# NORTHWESTERN UNIVERSITY DEPARTMENT OF ANTHROPOLOGY FALL 2010

# ANTHROPOLOGY 101 - MAKING OF THE FITTEST: ISSUES IN EVOLUTION

Course Location and Time: T/TH 2:00-3:20p; Shepard classroom

Instructor: Erin B. Waxenbaum, Ph.D. Email: e-waxenbaum@northwestern.edu Office Hours: Email for appointment

Office Location: 1812 Hinman Ave, Rm. 304

# Course Description

We recently celebrated the 200<sup>th</sup> anniversary of Charles Darwin's birth. But what would he think of our world today? We have a sophisticated understanding of genes and the ability to trace our ancestry over generations. Despite this knowledge, conclusive and irrefutable proof that we have or are continuing to evolve has not been found. In this course we will address where we have come from and where we might be going. We will cover some of the major issues in evolution ranging from those originating in Darwin's time to the many questions that persist today.

# Course Material:

- 1. Course pack purchased from Quartet Copy, 825 Clark St, Evanston will be available for purchase as of Monday, September 13<sup>th</sup>, 2010.
- 2. Carroll SB. 2009. Remarkable creatures: epic adventures in the search for the origin of species. Boston: Houghton Mifflin Harcourt Publishing.

# Grading

A student's final grade will be determined through an evaluation of class participation, reaction papers and final paper.

Class participation = 100 points (30% of final grade)

- Daily contribution (80 points)
- Topic lead (20 points)

Reaction papers = 10 points each (40% of final grade) Final = 100 points (30% of final grade)

These grades will be averaged and letter grades will be assigned using the following scale:

A = 93-100% B+ = 87-89% C+ = 77-79%

77-79% D+ = 67-69% F = <60%

A- = 90-92% B = 83-86% C = 73-76% D = 63-66% B- = 80-82% C- = 70-72% D- = 60-62%

# Class Participation & Reaction Papers

**Reaction papers:** Readings throughout the course will provide opportunities for in-depth discussion and analysis of issues in evolution. Students will be required to write a 3 page (+/- \frac{1}{2}) reaction paper for 4 specified topics. Use in-text citation and include a "Works Cited"/"Reference" page for all literature mentioned. See *Waxenbaum's Code for Writing* (p. 3).

A reaction paper is your opportunity to show that you have read the material and thought about it critically. What is the point of this article? What did you think was interesting about it? Why is it important? How does it relate to topics covered in previous class sessions? Does the reading raise additional questions or issues? Are there problems with the author's conclusions or methods? These are some, but not all, of the questions that you could address in your reaction papers. You can focus on one particular issue in one of the day's reading, or you can synthesize and integrate all the readings. Remember that you only have ~3 pages, so your discussion should be concise and focused on a few main points.

NOTE: Reaction papers will be due in class the day the readings are assigned for that class. Late reaction papers will be marked down 1 point each day they are late, ½ if it is received the day it is due, but after class discussion.

Reaction papers will be graded on a 10 point scale:

- 9-10 Excellent critical analysis and integration of issues from the reading. Shows solid understanding of the concepts and their implications.
- 7-8 Shows adequate understanding of concepts, with some critical analysis or integration.
- 5-6 Overview of the day's reading that shows adequate understanding of the concepts, but lacks in-depth analysis or integration with other topics.
- 3-4 Shows evidence of having done the reading, but understanding is lacking.
- 1-2 Shows no evidence of having done the reading.

*Class participation:* A portion of your grade in this area will come from your contribution to class discussion each week. It will be assumed that you have done the readings, thought about the concepts and issues, and will come to class prepared to share your opinions and questions. Class discussion is your opportunity to demonstrate that you have done the readings and thought critically about their content.

*Topic lead:* Each student will be required to lead discussion for one course topic to be assigned the first week of class. Responsibilities include introducing the topic, readings and providing questions and commentary to direct class discussion.

*Final paper:* Your term paper for this course will explore the following questions: Who was Darwin? What kind of man or scientist or evolutionist was he? What would he think of our world today? You may also choose to write your final paper on an "Issue in Evolution" not directly discussed in class. Please bring your intended topic to Prof. Waxenbaum's attention beforehand for approval. The final paper is to be 7-10 pages in length not including a 'Works Cited' page.

#### Waxenbaum's Code for Writing Papers in College

#### Formatting

- 12-point, Times New Roman font
- Double-spaced text
- 1" margins on all four sides (different versions of Word and other word processing programs have different defaults settings)
- Include page numbers

#### Citations

Citations are an INTEGRAL component of academic writing. The purpose of citations is to give credit to those writers/theorists/researchers that came before you.

- Wikipedia or any Wiki-related website is <u>NOT</u> an appropriate academic resource. Librarians are specifically paid to help students find valid academic references.
- All in-text citations should also be represented in the Works Cited page and vice versa
- All <u>research</u> papers should include limited personal opinion and thus virtually every paragraph should contain *at least* 1 citation with the exception of the Introduction and Conclusion.
- Paraphrasing pointers: close your source(s) as you are writing will limit the urge to over-use quotations or plagiarize material.
- In-text citation format for:
  - o Paraphrased information: (Waxenbaum 2009).
    - All authors should be noted in citations 2 authors include both names, more than 2 authors should be written as (First author et al. year).
    - Note placement of the period <u>after</u> the citation
  - o Directly quoted material: (Waxenbaum 2009:1)
    - Where the number after the colon indicates the page number where the material is cited from
    - Even internet sources have page numbers do your best estimation if page numbers are not listed explicitly
- All Works Cited references should be alphabetized by author/organization. Do not cite in-text or in Works Cited by the title of the article – for a CNN article that does not list a specific author, use CNN (or organization) as the author.
- If you have multiple references by the same author in the same year, add a letter next to the year to distinguish the references in Works Cited and in-text. For example in Works Cited page:

Waxenbaum E. 2010a. Anthropology is great. Journal name volume:page.

Waxenbaum E. 2010b. Physical Anthropology is the best! Journal name volume:page.

Waxenbaum E. 2010c. Forensics rocks. Journal name volume:page.

- o For in-text: (Waxenbaum 2010b).
- It is also "fair game" to cite class lecture. Example:

Waxenbaum E. 2010. Development of Evolutionary Theory lecture. Making of the Fittest: Issues in Evolution. Evanston, IL: Northwestern University, Fall.

#### Plagiarism

All papers will be submitted to SafeAssign a NU plagiarism detection tool. For any questions or concerns about potential plagiarism or what qualifies as plagiarism please see:

http://www.northwestern.edu/uacc/plagiar.html or contact Prof. Waxenbaum.

#### Details

- Contractions are <u>inappropriate</u> for academic writing write out the words!
- Paper guidelines dictate 5-7 pages. That means <u>at least</u> 5 complete pages and <u>at most</u> 7 complete pages; 4 complete pages with 3 lines on the 5<sup>th</sup> page does NOT constitute 5 pages.
- Title pages are unnecessary, superfluous and kill trees. For introductory information, the first few (no more than 3) lines of your page 1 can be used for single spaced title, your name, and "Issues in Evolution Final Paper Fall 2010 Professor Waxenbaum."

# Waxenbaum's Code for Writing Checklist Review prior to turning in ANY paper

Formatting Time Number of the state of the s
□ 12-point, Times New Roman font
☐ Double-spaced text
□ 1" margins on all four sides
☐ Included page numbers
Citations
☐ All in-text citations are represented in the Works Cited page and vice versa
☐ All research papers should include limited personal opinion and thus virtually every paragraph should contain <i>at least</i> 1 citation with the exception of the Introduction and Conclusion.
☐ Paraphrased in-text citations appear in the following format: (Author date).
☐ Directly quoted citations appear in the following format: (Author date:pg#).
☐ All Works Cited references are alphabetized by author/organization.
☐ In-text citation formatting is <u>consistent</u> throughout this paper.
Details
$\Box$ There are <u>no</u> contractions in this paper.
$\square$ Paper length is 3 pages +/- $\frac{1}{2}$ as required for reaction papers.
☐ The introduction has a strong thesis that tells the reader the main theme of the paper and/or poses a question to be answered by the following text.
☐ The <u>topic sentence</u> of each paragraph directs the reader to all the ideas/material/information discussed within that paragraph.
☐ The focus of the material discussed is based on the readings for the day the paper is due.

# **COURSE SCHEDULE**

<u>COURSE SCHEDULE</u>		
WEEK 1		
Sept 21: Introductions – Evolution 101	1002 G 111002	
Sept 23: What is science?		
Root-Bernstein 1995 PART I - ISSUES IN EVOLUTION		
WEEK 2		
Sept 28: Kitzmiller et al. vs. Dover Area School Board	Miller 2008: Shermer 1997	
Sept 30: The debate continues.		
	evolution	
Reaction Paper #1 — Religious perspectives on evolution. <u>Due: Sept 30th<sup>th</sup></u>		
WEEK 3	I 1 1000 C 11	
Oct 5: Darwin and his contemporaries.	Lamarck 1809; Carroll 2009a ch.2, 3	
Oct 7: Natural selection.	Darwin & Wallace 1858;	
Oct 1. I talian solocion	Diamond 1998, 1995	
WEEK 4	,	
Oct 12: Rise of genetics.	Mendel 1866	
0.144 777	Carroll 2006	
Oct 14: Why sex?	No reading	
WEEK 5		
Oct 19: Unique nature of human sexuality	Diamond 1996, 1992	
Reaction Paper #2 – Unique nature of human sexuality. <u>Due O</u>	ct 19 <sup>th</sup>	
Oct 21: Evolution of culture & beauty.	Dawkins 1976;	
	Yu & Shepard 1998;	
MELKE	Alam et al. 2001	
WEEK 6 Oct 26: Whatever happened to dinosaurs?	Gould 1984; Carroll 2009a	
Out 20. Whatever happened to dimosadis:	ch.8	
Oct 28: Novel innovations: Taking flight.	Carroll 2009a ch. 9;	
	Simmons 2008	
WEEK 7	1 1000	
Nov 2: Evolution of disease	Armelagos et al. 1996; Carroll 2009b ch. 8	
Nov 4: Modern evolution of disease	Nesse & Williams 1998;	
NOV 1. WOODIN CVOIDED OF DISCUSC	Moalem & Prince 2007	
Reaction Paper #3 - Modern evolution of disease. <u>Due Nov 4<sup>th</sup></u>		
WEEK 8		
Nov 9: Milestones in human evolution.	Johanson & Edey 1980;	
	Carroll 2009a ch. 5, 13; Cartmill 1997	
Nov 11: Evolution gone awry – Social Darwinism & eugenics		
Nov 11. Evolution gone uvry Social Bul vinish & eagenes	1992; Brace 2005	
WEEK 9	,	
Nov 16: Understanding human variation.	AAPA 1996;	
	Jablonski & Chaplin 2002;	
Relethford 2002 Reaction Paper #4 – Understanding human variation. <u>Due Nov 16<sup>th</sup></u>		
Nov 18: Adapting to your environment		
	2009b ch. 9	
WEEK 10		
Nov 23: Evolution today	Bosveld 2009; Zimmer	
	2007; Wills 1992;	
FINAL PAPER DUE MONDAY, DEC 6 <sup>TH</sup> BY 5PM	McAuliffe 2009	
INVICE THE DOLINION DAT, DEGO DE UNION		

FINAL PAPER DUE MONDAY, DEC 6<sup>TH</sup> BY 5PM

#### References Cited for Anthropology 101 Coursepack

#### Alam, M, Dover JS.

2001 On beauty: evolution, psychosocial considerations, and surgical enhancement. Archives of Dermatology 137:795-807.

#### American Association of Physical Anthropologists.

1996 AAPA statement on biological aspects of race. American Journal of Physical Anthropology 101:569-570.

#### Armelagos, GJ, Barnes, KC, Lin J.

Disease in human evolution: The re-emergence of infectious disease in the third epidemiological transition. AnthroNotes 18(3):1-7.

#### Barry, AL.

Creationism and evolution. The Lutheran Church – Missouri Synod. Internet document, http://www.lcms.org/graphics/assets/media/LCMS/wa\_creation-evolution.pdf.

#### Bosveld, J.

2009 Evolution by design. Discover. Vol. 30(3):58-59.

#### Brace, CL.

The ethos of eugenics. In "Race" is a 4-letter word. New York: Oxford University Press.

#### Carroll, SB.

Immortal genes: Running in place for eons. In The making of the fittest: DNA and the ultimate record of evolution. New York: W. W. Norton & Company.

2009a Remarkable Creatures. Boston: Houghton Mifflin Harcourt.

2009b Into the jungle: Great adventures in the search for evolution. San Francisco: Pearson Education, Inc.

#### Cartmill, M.

1997 The third man. Discover. September.

#### Darwin CR, Wallace AR.

1859 [1858] Natural selection. The Linnaean Society Papers.

#### Dawkins, R.

1976 The selfish gene. Oxford University Press, pp. 189-201.

#### Diamond, J.

1992 The evolution of human sexuality. In The third chimpanzee, New York; Harper Perennial.

1995 Father's milk. Discover February:83-87.

1996 The best way to sell sex. Discover December: 78-85.

1998 Evolving backwards. Discover 19(9):64-69.

#### General Council of the Assemblies of God.

1977 The doctrine of creation. Internet document,

http://ag.org/top/Beliefs/Position\_Papers/pp\_4177\_creation.cfm.

#### Gould, SJ.

Evolution as fact and theory. In Hen's teeth and horse's toes: Reflections in natural history: W. W. Norton & Company, Inc.

Sex, drugs, disasters, and the extinction of dinosaurs. In The flamingo's smile: Reflections in natural history: W. W. Norton & Company, Inc.

#### Jablonski, NG, Chaplin, G.

2002 Skin deep. Scientific American 287(4):74-82.

## References Cited for Anthropology 101 Coursepack

#### Johanson, D. Edev, M.

1980 Finding Lucy. In Lucy: The beginnings of humankind. D. Johanson and M. Edey, eds: Simon & Schuster.

#### Lamarck, JBPAM.

1914 [1809] The inheritance of acquired characteristics. Zoological Philosophy Part 1(Ch. 7).

#### Linnaeus, C.

1996 [1758] Systema naturae. In The mismeasure of man. S.J. Gould, ed. Pp. 404-405: W. W. Norton & Company, Inc.

#### Majid, A.

Muslim responses to evolution. Internet document, http://www.hssrd.org/journal/summer2002/muslim-response.htm.

#### McAuliffe, K.

2009 Are we still evolving? Discover. Vol. 30(3):50-58.

#### Mendel, JG.

1901 [1866] The laws of inheritance. The Garden, Journal of the Royal Horticultural Society.

#### Miller, K.

2008 Only a theory: evolution and the battle for America's soul. New York: Viking, pp. 1-16, 135-143.

#### Moalem, S., Prince, J.

A spoonful of sugar helps the temperature go down. In Survival of the sickest: A medical maverick discovers why we need disease. New York: HarperCollins.

#### Moore, JA.

Science as a way of knowing. In Science as a way of knowing: The foundations of modern biology. Cambridge, MA: Harvard University Press.

#### Nesse, RM, Williams, GC.

1998 Evolution and the origins of disease. Scientific American November:86-93.

#### NOVA.

2007 Judgment day: Intelligent design on trial. WGBH: Vulcan Productions, Inc.

#### Paul II, John.

1996 On evolution. Pontifical Academy of Sciences, October 22.

#### PBS-WGBH.

2001 The evolutionary arms race & Why sex? In Evolution: WGBH/NOVA Science Unit & Clear Blue Sky Productions.

#### Rabbinical Council of America.

2005 Creation, evolution, and intelligent design. Electronic document, http://www.rabbis.org/news/article.cfm?id=100635.

#### Relethford, JH.

Apportionment of global human genetic diversity based on craniometrics and skin color. American Journal of Physical Anthropology 118:393-398.

#### Root-Bernstein, RS.

1995 Darwin's rib. Discover. September:38-41.

## References Cited for Anthropology 101 Coursepack

Shermer, M.

Why people believe weird things: pseudoscience, superstition, and other confusions of our time. New York: MUF Books, pp.137-153.

Simmons, NB.

2008 Taking wing. Scientific American. Dec 2008:96-103.

Wills, C.

1992 Has human evolution ended? Discover. Vol. 13(8):22-25.

Yu, DW, Shepard, GH.

1998 Is beauty in the eye of the beholder? Science 396:321-322.

Zimmer, C.

2007 Evolved for cancer? Discover: January.