

BIOL 828: Human Evolution Syllabus Fall 2014

University of Nebraska at Kearney

Dr. Marc Albrecht



Contact Information

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INTRODUCTION

Human evolution has been an interest of humans probably ever since people could think about the idea. This course examines the current state of scientific knowledge about human origins. The class will focus primarily on anthropological evidence, but also include genetic and behavioral information.

The story of human evolution has driven many people to work hard to discover “where we came from”. This appears to be both a scientific and a psychological need for humans. Understanding how our own species came about provides information about us today in terms of genetics, biochemistry, diseases, and social behavior.

CLASS OBJECTIVES

The learning objectives for course are:

- Learn basic archeological and paleontological research techniques.
- Understand the time scales and dating techniques involved in researching the evolution of organisms on Earth including hominid species.
- Explore the biotic and abiotic factors that have affected hominid evolution.
- Discuss major events that impacted some hominid species such as global migration and the use of fire and tools.
- Explore some of the major genetic and behavioral discoveries about human evolution.
- Understand the phylogenetic relationship of *Homo sapiens* to other hominid species.

CLASS INFORMATION

What are the illustrations in the syllabus?

To help begin the class by already getting started these are materials about human evolution! These are 1) a diagrammatic summaries of the evolution of the hominid family and 2) a geographic summary of the spread of *Homo sapiens*. I think these materials are useful because they set the parameters for discussions and give everyone some information to start discussions with immediately.

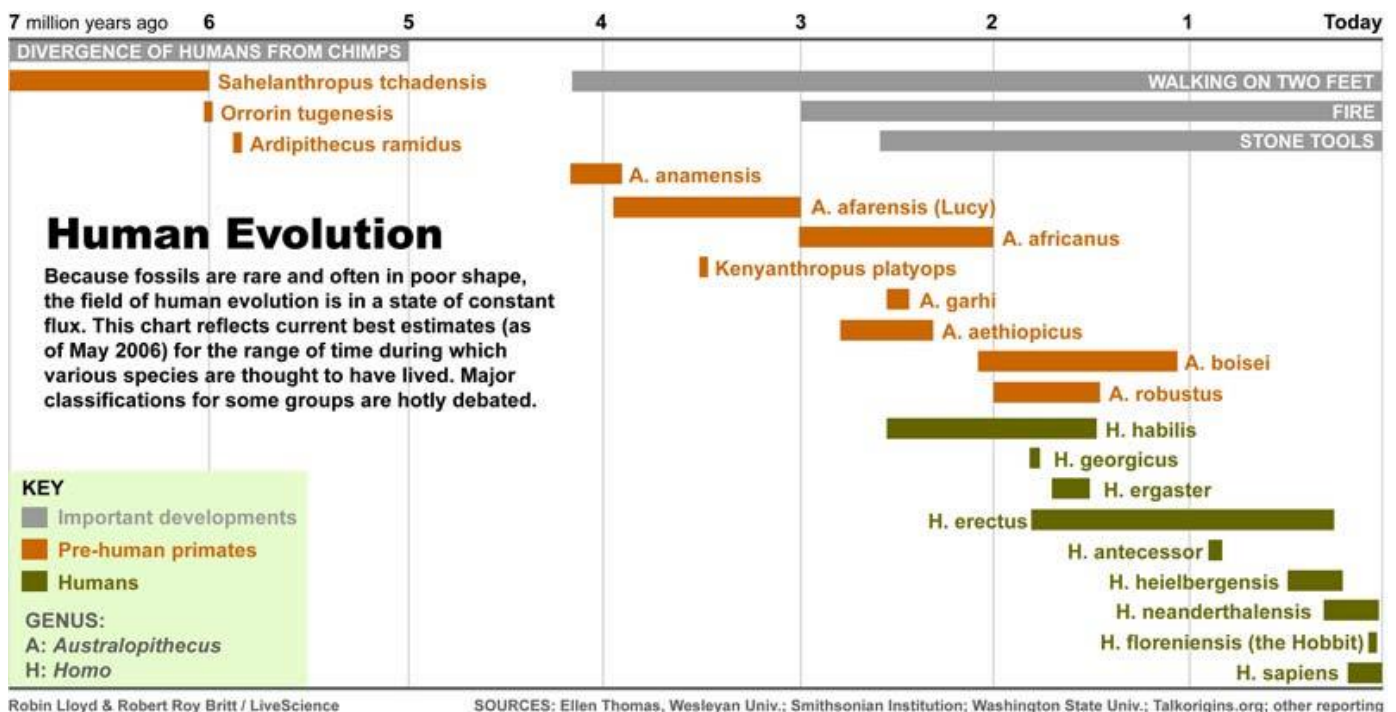


Figure 1. This diagram from the Smithsonian Institution shows a recent diagram of the hominid species for the last 7 million years. Notice top of the figure which shows when bipedal walking, fire, and tools started: all millions of years before our species evolved.

THE MIGRATION OF ANATOMICALLY MODERN HUMANS

Evidence from fossils, ancient artefacts and genetic analyses combine to tell a compelling story

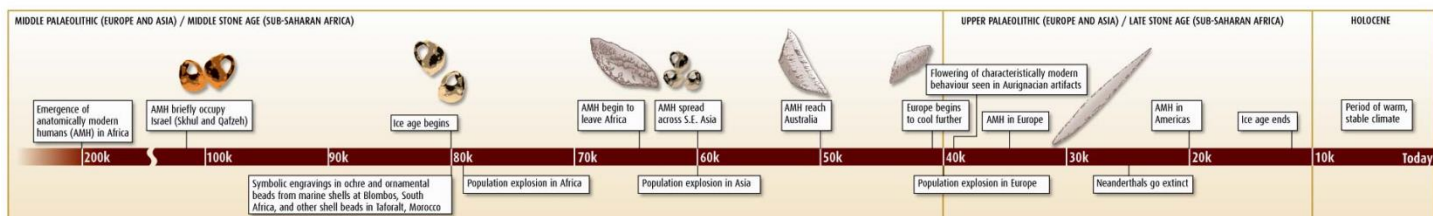
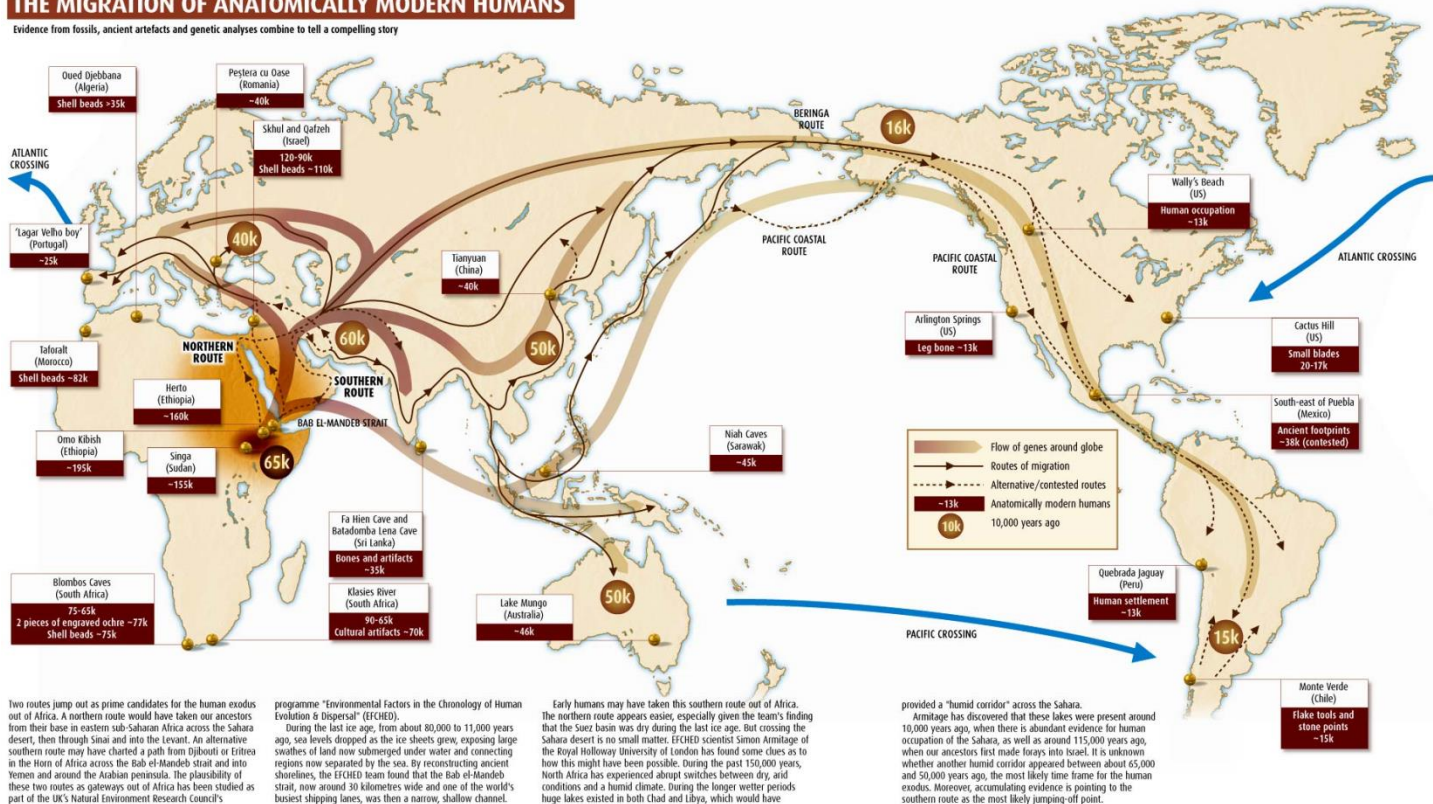


Figure 2. This figure shows the geographic pattern of the spread of *H. sapiens* throughout the Earth according to work reported in the New Scientist. Unfortunately they now charge to view the article (<http://www.newscientist.com/article/mg19626271.800-going-global-how-humans-conquered-the-world.html>).

CLASS MATERIALS

Required Texts

Stringer, Chris and Peter Andrews. 2011. *The Complete World of Human Evolution*, 2nd Ed. Thames and Hudson 240 pp.

Turney, Chris. 2008. *Bones, Rocks, and Stars*. MacMillan. 181 pp.

Recommended Texts (this is definitely optional, this is a good book that covers a wider field of evolution)

Zimmer, Carl. 2014. *The Tangled Bank, an Introduction to Evolution*, 2nd Ed. Roberts & Company Press. 452 pp.

Further Readings (these are good books about prehistoric history, they are both easy reads . . . if you have the time for them!)

Gonick, Larry., 1997. *The History of the Universe vol 1-7*. Doubleday. 368 pp.

Shubin, Neil. 2009. *Your Inner Fish*. Vintage Books. 237 pp.

Required Software and Equipment

Written assignments must be submitted as .doc or .docx files (MS Word or any word processor that can save documents to these formats). You may purchase the software from [UNK Connections](#) at a reduced price or obtain a freeware program such as LibreOffice. Acrobat Reader 7.0 or later will be necessary for viewing PDF files, including PowerPoint slides saved as PDF (available for free from [Adobe](#)). It will be necessary to read Office documents I produce for this class so please use Office 2010 (or later) or LibreOffice.

GRADING

Directions for each assignment will be given on Blackboard. Contact me with any questions you have on any assignment. Communication is important in distance classes and intent, tone, and attempts at humor are sometimes difficult to get clearly through the internet. So please email, phone, Skype me with questions anytime. I like to hear from people during the semester whether you have a specific problem or not – please contact me during office hours or make an appointment for other times.

Assignment	Points
Paper 1: Humans, evolution, and deep time	50
Final Exam	120
Participation (Discussion Board 10 pts for 10 weeks; first & last 2 weeks of class and Thanksgiving not included in grading, 2 posts per week for full credit)	100
Quizzes 30 pts * 3 quizzes	90
TOTAL	360

Grading Scale

The following grading scale will be used for this class.

A+ 99-100%	B + 87-89%	C + 77-79%	D + 67-69%
A 92-98%	B 82-86%	C 72-76%	D 60-66%
A- 90-91%	B - 80-81%	C - 70-71%	F below 60%

Students with Disabilities or those who are pregnant

Students with disabilities or those who are pregnant are encouraged to contact me for a confidential discussion of their individual needs for academic accommodation. It is the policy of the University of Nebraska at Kearney to provide flexible and individualized reasonable accommodation to students with documented disabilities or those who are pregnant. To receive accommodation services for a disability, students must be registered with UNK Disabilities Services Coordinator, David Brandt, in the Academic Success Office, 163 Memorial Student Affairs Building, 308-865-8214 or by email brandtdl@unk.edu. For those needing accommodation due to pregnancy, you need to visit with Student Health. The following link provides information for students and faculty regarding pregnancy rights. <http://www.nwlc.org/resource/pregnant-and-parenting-students-rights-faq-college-and-graduate-students>
Attached is the link to the above statement for your convenience. http://unkcms.unk.edu/offices/disability_services/

Syllabus for Human Evolution Fall 2014

The following schedule is an outline of the topics covered in each lecture. Dates are subject to change.

Week	Topic	Lec #	Readings	Assignments
1 Aug 25	Introduction	0	None	
	Turney I: Time , Dating	1	Turney Chp 1, 3, 7	
2 Sept 1	Turney II: Dating samples	2	Turney 8, 9, 11	Labor Day
3 Sept 8	Apes, fossils, techniques	3	Stringer & Andrews I pp 6: 50	
4 Sept 15	Climates, excavations	4	S&A II pp. 50:79	
				Quiz 1 Friday 19 th
5 Sept 22	Prconsul & other species	5	S&A III pp. 92:129	
6 Sept 29	Primary literature	6	Ardipithecus 1-5	Paper 1 due Sept 29 th at 5:00 pm CST
7 Oct 6	Archeological papers	7	Ardipithecus 6-10	
8 Oct 13	Science 2009 papers	8	Ardipithecus 11-15	
				Quiz 2 Friday 17 th
9 Oct 20	Human Origins	9	S&A IV pp. 130:157	UNK Fall Break Mon
10 Oct 27	African Homeland?	10	S&A V pp. 158:175	
11 Nov 3	Genetic data	11	S&A VI pp. 176:181	
12 Nov 10	Locomotion, feeding, geography, behavior	12	S&A VII pp. 182:209	
				Quiz 3 Friday 21 th
13 Nov 17	Human tools, art, behavior, overview	13	S&A VIII pp. 210:229	
14 Nov 24	None		None	Thanksgiving Break
15 Dec 1	Future of the species	14	Better humans, Hawks evo speed	
16 Dec 8	Review for Final	15	None	
17 Dec 15	Final Exam: Due Noon, CST on Wednesday, Dec 17 th			

Dr. Albrecht's Orientation to Blackboard Use

Version 1.91 Fall 2014

UNK Biology Department

Introduction:

The UNK Biology Distance Master's program has a number of faculty teaching classes. Part of the experience and challenge of the program is that, as in other professional situations, faculty are different from each other. Different faculty have different lecture styles, different discussion board expectations, different grading priorities, and even different delivery methods. This is similar to different journals having different requirements, or different companies having different methods and procedures. I realize this might be confusing for people, but hopefully the various approaches will demonstrate what works and what does not for you in your own future careers. Please read this section as I try to clarify how I structure classes and use Blackboard.

Please contact me with any questions on technical aspects, also note that the UNK e-Campus website does provide both Video Tutorials and Atomic Learning Tutorials on using Blackboard, email, and MS Office see [this page](#).

Expectations:

I approach this program with the goal of providing, as closely as possible, the level of experience I was fortunate enough to experience in my graduate career at some good universities. This means that generally my expectations are high. I will do my best to find, organize, and present material I think is important and appropriate for the subject area of each class. I will also do my best to explain how the process of science works such as experimental design, statistical testing, research, and publication. I will also work to be as available as possible, and turn around Blackboard, emails, and graded work as quickly as I can.

Communication through distance means can be difficult and frustrating at times for everyone. So please be patient and give more time than you think is necessary for communication. There have been problems with Blackboard and UNK email in the past and such things will probably happen in the future as well.

There is responsibility on your part as well to meet both the letter and spirit of assignments. It is my hope that everyone in this program is here because they enjoy biology, and I want to help with that. Here is a checklist of what this means to me, based on my experience as both a graduate student and professor:

1. **Are you prepared for class?** Have you read the material, not just once but twice? Have you looked up authors, concepts, or words you were not familiar with while reading? Do you understand how this reading fits into the discipline in general, and why it was assigned? Have you noticed the author, date, and author's institution of the paper in addition to the data, statistical tests, and concepts in the paper? If I have made an assignment that is not useful or helpful – let me know!
2. Is the work you are turning in **reflective of you** as the professional you are working towards becoming? Is the work well-researched? Do you have all the important concepts covered in your work? Is the organization of the paper clear and useful? Have you put in thought and work on the figures and tables

to make them clear, professional, and are they referenced if they need to be? Has the work been proofread for grammatical, factual, spelling, and formatting errors? Do you know what formatting is desired by the professor and done it?

Blackboard:

The Blackboard Classroom software suite is the main portal for the class work in the UNK Biology Distance Master's program. Being familiar with this program is helpful for success in the program. Now there are problems with it. No new version has come out since 2010, and a private equity group has owned the company since about 2011. So it does not always function well. To be more precise, the following components are the ones I use the most:

1. Course Documents:

- a. This is where I place pdf files and wmv files that are the lectures for classes. These lectures follow the assigned readings for the week whether they are from a textbook or other source: Please:
 - i. Download the PowerPoint files the wmv files (do NOT try to stream video files)
 - ii. I would suggest printing out the PowerPoint files
 - iii. View the video files while reading through and notating the printed pages
- b. You can put the downloaded video files on any device to view them. Downloaded files do not need an internet connection to be viewed.

2. Discussion Board:

- a. This section of Blackboard is how you will primarily communicate with me and each other in the class.
- b. In my classes Discussion Board is an important part of the class experience, there are a lot of points associated with participation on Discussion Board. The idea is to state and listen to the ideas, views, and questions other people have.
- c. I do read just about every discussion board post but I typically respond only when I think someone may be a bit off track or when I want to emphasize a point.
- d. Typically discussion boards are opened Monday around 1:00 pm Central Time, and closed Sunday night around 9:00 pm Central Time.
- e. Because discussion boards are important, posts will be graded.
 - i. At least two (2) useful postings each week are needed for full credit, but not both on Sunday night.
 - ii. *The quality of your contribution.* This is a somewhat subjective category, but the more thoughtful your comments the better the quality of discussion will be. Your comments should be at least a few sentences. Conciseness and clarity are necessary to keep the work load for this class to a reasonable level, i.e.: page long postings are discouraged. Your comments should be supported with information, file attachments or web sites, and should be relevant to the current topic of discussion. References are encouraged.
 - iii. *How well you interact as classmates.* Your responses should demonstrate that you are aware of the discussion that has been taking place, not stated in a vacuum. Go beyond simple postings such as "I agree" with someone. Go ahead and state your reasoning behind a post, especially if you are responding directly to another person. Please be polite and constructive in your responses to other students and me.

3. Assignments:

- a. Many, if not all the assignments in the class will appear in the section of Blackboard called “Assignments”, so please find this area of Blackboard
- b. There are two types of assignment functions I use most:
 - i. Tests: these are timed tests, typically multiple choice quizzes that are available for a limited amount of time. That time frame is **usually** Friday at 5:00 pm to Monday at 10:00 pm Central Time. These tests are to be completed online within a time limit (e.g. 30 minutes) once started.
 - ii. Papers: I use the ‘assignment function’ to create a link through which you can upload your documents. This system has the distinct advantage over email in that papers go directly to a ‘space’ that is specific to one person for one assignment. Users will see a green exclamation point in the Gradebook for the assignment when you have uploaded the document.
 1. This function also can be set to be available for a limited amount of time. Papers are typically due Mondays at 10:00 pm Central Time. Typically I post the assignments at least 1 week ahead of when they are due.

4. Gradebook:

- a. This is the area of Blackboard where grades are recorded and displayed, these are the actual grades I use, so check your grades often.
- b. Note the symbols in Blackboard. The responsibility is yours to make sure assignments are in on time, uploaded correctly, and that the correct file is uploaded. If the wrong file is uploaded, or the file is late, penalty of at least 10% will be assessed.
 - i. Empty assignment: this means no file has been uploaded, or test taken according to Blackboard. You **do not** want see this if you have taken a test or uploaded a file.

Student Help		UNK Library	
Final paper outl			
	29.00		
	--		
	28.00		
	33.00		
	38.00		
	34.00		

- ii. Green exclamation point: this means that Blackboard has received a file, or that a test has been taken. A file that is uploaded may still be corrupt, or a person could still have uploaded the wrong file, but whatever it is, Blackboard has it. This is fine, with the two exceptions given above, and it means I have to grade the assignment before you will see a grade. Any paper, and any tests with subjective questions (such as fill-in, short answer that I will grade by hand) will have this symbol until I graded.

Prob set 6	Extra Credit 2
14.50	--
14.50	!
14.00	--
12.00	--
12.50	--
14.00	--

- iii. The red exclamation point: this symbol is **bad**. This symbol means that a file failed to upload correctly, or a test failed while being taken. This symbol means that you and I need to talk by email, phone and figure out a solution. This needs to be done **before** the due date of the assignment. If you do not contact me before the due date, late penalties will be assessed of 10% of grade if late, and 10% per 24 hour period after that.



5. Announcements:

- These are the text entries you see just below the title for the class when you enter Blackboard
- I will post class information here, such as changes to the syllabus, snow days at UNK, or answering a question that is coming up repeatedly in the class.
- Please check this area several times a week on your way to other areas in Blackboard (Bb).

6. Other Features:

- There are other features of Blackboard that I use from time to time, I will let you know.

7. Scientific Writing

- I will include documents in Blackboard/Course Documents folder to help with scientific writing.
- I encourage everyone to work on improving their writing skills, as I continue to work on mine. Everyone in the program should have at least a few papers from primary journals from other classes or your own reading. If not, get a few from the UNK library collection that you have access to as a UNK student. Recent papers from a major journal should be read for style, voice, formatting. Such examples will show you how to build sentences, tables, figures, paragraphs, references and abstracts. Everything you need to know is there. Also, you can always ask!

Dr. Albrecht Class Policies

Version 1.7 Fall 2013

Introduction:

Every institution has its rules and policies and UNK and the Biology Department have them too. Because of the distance education environment the degree of communication between student and faculty can be difficult, and misunderstandings do happen. Please keep in mind “talking” over the computer is not the same as face to face – several types of communication are lost. Please be patient and allow more time than you might otherwise to get the solution you need. Here are the policies that will be in place for this class in addition to the policies of the Biology Master’s Program, Biology Department, and UNK itself.

Policies:

1. Paper formatting: **All papers** turned in for this class should have the following formatting
 - a. Size 12 font, 1” margins all around the page, page numbers present, no right justification
 - b. Header information on the first page: name, class, date, assignment
 - c. All text double-spaced with proper English spelling and grammar used. The writing should be simple, clear, and in the scientific writing style. At the least this means: full English sentence with subject-verb-direct-object structured sentences. See current journal articles in your area of research interest for examples.
 - d. Tables must be labeled at the top and have captions that explain them.
 - e. Figures must be labeled at the bottom and have captions that explain them.
 - f. All outside published and copyrighted sources must be cited. This includes textbooks, software programs, and webpages used in course. These sources are especially included to provide practice at citation and engrain the habit of citation when doing professional work.
 - g. All needed citations must be (author year) format in text (including figures and tables) and fully cited at the end of the paper. See Section 2 below for more information on this.
 - i. Citations **are** needed if textbook or lecture material is used (especially if quoted!). This is both the legal necessity and good practice for work beyond class.
 - ii. Full citations should be in a References section at the end of each paper and follow these formats, reverse indented, and alphabetical by author:
 - h. **Failure to do any of this formatting can result in immediate letter grade reductions.** This stems from me being worn out by seeing and having to grades these sorts of mistakes every term. It is also the lack of direction-following that can get CV, job applications, or grant proposals rejected without consideration.
 - i. See examples of citation examples below

Citation Style Examples

Books:

Darling D. 2001. Life Everywhere: The maverick science of astrobiology. Basic Books. New York. 206 pp.

Computer Programs:

Microsoft. 2010. Microsoft Excel Version 14.06112.5000. Redland, WA.

Journal Articles:

Chekalyuk A C, and M Hafez. 2008. Advanced laser fluorometry of natural aquatic environments. Limnological Oceanographic Methods 6: 591-609.

Websites: note that date of access is included, this is important.

Food and Agriculture Organization of the United Nations. 2006. Livestock impacts on the environment. URL: <http://www.fao.org/ag/magazine/0612sp1.htm>. Accessed Feb 26, 2012.

2. Plagiarism and Cheating:

- a. Please see and complete [this page](#) - I require everyone in the class has visited this site, take the quiz and send me a completion certificate (Test & Certificate section) by the 5:00 pm Central Time on the **second Friday** of the semester. Every semester, even if you have done it before. Send a file of this to the 'Plagiarism' link in Blackboard - Assignments. The reason? So everyone knows exactly what plagiarism is. ALL sources in anything turned in for this class must be cited, including figures and anything taken from class texts (such as copying the text of problems), every time!
- b. Also see the [UNK Student Handbook](#) for UNK policy statement on plagiarism
- c. I consider plagiarism a scourge and a stain on science and detrimental to the progress of humanity. I will treat any plagiarism seriously including giving zeros on questions, or entire tests (which often drops a student one letter grade or more), or failing the class outright in addition to letters in the permanent files here at UNK
- d. Citation information for APA style is given at the UNK eCampus website [here](#)
- e. A quick rule: **more than 3 words in a row from any published source must be referenced**
- f. Do not communicate with outside experts to answer tests. Assignments are meant to assess your knowledge, not that of others.
- g. Work individually unless directed into groups. Your work should be your own.

3. Late work/technical difficulties:

- a. Late work will be subject to the following grade reductions:
 - i. 10% reduction of grade for any work submitted after stated deadline until 24 hours after the stated deadline
 - ii. A further 10% grade reduction for each 24 hour period past the stated deadline
- b. I understand that online classes demand attention to deadlines on top of those already present. However, this graduate program is not a self-paced one. This program is structured to academic terms and time frames (such as breaks) as the brick and mortar University of Nebraska system.

In general I am impressed at the dedication of students in this program and hope this tradition continues.

- c. Technical difficulties are part of the reality of the online world. Given that truism, do NOT wait to submit assignments until the last minute or hour of a deadline. Both you and I cannot be responsible for failures of power, computers, computer networks, or even Blackboard. Do not procrastinate; turn assignments in early, so there is time to resubmit if there are any problems.
- d. Important: please install and run anti-virus and anti-malware software on your computer. This is for all of us in the class, so that bad things are not spread through the class. Here are three examples of programs that do different things to protect your computer. Please protect yourselves:
 - i. Microsoft Security Essentials
 - ii. (recommended): other maintenance software such as System Mechanic (my favorite), Symantec System Works
 - iii. Malwarebytes Anti-Malware

4. Online etiquette:

- a. **Please be respectful of all others in the class.** It is easy to be more confrontational via electronic post than in person. I understand conversations may become heated, and that irony, and even sarcasm may at times be used to make a point. However, please try to remain civil at all times.
- b. Posts I deem as offensive or inflammatory towards others, or even me, will be removed from the discussion boards. If this becomes a continuing problem, grade reductions may result. I will keep copies of such posts.