ANTY 513.01: Seminar in Bioarchaeology & Skeletal Biology

Matthew P. Rhode
University of Montana, Missoula, matthew.rhode@umontana.edu

Follow this and additional works at: https://scholarworks.umt.edu/syllabi2021-2025

Let us know how access to this document benefits you.

Recommended Citation
https://scholarworks.umt.edu/syllabi2021-2025/1607

This Syllabus is brought to you for free and open access by ScholarWorks at University of Montana. It has been accepted for inclusion in University of Montana Course Syllabi, 2021-2025 by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.
Course Description:
As listed in the catalog, this course is designed as an exploration of “some” theoretical and methodological approaches to studying archaeologically derived human skeletal remains. Topics that we will try to cover over the semester: health and disease, trauma, diet and nutrition, growth, activity patterns, and measures of biological distance.

As this course is a seminar - = the concept of the course is to give you knowledge across a range of topics that allow you to learn about how skeletal remains can be investigated to help learn about aspects of population. All these ideas will be presented in a discussion-based format.

*Students will also be required to demonstrate competency by designing a research proposal or paper including identification and acquisition of relevant literature and appropriate data collection methods | skeletal samples.

Required Text:

Optional Text

Additional Texts:
There will be “lots” of additional articles and other readings across the semester, that you will find and make available for everyone. Once collected you will send them to be, and I will upload them to Moodle (for appropriate weeks. *Thus, you need to locate your articles and chapters, obtain them, and send them to me before your week(s) as lecture | discussion leader.
Course Structure (How your will be graded):

As a seminar, the course will be based around class discussions focused on theoretical and methodological issues in bioarchaeology and skeletal biology. The lecture will be designed to introduce topics and provide the basis for the ensuing discussions. Thus, **IT IS YOUR** responsibility to come to class prepared (having read) to discuss the assigned readings and have questions and answers ready for discussion.

**Grade = 3 Components:**

20% - **Class participation** [Reading and Discussion]

Each week you will come to class prepared = having read and have questions and answers ready both the topic leads and rest of the class. Those not presenting- will submit (in person or email) a typed document – *summarizing the papers and chapters for the meeting, which has at least 2 discussion questions for each reading (let’s say at least 2 pages, 12 pt. font, single line spacing)*. Part of the participation will be based on your answer or asking questions in class as well.

45% (3x) – **Presentations** (Weekly Topic Leaders).

At least 3 times during the semester you will be required to lead the assigned topic and come up with a list of readings for your fellow students. Being a topic lead = means having lecture slides with a basic summary of the topic and having at least 2-4 questions per reading. Depending on class size, these presentations may be made solo or in small groups.

- Topic Leaders will need to locate 3-5 articles or text chapters for each week. These should be of reasonable length, so everyone can read them, not just scan them)… so look for at maximum 10 pages. They should also be related to the foundations of the topic, major theoretical issues | debates, as well as current applications.
  - *These must be submitted to the instructor (to be put on Moodle for rest of class) at least ONE WEEK before your presentation The sooner is better...

For the topic you choose you will be responsible to read in much greater detail regarding in order to effectively **“teach”** topic yet have enough time for discussion. The class is 1 hour 20 mins. So, ~30 minutes for lecture and ~50 minutes for discussion.

The lecture introduces the topic and important aspects, then shift to asking questions that the rest of the class and topic leader. **PowerPoint** presentations or similar formats are encouraged… send your slides to Dr. Rhode when completed and a copy to class on your day to be the topic leader. Redundancy is a good trait to cultivate.

35% - **Final Paper | Presentation**

The last portion of your grade will be based on developing, presenting, and submitting a research proposal to investigate an aspect of skeletal biology that interests you.

Your research proposal should include an **introduction** (why your hypothesis should be investigated), a **review of the relevant literature**, a **description of the method of data collection** that would be employed, **identification and description** of an appropriate skeletal sample (that actually exists) for testing your hypothesis, **expected outcomes**, and a **complete bibliography**.

There are historic and prehistoric skeletal samples housed at museums and universities across the US, Central America, South America, Europe, Asia, and Africa, and many institutions provide lists of their holdings online.

The paper must be **10 pages** in length and is due by **May 10** (last day of Spring 2024 finals week) at 4:30 pm. I will also want a copy of the presentation.

You will also present a short (15 minute) presentation on your proposed project our “finals” period. This presentation should be viewed as or formatted as a presentation you would give at a local, regional, national, or international meeting. However, given the specific material covered, it may not fully replicate the format of a fully research project.
**Total Points (~800 points)**
*Value may change, likely downward as assignments are removed based on constraints.*

- **A** = 720 pts. or 90%
- **B** = 640 pts. or 80%
- **C** = 560 pts. or 70%
- **D** = 480 pts. or 60%
- **F** = 480 pts. or < 60%

I like the simplicity of the straight grade approach.

**General Course Policies**

**Course Attendance | Participation:**

Like most courses I teach, one of the primary means of instruction = lectures related to a chapter or chapters in your required text. I essentially distilled text into lectures with images. The difference in this course, as discussed above, is that you will be leading the lectures and discussion too. As such, you need to attend class regularly. I take attendance every class but mostly as means to learn names (never been good with names), but I may use this information during final (points) grade calculations as a form of extra credit to bump up borderline grades = 89.54% (B) to 90% (A) for example.

Obviously, there will be times when you cannot attend the lecture (for various reasons). I understand this, and I will allow a limited number of absences (~3) during the semester. If you know you will be missing a class (ahead of time), send me a note about the absence (email). If you are sick, let me know via email after you have returned so that I can make a note in the roster to ignore any absence I have listed for you.

I am confident that some of the material we will cover is new to you, and you may have questions and should have them. If you have questions at any time, please ask.

I will upload any lecture slides used (after lecture by Fri.) and articles (on sent to me) before class (as soon as possible).

**Moodle Site for Course:**

I have "customized" a general Moodle site for the course as much as possible. You can access Moodle at UM form the MYUMT page. Once you login click on the Moodle link and log-in, from there you will scroll down to your courses and find ANTY513. Most of not all of the course content will be (at one time or another) added to the site. If you have any problems access this content, send me an email = matthew.rhode@umontana.edu. If you have any issues accessing the Moodle site, Ask the Solutions Center at the following address: https://umontana.edu/ and submit a help ticket, or send an email to helpdesk@umontana.edu. I can fix items I put on Moodle, but I cannot fix technical (your computer/internet connection) issues you may encounter.

**Apple users, please note.** I am a PC user and have had issues opening "*.pages" and "*.key" files on PC's. The *.pages format appears to be a default on Apple computers in Word, and the *.key format is for Keynote, which is a PowerPoint-type software. I can eventually open them, but I have to go through several hoops to do. Thus, I require that anything uploaded to Moodle or via email be converted or saved as a *.doc, *.docx, *.txt, or *.pdf files so that I can both open and read what you send. For example, in the past, when I was able to convert "pages" files the "easy" way, they became PDFs but with only 1 page, even in multi-page assignments. This leads to significant points deductions (50% off). I will contact you if I cannot open any file you send, but the deductions will become permanent if you do not change its format.
Office Hours / Contacting Me:

My office hours are listed above. I try to keep an "open door" policy, which means that when I am in my office (most of the time), my door will be open, "cracked," or at the very least. Just knock on the door and come in. I only ask that you give me ~30 mins. before class to prepare for my lecture (typos are my nemesis). My email is listed above is (matthew.rhode@umont.mso.edu). It is the best way to contact me as I check it regularly during the day, but not as much during the evenings or weekends. Thus, I may not get back on the same day. Regardless, please give me a ~24 hr. window to respond if I do not respond within that time frame or 48 hrs. On weekends, send me another message. I have found that sometimes when I have many emails in my inbox (often near due dates), I may lose an email from time to time in the stack.

**Electronic Devices & Class Conduct**

The bane and boon of instructors… Simply put, you are here to learn, and I am here to teach. Over the years, I have struggled with the use of electronic devices in class. While you may think they are essential or necessary to always have on you constantly, THEY are NOT needed during lectures, but you may use them to take notes (I understand), but generally they are a distraction for you and the rest of the class. Thus, once I begin (usually on time), your cell phones must be turned off (or silenced) and put away. This includes earbuds of any type (wired or wireless). By this, I mean that your devices need to be in a bag or pocket, not in your hand, leg, or your desk. If you think that I cannot see you, you are wrong, and by using your phone, you are only hurting yourself, annoying others, and in the long-term, impacting your grade by not paying attention. That is your fault, not mine or anyone else's. Your decisions are your own, but when your actions impact other students, we have a problem, which must be dealt with appropriately. What about laptops and tablets? I also tend to be against these, but I know that some students prefer to take notes using these devices. Like phones, students may be checking email, Facebook, Twitter, YouTube, Netflix, etc. Thus, if you want to use your tablet or computer to take notes, I ask that you talk to me to permit me early in the semester. I also ask that you arrive at class on time. Some of you may be coming from the other side of campus (I have had to make treks across campus to give lectures in the past. Once class starts, I ask that the crosstalk stop and not talk during lecture unless you have a question. You may not think that I can hear you, but I can and find it disruptive and inconsiderate when I am lecturing and there is still crosstalk in the room. Continuing the coming and going, do not leave the class mid-lecture to conduct other business unless it is vital/urgent. If you know that you must leave early, let me know before class, and that way, it will not be as much of a disruption. In general, the golden rule is to respect your fellow students and your instructor. Do unto others as you would have them do unto you.

General Policies

1) Students with disabilities requiring appropriate academic adjustments should contact the Office of Disability Equity (ODE). “Reasonable” means the University permits no fundamental alterations of academic standards or retroactive modifications. (For other options see http://www.umt.edu/disability).

2) Academic dishonesty will be dealt with in accordance with university policies. Though I don’t expect any issues… it is policy.
   a) Cheating on labs will result in an F in the course.
   b) Plagiarism is a form of cheating. It is defined in the Macmillan Dictionary as “the process of taking another person’s work, ideas, or words, and using them as if they were your own.” If you plagiarize any assignment, you will receive, at minimum, a zero for the assignment. We are experts at detecting plagiarism.
University Support Services

The University of Montana provides a plethora of student support resources available to all students. These programs are designed to support the continued progress and success of UM students from all backgrounds. From stress relief activities scheduled in the University Center Lobby to free academic tutoring and writing support. Please take advantage of these resources.

- **Office for Student Success**: hub for information pertaining to the Undergraduate Advising Center, Financial Education Program, KPCN (The Peer Connection Network), Writing and Public Speaking Center, TRiO, and more.
- **Campus Resource Page**: Outlines key resources available to students such as campus tutoring (umn.edu/tutoring), EdReady Montana, Study Jam Tutoring, Four Bear Program, and more! Check it out.
- **The Writing and Public Speaking Center**: An amazing group of individuals ready to help you with all stages of writing from planning and organizing to citations. You can book individual writing appointments for personalized support, or you can attend writing support groups and workshops. They will even help you avoid procrastination by setting mini-progress deadlines to hold you accountable and keep that ‘Panic Monster’ away!
- **Curry Health Center**: Your one-stop health shop. Quick and affordable access to healthcare, behavioral health, dental needs, and a full pharmacy!
- **Student Advocacy Center**:
  - The Associated Students of the University of Montana (ASUM): Offer support services for non-education specific needs.
    - **ASUM Legal**: While this department does charge for many of its services, they provide very affordable legal assistance for things like renter’s rights violations, legal document drafting, and more.
    - **ASUM Food Pantry**
    - **ASUM Childcare**
- **Student Advocacy Resource Center (SARC)**: Advocacy and support for students who have experienced discrimination or assault.

This list is far from comprehensive. If there is something that you are struggling with, please do not feel that you have to face it alone. The UM community is here to support you; all you need to do is reach out. If there is a resource not listed that you require, please don’t hesitate to ask your instructor.

### Important UM Deadlines & Holidays Spring 2024

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Sky Experience</td>
<td>Tues.-Wed. Jan. 16-17</td>
</tr>
<tr>
<td>Spring 2024 Semester Classes Begin</td>
<td>Thurs. Jan. 18</td>
</tr>
<tr>
<td>President’s Day – No classes</td>
<td>Mon. Feb. 19</td>
</tr>
<tr>
<td>Spring Break (All Week)</td>
<td>Mon. Mar 18 – Fri Mar. 22</td>
</tr>
<tr>
<td>Last Day of Regular Classes</td>
<td>Fri. May. 3</td>
</tr>
<tr>
<td>Final Exam (Week)</td>
<td>Mon. May. 6 - Fri. May 10</td>
</tr>
<tr>
<td>Spring Commencement</td>
<td>Sat. May. 11</td>
</tr>
<tr>
<td>Course Grades to Registrar (Instructors)</td>
<td>3rd Week of May.</td>
</tr>
<tr>
<td>Week</td>
<td>Day</td>
</tr>
<tr>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>1</td>
<td>H 1</td>
</tr>
<tr>
<td>2</td>
<td>T 2</td>
</tr>
<tr>
<td></td>
<td>H 3</td>
</tr>
<tr>
<td>3</td>
<td>T 4</td>
</tr>
<tr>
<td></td>
<td>H 5</td>
</tr>
<tr>
<td>4</td>
<td>T 6</td>
</tr>
<tr>
<td></td>
<td>H 7</td>
</tr>
<tr>
<td>5</td>
<td>T 8</td>
</tr>
<tr>
<td></td>
<td>H 9</td>
</tr>
<tr>
<td>6</td>
<td>T 10</td>
</tr>
<tr>
<td></td>
<td>H 11</td>
</tr>
<tr>
<td>7</td>
<td>T 12</td>
</tr>
<tr>
<td></td>
<td>H 13</td>
</tr>
<tr>
<td>8</td>
<td>T 14</td>
</tr>
<tr>
<td></td>
<td>H 15</td>
</tr>
<tr>
<td>9</td>
<td>T 16</td>
</tr>
<tr>
<td></td>
<td>H 17</td>
</tr>
<tr>
<td>10</td>
<td>T 18</td>
</tr>
<tr>
<td></td>
<td>H 19</td>
</tr>
<tr>
<td>12</td>
<td>T 22</td>
</tr>
<tr>
<td></td>
<td>H 23</td>
</tr>
<tr>
<td>14</td>
<td>T 26</td>
</tr>
<tr>
<td></td>
<td>H 27</td>
</tr>
<tr>
<td>15</td>
<td>T 28</td>
</tr>
<tr>
<td></td>
<td>H 29</td>
</tr>
<tr>
<td>16</td>
<td>T 30</td>
</tr>
<tr>
<td></td>
<td>H 31</td>
</tr>
<tr>
<td>17</td>
<td>TBD</td>
</tr>
</tbody>
</table>
Course Schedule

As commonly occurs, this is my pie in the sky view of the semester. While we will try to keep to the schedule. However, we may run a bit over (as often happens), and shift topics around. The due dates for the project components (proposal, draft, final) will be firm.

---

**Week #1 - M-F Jan. 15-19**

*Mon. Jan. 15 Martin Luther King Jr. Day – No Classes, Offices Closed*

*Tues.-Weds. Jan. 16-17 Big Sky Experience*

**Classes Begin (Spring 2024) – Thurs. Jan. 18**

Course Introduction – Syllabus Review

Discussion = Topic Selection for rest of semester…

---

**Week #2 - M-F – Jan. 22-26**

Bioarchaeology – Theory | Theory – Bioarchaeology – Theory Ethics

Readings:

- Larsen CS 2018. Bioarchaeology in perspective: From classifications of the dead to conditions of the living AJPA 865-878.
- Katzenberg and Grauer 2019: Ch1 Lambert and Walker Bioarchaeological Ethics:
- Perspectives on the Use and Value of Human Remains in Scientific Research 3-43.
- Larsen 2015: Ch1 - Introduction

---

**Week #3 - M-F -Jan. 29–Feb. 2**

Nature of Archaeology Assemblages – Taphonomy

Morphology – Developmental Studies - Children

Readings:

- Katzenberg and Grauer 2019: Ch3 Stodder Taphonomy and the Nature of Archaeological Assemblages 73-117
- Katzenberg and Grauer 2019: Ch4 Lewis Children in Bioarchaeology: Methods and Interpretations 119-145
- Larsen 2014: Ch2 – Stress and Deprivation During Growth and Development and Adulthood

*Project Proposals (Due Sun. Feb. 4 at 11:30 pm on Moodle or Email) = A page (full page – single spaced) that covers the general concept of your project for the semester…*

---

**Week #4 - M-F -Feb. 5-9**

Morphology – Developmental Studies – Dental Morphology

Morphology – Developmental Studies – Biomechanics

Readings:

- Katzenberg and Grauer 2019: Ch8 Ruff Biomechanical Analyses of Archaeological Human Skeletons 189-225
- Katzenberg and Grauer 2019: Ch6 Scott and Pilloud Dental Morphology 257-293
Week #5 - M-F -Feb. 12-16
Health and Disease - Bone to Behavior
Health and Disease - Dental Pathology

Readings:
• Katzenberg and Grauer 2019: Ch13 Grauer Paleopathology: From Bones to Social Behavior 447-467
• Larsen 2014: Ch5, 6 Activity Pattern I, Activity Pattern 2
• Katzenberg and Grauer 2019: Ch9 Hillson Dental Pathology 295-335
• Larsen 2014; Ch2 Stress and Deprivation During Growth and Development and Adulthood

Week #6 - M-F -Feb. 19-23
Health and Disease – Aging and Bone Loss
Health and Disease – Infection | Metabolic Disease

Readings:
• Katzenberg and Grauer 2019: Ch11 Agarwal Understanding Bone Aging, Loss, and Osteoporosis in the Past 385-415
• Katzenberg and Grauer 2019: Ch12 Roberts and Brickle Infectious and Metabolic Diseases: A Synergistic Relationship 415-467

---FYI - AAFS Meeting (Denver) February 19-24, 2024---

Week #7 – M-F -Feb. 26-Mar. 1
Health and Disease – Trauma
Health and Disease – Trauma II

Readings:
• Katzenberg and Grauer 2019: Ch10 Lovell and Grauer Analysis and Interpretation of Trauma in Skeletal Remains 335-385
• Larsen 2014: Ch4- Injury and Violence

Week #8 - M-F -Mar. 4-8
Chemical and Genetics Studies-Stable Isotopes
Chemical and Genetics Studies – Bone Chemistry

Readings:
• Katzenberg and Grauer 2019: Ch14 Katzenberg and Rist Stable Isotope Analysis: A Tool for Studying Past Diet, Demography, and Life History 469-505
• Larsen 2014: Ch8 - Isotopic and elemental signatures of diet, nutrition, and life history
• Katzenberg and Grauer 2019: Ch15 Burton and Katzenberg Strontium Isotopes and the Chemistry of Bones and Teeth 505-515

Week #9 - M-F -Mar.11-15
Chemical and Genetics Studies – aDNA

Readings:
• Katzenberg and Grauer 2019: Ch16 Nieves-Colon and Stone Ancient DNA Analysis of Archaeological Remains 515-545
**Week #10** - M-F - Mar. 18-22
*Spring Break – No Classes*
ENJOY!

**Week #11** - M-F - Mar. 25-29
Quantitative | Population Studies - Biodistance

Readings:
- Katzenberg and Grauer 2019: Ch17 Pietrueskey Traditional Morphometrics and Biological Distance: Methods and an Example 547-593

**Week #12** - M-F – Apr. 1-5
Quantitative | Population Studies - Biodistance
Quantitative | Population Studies - Paleodemography

Readings:
- Larsen 2014: Ch9 – Biological Distance and Historical Dimensions of Skeletal Variation
- Katzenberg and Grauer 2019: Ch.18 Milner et al. Paleodemography: Problems, Progress, and Potential 593-635

*Project Rought Draft* (Due Sun. Apr. 7 at 11:30 on Moodle or Email) = A rough draft of both project with references in the APA format. I will review and return to you with comments.

**Week #13** - M-F – Apr. 8-12
Quantitative | Population Studies – Paleodemography

Readings:
- Katzenberg and Grauer 2019: Ch.18 Milner et al. Paleodemography: Problems, Progress, and Potential 593-635
- Larsen 2014: Ch10 – Bioarchaeological Paleodemography: Interpreting age-at-death structures

**Week #14** - M-F – Apr. 15-19
TBD – Depending on semester and progress through topics… this will be an overflow date.

Readings:
- TBD

---FYI – SAA Conference (New Orleans) April 17-21, 2024---

**Week #15** - M-F - Apr. 22-26
TBD – Depending on semester and progress through topics… this will be an overflow date

Readings:
- TBD
Week #16 - M-F - Apr. 29-May 3

Last Day of Semester – Fri. May 3

*Research Project Paper Preparation* – No Class (Tues)

*Student Project Presentations* (Begin) – Thurs.

---

Week #17 - M-F - May 6-10

**Finals Week**

*Student Project Presentations* Finish = Standard Room – Date and Time TBD

*Final Project Paper* – Due Fri. May 10 at 4:30 pm on Moodle or via email