Advanced Human Osteology

ANG 6520C (0001) • 3 credit hours

Department of Anthropology • College of Sciences • University of Central Florida

Professor Contact

Professor:	Dr. Sandra Wheeler
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Course Information

Course name:	Advanced Human Osteology
Course ID:	ANG 6520C; with lab (C)
Credit hours:	3.0 hours
Semester/Year:	Fall/2018
Location and time:	Thursdays, 3:00-5:50pm, MSB 149; Research Park Osteology Lab, occasional

Course Overview

This course is a reading-based and hands-on approach to the study of the human skeleton. Our focus will be the adult and juvenile human skeleton from archaeological contexts and the various methods and theoretical concepts used in human osteological research. Each week we will be exploring a different topic relating to human osteology. Hands-on skeletal labs will also be a critical part of this course. Classes will consist of student presentations, discussion sessions, and hands-on lab exercises to provide you with experience in working with adult and juvenile skeletal remains.

NB: This is a graduate level applied human osteology course. This is not a beginning osteology course, however, there will be a *brief* review of the human skeleton and basic bone anatomy at the beginning of this course.

Topics to be covered will include:

- The history and development of physical anthropology
- Ethics in human osteological research
- The 'race' concept from a skeletal perspective
- The juvenile skeleton and growth studies
- Skeletal and dental health, disease, and trauma
- Biochemical and molecular methods of analyses
- Assessing identity and status from skeletons
- The peer review process

Course Learning Outcomes

By the end of this course you will be able to:

- Collect basic demographic data from whole, fragmentary and isolated bones
- Understand and apply various methods of determining metric and non-metric skeletal data
- Gather and analyze skeletal data sets
- Synthesize concepts and ideas from the readings and apply them to research questions

Required Texts

There are **no required texts** for this course. All readings will be available electronically via Webcourses or the UCF library system. In addition, the Bone Lab (MSB 149) has several copies of the reference texts we will be regularly using for the readings and labs.

Course Requirements

This class begins on **August 20** and ends on **December 2, 2018.** Final's Week is **Dec 3-7, 2018**. Over this semester, you will be expected to:

- keep up with the readings assigned in the weekly modules.
- turn in your weekly annotations, micropapers, and labs on time and in a professional manner.
- participate in class presentations, discussions, labs, and peer reviews.
- complete a final research paper and present it to the class.

Please note the due dates carefully as there are many of them. I will not accept late work unless there is a valid absence (i.e., illness, family emergencies, conferences, etc). If you are unsure about what qualifies as valid absence, come talk to me. You are advised of this from the start, and you should recognize that it is your responsibility to be aware of all due dates for this course.

Evaluation and Grading

You can access your grades for your work through the 'Grades' link in the main course menu. It is your responsibility to check on your grades throughout the course. Please allow for a reasonable amount of time to pass for the grading process to occur. I will put as much time and effort into grading your work as you do in completing it.

NB: As per UCF rules, any grade below a B- in a graduate course **does count** toward your GPA but **does NOT count** toward your degree program.

Your final grade for the course is weighted and will be based on your performance on the following:

Assignment	Percentage	Description
Participation	10%	Weekly presentation and discussion of assigned readings, peer reviews and active participation. This is a cumulative grade assessed at the end of the semester.
Annotations	10%	Weekly annotation on readings.
Micropapers	20%	Weekly micropapers (600-700 words) on approved topics. You will peer review these.
Labs	20%	Hands-on osteology exercises.
Final paper and presentation	40%	Research paper and public presentation.

Really Important Participation Information: We are required to document students' academic activity at the beginning of each course. In order to document that you began this course, **YOU MUST COMPLETE THE GETTING STARTED ACTIVITY BY FRIDAY AUGUST 24, 2018.** Failure to do so will result in a delay in the disbursement of your financial aid. And no one wants that.

Discussion and presentation: Each class will start with start with a student 'expert' who will be the Discussion Leader and Moderator for the week's topic. You are expected to be familiar with the assigned readings for the week's presentation topic and also with some of the literature on key issues or debates within human osteology that may relate to that topic. You will come up with at least two (maybe more) leading discussion questions and moderate the class discussions.

Annotations: You will turn in one annotation each week on the theme of that week's readings. You will submit your annotations to the Assignment page AND you will paste them (in alphabetical order) into the annotation module page for that week so everyone can see the submitted annotations.

Micropapers: You're probably wondering what a micropaper is. It's basically a short and intense research paper on a particular topic. I have compiled an **informative document** explaining exactly what you can expect preparing and peer reviewing a micropaper. Almost every week, you will turn in a micropaper on the theme of that week's readings. You may even use the topic for your annotations for your micropaper! Your classmates will peer review your micropaper and I will check over their reviews before releasing your grade.

Lab exercises: Labs are designed to familiarize you with techniques for data collection as well as applications of skeletal data sets. Lab exercises will be turned in the following week they are assigned unless otherwise noted. We will start the labs in class, however it is your responsibility to ensure their completion before the due date. This means working on your labs outside of class time. Please check the MSB 149 room schedule (posted on the lab door) for times when the room is not in use. If there is a class in session, **do not** interrupt!! We will have some class and labs over in Research Parkway, I will post those dates as we get closer to the meeting times.

Final research paper and presentation: You are expected to write a 10- to 12-page research paper on a chosen and approved topic. Your research paper will form the basis of your final presentation. Your paper should address a problem, methodology or debate in human osteology and must have a clear thesis statement or research question (i.e., not a literature review). Reference and citation style will be consistent with the style used in the Annotations. Your presentation will consist of a 15-minute (max) PowerPoint (or similar) presentation summarizing the major findings in your research paper. The presentation will be followed by a brief question period. Final presentations will take place in **MSB 149 on NOV 29 and DEC 6**. You are **required to be present and fully participate in both sessions**. More details about your paper and presentation can be found in Assignments or in the Modules.

Grading Scale (+/- letter grades)

A	94-100%	B+	87-89%	C+	77-79%	D	60-69%
A-	90-93%	B	84-86%	C	70-76%	F	59% or below
		B-	80-83%				

Incomplete grades are only given in situations where unexpected and documented medical emergencies prevent a student enrolled in the course in good standing from completing the remaining work. Your instructor is the final authority on whether you qualify for an incomplete. Incomplete work must be finished by the end of the subsequent semester or the 'I' grade will automatically be recorded as an 'F' on your transcript.

Weekly Schedule

The following table provides the **weekly cycle of work that you are expected to complete** for your class preparation and participation:

Thursdays	Fridays	Saturdays	Tuesdays	Wednesdays
• Class 3-5:50pm • Discussion leader 3-4:30pm • Micropaper assigned • Start lab assignment • Peer review due by11:59pm	• Peer review grades released • Labs due by 11:59pm	• Dance	• Annotations due by 11:59pm	• Micropapers due by 12pm

Important Things

First and foremost, read this syllabus. The syllabus is your guide so that you can keep up with the scheduled readings, modules, and assignments. There are many due dates for assignments, so you have to stay on top of this as **no late work will be accepted** unless I have given you express permission due to extraneous circumstances. If you've never used that **Calendar button** on the side of your screen, use it!! It's super helpful!

What if I Have an Emergency that Affects My Course Performance or Coursework?

First of all, come talk to me. I can't help you or work with you if I don't know what's going on. If you don't feel like you can talk with me, contact the Anthropology Department Graduate Coordinator to discuss your situation.

Academic Integrity

Time management, problem solving, responsibility and personal accountability are among the most important things you can learn in college. To be successful in this class (and in college in general), you will need to check Webcourses regularly (and often!), keep up with assigned readings and make every effort to complete assignments, labs, and papers on time and in a professional manner!

Academic honesty: Plagiarism and/or cheating of any kind on an examination, quiz, or assignment will result at least in an "F" for that assignment (and may, depending on the severity of the case, lead to an "F" or "Z" for the entire course). It may also be subject to appropriate referral to the UCF Office of Student Conduct for further action. See the UCF Golden Rule. I will assume that you will adhere to the academic creed of this University and will maintain the highest standards of academic integrity. In other words, **don't cheat** by giving answers to others or taking them from anyone else. **If you let your friend copy your homework, that is plagiarism also and you will both be subject to a Z grade** or I might just have to turn you both into werewolves. I may just toss a zombie on you. And no one wants that. Keep this in mind before you decide to "help out" a friend. Also, please keep in mind while the Internet is an excellent source of *quick* information, it is not necessarily an excellent source of *valid* information and may also be a source of plagiarism in its own right.

I will also adhere to the highest standards of academic integrity, so please do not ask me to change or expect me to change your grade illegitimately or to bend or break rules for one person that will not apply to everyone. This is particularly the case when it comes to final grades.

Trolling: Trolls, don't be one, don't do it. See statement below.

Respect for diversity and inclusion: This class will be conducted in a way that respects all aspects of diversity and it is my intent to teach this course so that all students, no matter their **gender identity, sexuality, disability, age, socioeconomic status, immigration status, ethnicity, and culture,** are respected. It is expected that everyone show respect for one another and the diverse issues and topics that will be covered. If you make inappropriate statements or act aggressively toward other students, you may be removed from the class OR if the infraction is severe, **you may be removed from the course** and subject to action by the Office of Student Conduct. Also, please let me know if you would like me to use specific **personal gender pronouns** (PGPs) when communicating with you.

Campus Safety

Emergencies on campus are rare, but if one should arise during class, everyone needs to work together. Students should be aware of their surroundings and familiar with some basic safety and security concepts:

- In case of an emergency, dial 911 for assistance.
- Sign up to receive UCF text alerts by going to <my.ucf.edu> and logging in. Click on "Student Self Service" located on the left side of the screen in the toolbar, scroll down to the blue "Personal Information" heading on the Student Center screen, click on "UCF Alert", fill out the information, including e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."

- If you're not on campus, use your common sense and stay safe.

Student Accessibility Services (SAS)

The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need disability-related access in this course should contact the professor as soon as possible. Through Student Accessibility Services, a Course Accessibility Letter may be created and sent to professors, which informs faculty of potential access and accommodations that might be reasonable. No accommodations will be provided until the professor receives the letter from SAS. Students who need accommodations must be registered with Student Accessibility Services, Ferrel Commons 185, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, or sas@ucf.edu.

Copyright

This course may contain copyright protected materials such as audio or video clips, images, text materials, etc. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. Please do not copy, duplicate, download or distribute these items. **The use of these materials is strictly reserved for this online classroom environment and your use only.** All copyright materials are credited to the copyright holder.

There are many fraudulent websites claiming to offer study aids to students but are actually cheat sites. They encourage students to upload course materials, such as test questions, individual assignments, and examples of graded material. Such materials are the intellectual property of instructors, the university, or publishers and may not be distributed without prior authorization (see Copyright statement above). Students who engage in such activity are in violation of academic conduct standards and may face penalties. Also, it's just not cool.

Third-Party Software and FERPA

During this course you might have the opportunity to use public online services and/or software applications sometimes called third-party software such as a blog or wiki. While some of these could be required assignments, you need **not** make any personally identifying information on a public site. Do not post or provide any private information about yourself or your classmates. Where appropriate you may use a pseudonym or nickname. Some written assignments posted publicly may require personal reflection/comments, but the assignments will not require you to disclose any personally identity-sensitive information. If you have any concerns about this, please contact your instructor.

Course Lecture and Assignment Schedule

Changes to the lecture and assignment schedules are not expected but may occur. Your professor reserves the right to make reasonable adjustments to the assignment schedule. Any changes will be announced in class or through Webcourses. Due dates for assignments can be found in the table below. Look in the Modules for a complete listing of the course schedule and materials.

ANG6520C Advanced Osteology Required Readings: See Webcourses for assignment due dates

Module/Date	Topic and Required Readings
Module 1/Aug 30	History of Physical Anthropology and Scientific Racism • Washburn, S. (1951). The new physical anthropology. *Trans N Y Acad Sci* 13(2), 298-304. • Blakey, M.L. (1987). Intrinsic social and political bias in the history of American physical anthropology with special reference to the work of Aleš Hrdlička. *Crit Anthropol* 7(2), 7-35.

	• Buikstra, J.E. (2006). A historical introduction. In: J.E. Buikstra and L.A. Beck (Eds.), *Bioarchaeology: The contextual analysis of human remains* (pp. 7-26). London: Elsevier. • Little, M.A. (2017). Physical anthropology in 1918 and the founding of the U.S. journal. *Am J Phys Anthropol* 165, 626-637.
Module 2/Sep 6	Ethics in Biological Anthropology and Human Osteology and Research Design • Walker, P.L. (2008). Bioarchaeological ethics: A historical perspective on human remains. In: M.A. Katzenberg and S.R. Saunders (Eds.), *Biological anthropology of the human skeleton, second edition* (pp. 3-40). New York: John Wiley & Sons, Inc. • Kaufmann, M., Rühli, F.J. (2010). Without 'informed consent'? Ethics and ancient mummy research. *J Med Ethics* https://jme.bmj.com/content/36/10/608 • Martin, D.L., Harrod, R.P., Pérez, V.R. (2013). An ethos for bioarchaeologists. In: *Bioarchaeology: An integrated approach to working with human remains,* Manuals in Archaeological Method, Theory and Technique (pp. 23-55). New York: Springer. • Turner, T.R., Wagner, J.K., Cabana, G.S. (2017). Ethics in biological anthropology. *Am J Phys Anthropol* 165, 939-951. • Martin, D.L., Harrod, R.P., Pérez, V.R. (2013). Formulating research projects involving human remains. In: *Bioarchaeology: An integrated approach to working with human remains,* Manuals in Archaeological Method, Theory and Technique (pp. 57-92). New York: Springer. Review Case Study of Ata
Module 3/Sep 13	The Paradigm of Race • Sauer, N.J. (1992). Forensic anthropology and the concept of race: If races don't exist, why are forensic anthropologists so good at identifying them? *Soc Sci Med* 34, 107-111. • Ubelaker, D.H. (2008). Forensic anthropology: Methodology and diversity of applications. In: M.A. Katzenberg and S.R. Saunders (Eds.), *Biological anthropology of the human skeleton, second edition* (pp. 41-69). New York: John Wiley & Sons, Inc. • Ousley, S., Jantz, R., Freid, D. (2009). Understanding race and human variation: Why forensic anthropologists are good at identifying race. *Am J Phys Anthropol*, 68-76. • Caspari, R. (2018). Race, then and now: 1918 revisited. *Am J Phys Anthropol* 165, 924-938.
Module 4/Sep 20	The Juvenile Skeleton • Goodman, A.H., Armelagos, G.J. (1989). Infant and childhood morbidity and mortality risks in archaeological populations. *World Archaeol* 21, 225-243. • Saunders, S.R. (2008). Juvenile skeletons and growth-related studies. In: M.A. Katzenberg and S.R. Saunders (Eds.), *Biological anthropology*

	of the human skeleton, second edition (pp. 117-147). New York: John Wiley & Sons, Inc. • Halcrow, S.E., Tayles, N. (2008). The bioarchaeological investigation of childhood and social age: Problems and prospects. *J Archaeol Method Theory* 15, 190-215. • Gowland, R.L., Chamberlain, A., Redfern, R.C. (2014). On the brink of being: Re-evaluating infanticide and infant burial in Roman Britain. *J Rom Archaeol supplementary series* 96, 69-88. • Schillaci, M.A., Nikitovic, D., Akins, N.J., Tripp, L., Palkovich, A.M. (2011). Infant and juvenile growth in ancestral Pueblo Indians. *Am J Phys Anthropol* 145, 318-326.
Module 5/Sep 27	Adult Age, Sex, and Stature • Milner, G.R., Wood, J.W., Boldsen, J.L. (2008). Advances in paleodemography. In: M.A. Katzenberg and S.R. Saunders (Eds.), *Biological anthropology of the human skeleton, second edition* (pp. 561-600). New York: John Wiley & Sons, Inc. • Buikstra, J.E., Ubelaker, D.H. (1994). Documentation of sex differences and age changes in adults. In: J.E. Buikstra and D.H. Ubelaker (Eds.), *Standards for data collection from human skeletal remains*, (pp. 15-38). Albuquerque: Arkansas Archaeological Survey Research Series No. 44. • Raxter, M.H., Auerbach, B.M., Ruff, C.B. (2006). Revision of the Fully Technique for estimating statures. *Am J Phys Anthropol 130*, 374-384. • Geller, P.L. (2005). Skeletal analysis and theoretical complications. *World Archaeol* 37, 597-609.
Module 6/Oct 4	Guest Speaker: Dr. Tosha Dupras on Peer Review in AJPA / Bioarchaeology and the Osteological Paradox • Larsen, C.L. (2018). Bioarchaeology in perspective: From classifications of the dead to conditions of the living. *Am J Phys Anthropol* 165, 865-878. • Martin, D.L., Harrod, R.P., Pérez, V.R. (2013). The practice of bioarchaeology. In: *Bioarchaeology: An integrated approach to working with human remains,* Manuals in Archaeological Method, Theory and Technique (pp. 1-21). New York: Springer. • Wood, J.W., Milner, G.R., Harpending, H.C., Weiss, K.M. (1992). The osteological paradox: Problems of inferring prehistoric health from skeletal samples. *Curr Anthropol* 33, 343-370. • Wright, L.E., Yoder, C.J. (2003). Recent progress in bioarchaeology: Approaches to the osteological paradox. *J Archaeol Res* 11, 43-70. • DeWitte, S.N., Stojanowski, C.M. (2015). The osteological paradox 20 years later: Past perspectives, future directions. *J Archaeol Res* 23, 397-450.
Module 7/Oct 11	Dental Anthropology and Pathology

	• Hillson, S. (2008). Dental pathology. In: M.A. Katzenberg and S.R. Saunders (Eds.), *Biological anthropology of the human skeleton, second edition* (pp. 301-340). New York: John Wiley & Sons, Inc. • Robbins Schug, G. (2016). Paleodemography II: Age estimation from dental histology. In: J.R. Lukacs and J.Pal (Eds.), *Holocene foragers of North India: The bioarchaeology of Mesolithic Damdama,* BAR International Series 2783 (pp. 121-131). Oxford: Archaeopress. • King, T., Humphrey, L.T., Hillson, S. (2005). Linear enamel hypoplasias as indicators of systemic physiological stress: Evidence from two known age-at-death and sex populations from Postmedieval London. *Am J Phys Anthropol* 128, 547-559. • Tiesler, V., Cucina, A., Ramírez-Salomón, M. (2017). Permanent dental modifications among the ancient Maya. In: S.E. Burnett and J.D. Irish (Eds.), A world view of bioculturally modified teeth (pp. 270-284). Gainesville: University Press of Florida. • Keenleyside, A. (2008). Dental pathology and diet at Apollonia, a Greek colony on the Black Sea. *Int J Osteoarchaeol* 18, 262-279.
Module 8/Oct 18	Paleopathology • Grauer, A. L. (2018). A century of paleopathology. *Am J Phys Anthropol* 165, 904-914. • Goodman, A.H., Martin, D.L. (2002). Reconstructing health profiles from skeletal remains. In: R.H. Steckel and J.C. Rose (Eds.), *The backbone of history: Health and nutrition in the western hemisphere* (pp. 11-60). Cambridge: Cambridge University Press. • Temple, D.H., Goodman, A.H. (2014). Bioarchaeology has a “health” problem: Conceptualizing “stress” and “health” in bioarchaeological research. *Am J Phys Anthropol* 155, 186-191. • Ortner, D.J. (2012). Differential diagnosis and issues in disease classification. In: A.L. Grauer (Ed.), *A companion to paleopathology* (pp. 250-267). Chichester: Blackwell Publishing Ltd.
Module 9/ Oct 25	Trauma Analysis and Dismemberment • Lovell, N. (2008). Analysis and interpretation of skeletal trauma. In: M.A. Katzenberg and S.R. Saunders (Eds.), *Biological anthropology of the human skeleton, second edition* (pp. 341-386). New York: John Wiley & Sons, Inc. • Walker, P.L. (2001). A bioarchaeological perspective on the history of violence. *Ann Rev Anthropol* 30, 573-596. • Nystrom, K.C., Sirianni, J., Higgins, R., Perrelli, D., Liber Raines, J.L. (2017). Structural inequality and postmortem examination at the Erie County Poorhouse. In: K.C. Nystrom (Ed.), *The bioarchaeology of dissection and autopsy in the United States* (pp. 279-300). Switzerland: Springer. • Dupras, T.L., Williams, L.J., De Meyer, M., Peeters, C., Depraetere, D., Vanthuyne, B., Willems, H. (2010). Evidence of amputation as medical treatment in ancient Egypt. *Int J Osteoarchaeol* 20, 405-423.

	• Wheeler, S.M., Williams, L.J., Beauchesne, P. Dupras, T.L. (2013). Shattered lives and broken bones: Evidence of physical child abuse in Ancient Egypt. *Int J Paleopathol* 3, 71-82.
Module 10/Nov 1	No class, UCF Football game, campus closes at 3pm On your own, read Reconstructing Social or Ethnic Identity • Knudson, K.J., Stojanowski, C.M. (2008). New directions in bioarchaeology: Recent contributions to the study of human social identities. *J Archaeol Res* 16, 397-432. • Tiesler, V. (2012). Studying cranial vault modifications in ancient Mesoamerica. *J Anthropol Sci* 90, 33-58. • Torres-Rouff, C. (2008). The influence of Tiwanaku on life in the Chilean Atacama: Mortuary and bodily perspectives. *Am Anthropol* 110, 325-337. • Buzon, M.R. (2006). Biological and ethnic identity in New Kingdom Nubia: A case study from Tombos. *Curr Anthropol* 47, 683-695. • Geber, J. (2017). Interring the 'deserving' child: The archaeology of the deaths and burials of children at the Kilkenny Workhouse during the Great Famine in Ireland, 1845-52. In: E. Murphy and M. Le Roy (Eds.), *Children, death and burial: Archaeological discourses* (pp. 248-262). Oxford: Oxbow Books.
Module 11/Nov 8	Biomechanics and Activity Patterns • Ruff, C.B. (2008). Biomechanical analyses of archaeological human skeletons. In: M.A. Katzenberg and S.R. Saunders (Eds.), *Biological anthropology of the human skeleton, second edition* (pp. 183-206). New York: John Wiley & Sons, Inc. • Pearson, O.M., Buikstra, J.E. (2006). Behavior and the bones. In: J.E. Buikstra and L.A. Beck (Eds.), *Bioarchaeology: The contextual analysis of human remains* (pp. 207-226). London: Elsevier Ltd. • Stock, J.T., Pfeiffer, S.K. (2004). Long bone robusticity and subsistence behavior among Later Stone Age foragers of the forest and fynbos biomes of South Africa. *J Archaeol Sci* 31, 999-1013. • Wanner, I.S., Sierra Sosa, T., Alt, K.W., Tiesler Blos, V. (2007). Lifestyle, occupation, and whole bone morphology of the Pre-Hispanic Maya coastal population from Xcambó, Yucatan, Mexico. *Int J Osteoarchaeol* 17, 253-268.
Module 12/Nov 15	Biochemical Methods of Analysis • Katzenberg, M.A. (2008). Stable isotope analysis: A tool for studying past diet, demography, and life history. In: M.A. Katzenberg and S.R. Saunders (Eds.), *Biological anthropology of the human skeleton, second edition* (pp. 413-441). New York: John Wiley & Sons, Inc. • Stone, A.C. (2008). DNA analysis of archaeological remains. In: M.A. Katzenberg and S.R. Saunders (Eds.), *Biological anthropology of the human skeleton, second edition* (pp. 461-483). New York: John Wiley & Sons, Inc.

	• Spence, M.W., White, C.D., Longstaffe, F.J., Law, K.R. (2004). Victims of the victims: Human trophies worn by sacrificed soldiers from the Feathered Serpent Pyramid, Teotihuacan. *Anc Mesoam* 15, 1-15. • Prowse, T.L., Schwarcz, H.P., Garnsey, P., Knyf, M., Macchiarelli, R., Bondoli, L. (2007). Isotopic evidence for age-related immigration to Imperial Rome. *Am J Phys Anthropol* 132, 510-519. • Dupras, T.L., Schwarcz, H.P., Fairgrieve, S.I. (2001). Infant feeding and weaning practices in Roman Egypt. *Am J Phys Anthropol* 115, 204-212.
Nov 22	No class, Thanksgiving
Nov 29/Dec 6	Final Presentations