SPRING SEMESTER 2014
GEOGRAPHY 632: SEMINAR IN DENDROCHRONOLOGY
SECTION 29404

Instructor: Dr. Henri D. Grissino-Mayer
Class Time: Monday, 6:45–9:35
Location: Burchfiel Geography Building, Room 406
Office Hours: TWRF, 4:00–5:00 or by appointment
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Textbook: None for this course

BRIEF DESCRIPTION OF THE COURSE: The seminar courses taught in our department are intended to provide more in-depth and detailed background to major topics and techniques at the forefront of geographical research. These courses provide our students with a well-rounded geographic education that ensures your marketability and success upon graduation.

In this course, we focus on Dendrochronology, one of the most versatile disciplines in the physical and cultural sciences. Dendrochronology is the science that uses tree rings dated to their exact year of formation to analyze temporal and spatial patterns of processes in the physical and cultural sciences. Trees are nature’s ultimate environmental monitoring stations. They are immobile. They assimilate events in the environment, they have their own special language, and they don’t know how to lie. You’ll learn how to read the language of trees and how to use this information to learn about past and present environmental processes that may shed light on your particular research questions.

CENTRAL LEARNING OBJECTIVES: In Spring 2014, this course will focus on Climate Change and how Dendrochronology can help scientists evaluate the possible effects of ongoing Climate Change. Upon completion of this course, students will be able to:
1. Use new skill sets acquired in this course to better understand how to interpret past environmental processes.
2. Understand the more complex processes of tree growth and how trees respond to driving mechanisms.
3. Examine specific statistically-valid sampling designs to learn about the environment.
4. Learn techniques for examining the temporal stability of past climate events from the tree-ring record.
5. Learn techniques for the reconstruction of climate variables from the tree-ring record.
6. Identify linkages between our terrestrial ecosystems and ocean-atmospheric circulation patterns.
7. Discern the ever-increasing role that humans play in changing our environment.

DEGREE-LEVEL LEARNING OBJECTIVES: For graduate students, this course satisfies the departmental requirement that M.S. students take at least one 600-level course during his/her Program of Study. For Ph.D. students, this course satisfies the requirement that Ph.D. students take three 600-level course during his/her Program of Study.

MY GOAL AS A TEACHER: I want to make this course as enjoyable and beneficial to you as possible. You will leave my course with useful knowledge that will provide you with a new outlook on the world around you. I am not here to try to fail you or to give you a hard time. I’m here to educate you. Important announcements will be made via email, so please check your email periodically. Use my e-mail address to ask me questions when you’re away from campus. I will respond promptly. When communicating by email about this course, please put “GEOG 632” in the subject line; I will do the same. If you have any questions about anything I’ve covered in the lecture, please ask me during or after class, or come see me in my office. Don’t wait until the last week of classes to ask for help. The earlier you seek help, the better!
DISCUSSION SESSIONS: Each class will be divided into two 1¼-hour sessions, with a 15-minute break in-between. Each session will involve discussion of one or more well-known published papers that use dendrochronological methods for detecting changes in past climate, highlighting the positive aspects of the research (“here are the good points about this research”) or blasting its pitfalls (“this is not the way to do research”). One student will lead the first 1¼-hour discussion session, while a second student will lead the second discussion section.

Once an article has been chosen by a student, please forward to me a PDF of the article(s) so I can approve its use in our discussion. Once approved, the student leading the discussion will distribute a PDF copy of the article(s) to all students in the seminar. **These articles are to be read critically and carefully before attending the seminar where the article will be discussed.** Please annotate your copy with copious notes to be brought up and discussed in the ensuing session. The student will lead the discussion, moderated by the me as the instructor. **It is your responsibility to obtain a copy of the article(s) ahead of time from the student leading the upcoming discussion or from the instructor. Failure to ensure you have the article will not exempt you from attending or participating in the discussion.**

ORAL PRESENTATIONS: Proper and correct communications skills are essential when you land your dream job in the real world after graduation, no matter if you become a professor or private consultant. You had better know what to say and how to say it, or else you’d better count on working at McDonald’s the rest of your life (“You want fries with that?”). The last week of regular class, we’ll hold a “mini-conference” where each student will present a 15–20 minute summary of his or her research. These presentations must use PowerPoint.

GRADING POLICY: Your grade for the course will be based on (1) the session(s) for which you lead discussion (20%), (2) participation in the remaining discussions (25%), (3) your oral presentation (15%), and (4) your final project and term paper (40%). Your final grade will be determined based on the following scale:

- A: 90.0–100.0
- B+: 86.7–89.9
- B: 80.0–86.6
- C+: 76.7–79.9
- C: 70.0–76.6
- D: 60.0–69.9
- F: below 60.0

ATTENDANCE: Keep in mind that this is a university course, and I expect prompt attendance. In fact, I take attendance very seriously because of this simple rule: **You do better when you attend class and participate in the discussions.** I don’t call roll or pass out a roll sheet because I have faith that you’ll take this seminar serious enough to come to class every day.

CIVILITY: Civility is genuine respect and regard for others: politeness, consideration, tact, good manners, graciousness, cordiality, affability, amiability and courteousness. Civility enhances academic freedom and integrity, and is a prerequisite to the free exchange of ideas and knowledge in the learning community. Our community consists of students, faculty, staff, alumni, and campus visitors. Community members affect each other’s well-being and have a shared interest in creating and sustaining an environment where all community members and their points of view are valued and respected. Affirming the value of each member of the university community, the campus asks that all its members adhere to the principles of civility and community adopted by the campus: [http://civility.utk.edu/](http://civility.utk.edu/)

Talking in class, surfing the web on your laptop, checking your email, even sleeping in class are all examples of disruptive behavior. If a fellow student around you complains, I will take this very seriously and give you a stern warning. If you’re caught a second time, I will initiate procedures for removing you from class. Keep in mind that such disruptive behavior may bother other students around you. When you disrupt them and keep them from taking good notes, they’re going to be very upset with you. I make sure that everyone has an equal opportunity to take adequate notes and to do well in this class. Cell phones must be turned off prior to entering the classroom (your instructors will do the same). To ensure no disruptions, please place your cell phone in "silent" mode and not "vibrate" mode.

ACADEMIC INTEGRITY: The University of Tennessee, Knoxville Honor Statement: You all will acknowledge and adhere to this honor code! “An essential feature of the University of Tennessee, Knoxville is a commitment to maintaining an atmosphere of intellectual integrity and academic honesty. As a student of the university, I pledge that I will neither knowingly give nor receive any inappropriate assistance in academic work, thus affirming my own personal commitment to honor and integrity.”
Don’t cheat! Cheating at a university will cause you to be expelled. We know all the tricks, like leg tapping, finger signs, and cell phone internet access. One basic rule for my class: if you’re caught cheating, don’t bother coming back to class – you’ve earned an F. Just don’t do it or even think about it! During exams, you must remove any hats (religious garments are acceptable, however), place all books and papers underneath your chair, and turn off and place your cell phone out of sight of anyone.

COURSE ASSESSMENT: At UT, it is our collective responsibility to improve the state of teaching and learning. During the semester, you may be requested to assess aspects of this course either during class or at the completion of the class. You are encouraged to respond to these various forms of assessment as a means of continuing to improve the quality of the UT learning experience.

DISABILITY SERVICES: If you need course adaptations or accommodations because of a documented disability or if you have emergency information to share with me, please contact the Office of Disability Services in 2227 Dunford Hall at 974-6087. This will ensure that you are properly registered for their services and we can make the required accommodations.

FINAL TERM PAPER: I strongly believe 500 and 600 level classes should help perfect your writing and research skills because these skills will be extremely important to you later in the real world. Therefore, a term paper is required of all students in this class. It must involve some application of dendrochronology relevant to the topics covered in this seminar. Each student must work individually. No group projects. You must check with me for my approval prior to selecting and finalizing a topic and beginning the paper.

The paper must be at least 18 pages (but no more than 20 pages) of double-spaced text (including tables and figures, but not including the title page and reference section). Your paper must have a title page with all the vital author and contact information, followed by a 250 word abstract at the top of the following page that summarizes the topic(s) in the paper. You should have an introduction section that introduces the reader to the problem, with a heavy emphasis on justification. If your paper has site information, a site description section should follow that gives information about your study area. Next, describe the methods used. A results section follows that tabulates and reports the major findings of your topic (table and graphs go here). Finally, a discussion section concludes the written portion of your paper and this should provide an in-depth interpretation of your paper. You must include a reference section that provides full bibliographic information on all references used in your paper.

You must format your paper according to the following rules. Failure to adhere to these rules will result in points being deducted:
1. liberal use of headings and subheadings (this helps organization)
2. margins should be one-inch on all sides
3. 12-point Times New Roman font must be used
4. full page justification must be used
5. page numbers must be placed on every page
6. all pages must be double-spaced (except the title page)
7. italics must be used for foreign words, Latin genus/species names, and titles of books and journals
8. cite references in the body of your paper as (Grissino-Mayer and Butler, 1993; Smith, 1996) with NO comma
9. figures and graphs must have captions (no titles) below the figure
10. tables must have a title header placed above the table
11. common names of species must be accompanied by the full Latin name with author
12. do not separate paragraphs by blank lines
13. indent the first sentence in each paragraph 0.5 inch
14. references to figures and tables are parenthetical and never occupy the subject/object in a sentence
15. use en-dashes for ranges of numbers (e.g. AD 1700–1900), not hyphens (e.g. AD 1700-1900)
16. spell out names of states rather than using postal codes, e.g. “Wyoming,” not “WY”
In the body of your text, you do not cite page numbers (see example above). You must have used at least 20 references (exclusive of web sites, and only five web sites may be listed here) when compiling information for your paper, and these must be listed in your reference section at the end of the paper. The references in your bibliography must use the following format, and be in alphabetical order by authors’ last name (note, this follows APA style, and you can find more information here: https://owl.english.purdue.edu/owl/section/2/10/):

Journal article:

Book:

Book Section or Chapter:

Web Site:

Common Mistakes Made on Term Papers...
1. Do NOT put blank lines between paragraphs in an effort to lengthen your paper.
2. Figures always should have figure captions and be numbered (e.g. "Figure 1") and mentioned in the text.
3. Do not -- repeat -- do not rely heavily on using direct quotes to lengthen your paper! Use your own words.
4. When inserting figures, learn to do this right. Do not leave extra "white space" at the end of a page because of a bad figure insert.
5. Pay attention to your citations at the end of your paper. You should provide enough information so that I can find the reference myself!
6. Never use contractions (e.g., "could’ve") which have no place in technical writing.
7. Watch out for overly long paragraphs – a paragraph should never ever take up an entire page.
8. Each paragraph should have a central topic, or theme sentence. Make sure all sentences in that paragraph are central to that theme.
9. It will be clear to me if you rely on one primary reference throughout your paper. You must use multiple references!
10. Do not rely heavily on my lecture notes and figures. You must demonstrate data-gathering skills we expect of graduate students.

Two very important things:
11. I can easily tell a term paper done at the last minute, resulting in a low-quality product with an appropriately low grade! You will therefore receive the grade you deserve.
12. I can easily spot plagiarism -- Google makes this easy as all I have to do is type in a phrase from your paper! And, did you know, “there’s an app for that!” Plagiarism = automatic "F."

Lastly:
13. The "truly excellent" term papers are those that actually teach me new things, introduce me to new findings, so that I can better improve my teaching for students in future courses! Don’t just regurgitate material from the book or the lectures.
Outline: All papers should begin with an annotated outline, much like a Table of Contents, and you’ll turn in an outline to me soon after the semester starts. Your outline should be at least two pages long, single-spaced, with added details (one or at most two sentences) under each heading and subheading, enough to let me know you’ve already dug into the literature and obtained some of your initial readings. A list of references is not needed, but would be a nice touch. But, I only expect a detailed (annotated) outline that resembles an annotated Table of Contents for a typical thesis or dissertation.

Suggestions: This paper should be well-written, with clear wording, absolutely no misspellings, and correct grammar and punctuation. You should proofread your paper several times before turning it in. Important, you are required to have a classmate proofread your paper to make sure he or she understands what you have written, and the classmate must sign the title page at the bottom. If he or she can’t understand it, chances are I won’t either. This is common strategy when writing reports and manuscripts for publication, which (I hope) you may be doing extensively after graduation. Have someone read over your work! Always! When in doubt about grammar, consult a book on technical writing such as The Elements of Grammar which can be found in the library. If your paper still has major grammatical mistakes after proofreading, both you and your classmate may see point deductions!

Due Dates: The detailed 2-page outline is due Friday, February 28. This outline will count 10% of the total grade for the paper. Your final paper is due on Monday, April 28 (after the last day of classes on the 25th). The other 90% breaks down as follows: Content (50%), Clarity (30%), and Organization (10%). Do not wait until the last minute to do this paper. You must plan ahead.

One Final Word… Writing a cohesive, well-organized, and easily-understandable paper or report is one of the most valuable skills you can learn in your university career. This skill will serve you well in years to come, as hopefully you will be working at a job that requires you to use your writing and communication skills as a geographer. Count on writing a lot after you graduate. Count on your writing skills as being one measure by which your supervisor and employer will gauge your success. That said, take this term paper seriously, especially if you’re a graduating senior or graduate student. Produce a paper that you would be proud to show your future employer as part of your application portfolio. Lastly, do not wait until the last minute to do this paper. You must plan ahead. I can easily tell those papers that were done in the last week of classes (or the night before the paper is due) versus those that were planned well in advance and were worked on over the entire semester. And whatever you do, never ever copy and paste material from a web site or anything you find online verbatim into your paper as this is plagiarism which constitutes grounds for dismissal from the university. It is very easy for me to find complex words and phrases on the web if you decide to lift material from the web from your term paper!

DISCUSSION SCHEDULE:

1. Jan 13  #1: _______ Henri  #2: _______ Henri
2. Jan 27  #1: _______ Henri  #2: _______ Henri
3. Feb. 3  #1: _______ Henri  #2: _______ Henri
4. Feb. 10  #1: _______ Henri  #2: _______ Henri
5. Feb. 17  #1: _______ Henri  #2: _______ Henri
6. Feb. 24  #1: _______ Henri  #2: _______ Henri
7. Mar. 3  #1: _______ Henri  #2: _______ Henri
8. Mar. 10  #1: _______ Henri  #2: _______ Henri
9. Mar. 24  #1: _______ Henri  #2: _______ Henri
10. Mar. 31  #1: _______ Henri  #2: _______ Henri
11. Apr. 7  #1: _______ Henri  #2: _______ Henri
12. Apr. 14  #1: _______ Henri  #2: _______ Henri
13. Apr. 21  Oral presentations