Last day to Drop: Monday **June 24**
- Request for "W": Friday, **July 9** (no tuition reversal)
- Change Grade Option: Friday, **July 9**

DRC Remote Accommodations: The Disability Resources Center reduces barriers to inclusion and full participation for students with disabilities by providing support to individually determine reasonable academic accommodations. Operations continue via

remote appointments. If you have questions or concerns about exam accommodations or any other disability-related matter, email the DRC Schedulers at drc@ucsc.edu for an appointment.

Academic Dishonesty: Academic integrity is the cornerstone of a university education. Academic dishonesty diminishes the university as an institution and all members of the university community. It tarnishes the value of a UCSC degree. All members of the UCSC community have an explicit responsibility to foster an environment of trust, honesty, fairness, respect, and responsibility. All members of the university community are expected to present as their original work only that which is truly their own. All members of the community are expected to report observed instances of cheating, plagiarism, and other forms of academic dishonesty in order to ensure that the integrity of scholarship is valued and preserved at UCSC.

In the event a student is found in violation of the UCSC Academic Integrity policy, he or she may face both academic sanctions imposed by the instructor of record and disciplinary sanctions imposed either by the provost of his or her college or the Academic Tribunal convened to hear the case. Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student's transcript.

For the full policy and disciplinary procedures on academic dishonesty, refer to the [Academic Integrity page](#) at the Division of Undergraduate Education.

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 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.

The Title IX Office is actively responding to reports and requests for consultation. If you are not currently working with someone in the office and want to make a report/request a consult, you can expect the fastest response by using our [online reporting link](#).

For more information please visit the [Title IX Operations under Covid-19](#) page.

LIVE CLASS AGENDA

Week	Date	1:00 pm - 1:30 pm	1:30 pm - 3:30 pm
1	June 21 (Monday)	<ul style="list-style-type: none"> • Introductions & Syllabus • Bone Group 1 Lecture 	• Open lab
1	June 23 (Wednesday)	• Bone Group 2 Lecture	• Open lab
1	June 25 (Friday)	• Open lab	• Open lab
2	June 28 (Monday)	• Bone Group 3 Lecture	• Open lab
2	June 30 (Wednesday)	• Bone Group 4 Lecture	• Open lab
2	July 2 (Friday)	• Open lab	• Open lab
3	July 5 (Monday)	****Holiday! No Class!****	--
3	July 7 (Wednesday)	• Bone Group 5 Lecture	• Open lab
3	July 9 (Friday)	• Bone Group 6 Lecture	• Open lab
4	July 12 (Monday)	• Bone Group 7 Lecture	• Open lab
4	July 14 (Wednesday)	• Bone Group 8 Lecture	• Open lab
4	July 16 (Friday)	• Open lab	• Open lab
5	July 19 (Monday)	• Bone Group 9 Lecture	• Open lab
5	July 21 (Wednesday)	• Open lab	• Open lab
5	July 23 (Friday)	• Open lab	• Open lab

COURSE SCHEDULE

Mod.	Live Class Agenda	Assigned Readings	Assignments (*Hard Deadline)
1	Due June 21 (Mon): Bone Group 1 <ul style="list-style-type: none"> • Introduction & Syllabus • Directional Terms & Planes of Reference • Skull Basics • Craniometric Landmarks • Skull Sutures 	Due June 21 (Mon): <ul style="list-style-type: none"> • Chapter 1 • Chapter 2 • Part of Chapter 4 (p. 43-59) 	Due June 27 (Sun): <ul style="list-style-type: none"> • Introduction Forum • Sketches of Bone Group 1 • Lab Quiz 1 (Bone Group 1)*
2	Due June 23 (Wed): Bone Group 2 <ul style="list-style-type: none"> • Elements of the Skull 	Due June 23 (Wed): <ul style="list-style-type: none"> • Chapter 4 (all) 	Due June 29 (Tue): <ul style="list-style-type: none"> • Sketches of Bone Group 2 • Lab Quiz 2 (Bone Groups 1&2)*
3	Due June 28 (Mon): Bone Group 3 <ul style="list-style-type: none"> • Pre-Molar Dentition • Molar Dentition 	Due June 28 (Mon): <ul style="list-style-type: none"> • Chapter 5 	Due July 4 (Sun): <ul style="list-style-type: none"> • Mid-Course Survey (not graded) • Sketches of Bone Group 3 • Lab Quiz 3 (Bone Groups 1-3)*
4	Due June 30 (Wed): Bone Group 4 <ul style="list-style-type: none"> • Vertebrae • Hyoid • Sternum and Ribs 	Due June 30 (Wed): <ul style="list-style-type: none"> • Chapter 6 • Chapter 7 	Due July 6 (Tue): <ul style="list-style-type: none"> • Sketches of Bone Group 4 • Lab Quiz 4 (Bone Groups 1-4)*
5	Due July 7 (Wed): Bone Group 5 <ul style="list-style-type: none"> • Shoulder Girdle • Humerus • Radius • Ulna 	Due July 7 (Wed): <ul style="list-style-type: none"> • Chapter 8 • Chapter 9 	Due July 13 (Tue): <ul style="list-style-type: none"> • Sketches of Bone Group 5 • Lab Quiz 5 (Bone Groups 1-5)*

Mod.	Live Class Agenda	Assigned Readings	Assignments (*Hard Deadline)
6	Due July 9 (Fri): Bone Group 6 <ul style="list-style-type: none"> • Carpals • Metacarpals • Phalanges 	Due July 9 (Fri): <ul style="list-style-type: none"> • Chapter 10 	Due July 15 (Thur): <ul style="list-style-type: none"> • Sketches of Bone Group 6 • Lab Quiz 6 (Bone Groups 1-6)*
7	Due July 12 (Mon): Bone Group 7 <ul style="list-style-type: none"> • Sacrum • Coccyx • Os Coxae 	Due July 12 (Mon): <ul style="list-style-type: none"> • Chapter 11 	Due July 18 (Sun): <ul style="list-style-type: none"> • Sketches of Bone Group 7 • Lab Quiz 7 (Bone Groups 1-7)*
8	Due July 14 (Wed): Bone Group 8 <ul style="list-style-type: none"> • Femur • Patella • Tibia • Fibula 	Due July 14 (Wed): <ul style="list-style-type: none"> • Chapter 12 	Due July 20 (Tues) <ul style="list-style-type: none"> • Sketches of Bone Group 8 • Lab Quiz 8 (Bone Groups 1-8)*
9	Due July 19 (Mon): Bone Group 9 <ul style="list-style-type: none"> • Tarsals • Metatarsals • Phalanges 	Due July 19 (Mon): <ul style="list-style-type: none"> • Chapter 13 	Due July 23 (Fri): <ul style="list-style-type: none"> • Sketches of Bone Group 9
--	FINAL EXAM (Open July 20 to July 23)	Due July 23 (Fri): <ul style="list-style-type: none"> • Exit Survey* • Final Exam (Bone Groups 1-9)* • All outstanding work (e.g., Sketches of Bone Groups 8 & 9)* 	