

## TC 302 (42775) – Fall 2010

### “Science and Religion in America: the evolution/creation debate”

#### Instructors:

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**Time and Place:** Tu-Th 11-12:30, MAI 220c

#### Course Description:

Starting with the late 17th century inquiries of Nicholas Steno, debate and discussion on the question of evolution raged in biology until the neo-Darwinian synthesis of the 1930's established evolution by mutation, genetic drift, and natural selection as the consensus paradigm of modern biology and the organizing principle around which the discipline is based. The universal adherence to evolutionary principles in biology stands in stark contrast to popular perceptions, where only about half of the U.S. population accepts the basic tenants of evolution. Many of those who reject evolution do so for religious reasons.

The aim of this course is to provide basic scientific and religious literacy in a single course that is team-taught by a physical anthropologist and a specialist in Biblical literature. We will examine the interplay between scientific and popular thought through the lens of the contemporary debate on evolution and human origins in the U.S. The course takes a broad look at how different religious traditions approach the question of origins, and how they interact with one another and with science. Through critical reading, civil discourse, and concise writing, students explore the scientific basis of evolution; different definitions of science, religion and mythology; the debate on intelligent design; scientific and mythic cosmologies; the bases of epistemologies; the role of science and religion in morality and ethics; and contemporary politics surrounding science education.

#### Course Goals:

1. Critical thinking: Students will learn to apply reason to difficult questions, to distinguish premises from deductions, and to recognize those things we take on faith in both science and religion. The objective here is neither to promote nor to denigrate religion or science, but rather to clarify the nature of religious and scientific knowledge.
2. Civil dialogue: Students will learn how to speak to others so that they listen, and how to listen so that others can speak.
3. Exploring epistemology: Students will explore the different methods for learning about the world, discovering “truth” and developing knowledge. Science has become a dominant paradigm, some might say dogma, that legitimizes some world views and discredits others. What is science? What alternatives are there to science?

## Course Requirements and Grading:

The course meets twice weekly for 1.5 academic hours each session and has a substantial writing component. This course seeks to develop three important skills: 1) *critical thinking* and the ability to analyze written and spoken arguments, 2) *the ability to share ideas* through discourse rather than heated argument with the aim of reaching greater understanding for all participants rather than coercive persuasion to a particular point of view, 3) *the ability to craft a laconic, well-reasoned essay*. In pursuit of these goals students will be evaluated based on the following:

1. Class Participation 20%
2. Discussion Summary 20%
  1. Draft 1 (10%)
  2. Final (5%)
  3. Critique (5%)
3. Journal 20%
4. Class Paper 40%
  1. Draft 1 (30%)
  2. Final (10%)

*Class Participation:* This is a discussion based course requiring active participation from all students. The class is organized around discussions of course materials (books, articles, videos etc.) and students are expected to have studied all materials in detail BEFORE each class session and to participate in the discussion by sharing their reasoned views on the topic. Students will be graded based on the amount AND quality of their in class participation.

*Discussion Summary:* Each class discussion is organized and led by one student with help from the instructors in moderating the discussion. In preparation to lead a class discussion, students must prepare written summaries of the readings, along with a list of major and minor discussion questions (roughly five of each). Students must also record the events of the discussion and draft a concise summary of the discussion and its major developments. The summary should answer the basic question: What did we learn from the discussion? The complete summary (ca. 1000 words, roughly 3 pages) includes the reading summaries, discussion questions and summary of the in-class discussion. A submitted summary is thus a polished and cleanly edited version of a journal entry (described below). Each submitted summary will be critiqued by the student who led the previous class discussion. Learning to critique another's work is an important course goal and students will be graded on the quality of the discussion critiques as well as their discussion summaries.

*Journal:* Students are required to keep a written journal with short entries (300-400 words, ca one page) for each class session. Entries should provide a synopsis of the readings, personal reflections, questions for in-class discussion, and a synopsis of the discussion. Student journals are a way of recording your intellectual and personal experience throughout the course. Journal entries will be entered online and will be graded four times throughout the course. We will provide feedback, but the contents of your journal will not be shared with anyone else. While we will grade journal entries, this is done mostly on a complete-incomplete basis. We want you to have a great deal of freedom of expression in your journals.

*Class paper:* Students are expected to write a well-crafted short essay (ca. 1200 words, roughly 4 pages) on a topic of their choosing. This essay may draw upon points raised during the class discussion but must be more than a mere summary of the discussion. The essay should reflect the student's position on the topic and also provide evidence and reasoned argument in support of that position. A first

draft of the essay will be evaluated by the instructors and returned with comments. A final draft is due at the end of the course.

**Course Materials:** The following have been ordered and are available from the Co-op.

**Required**

B&I: Denis R. Alexander and Ronald L. Numbers, eds. *Biology and Ideology: from Descartes to Dawkins*. Chicago: Chicago University Press, 2010. ISBN 978-0226608419

R&SD: Attridge, Harry, ed. *The Religion and Science Debate: Why Does it Continue?* New Haven: Yale Univ. Press, 2009. ISBN 978-0300152999

S&R: Paul Kurtz, P. ed. *Science and Religion: Are they Compatible?* Amherst, NY: Prometheus, 2003. ISBN 978-1591020646

Marks: Jonathan Marks. *Why I am Not a Scientist: Anthropology and Modern Knowledge*. Berkeley & Los Angeles: Univ. of California Press, 2009. ISBN 978-0520259607

**Optional**

Adler: Adler, M. J. & C. van Doren. *How to Read a Book*. New York: Touchstone, 1972. ISBN 978-0671212094 This is a classic text that has been reprinted several times. The readings from this book will be available in pdf, but it's worth having and there are cheap copies around.

*Course Schedule*

**1. INTRODUCTION: CRITICAL THINKING  
ABOUT SCIENCE AND ABOUT RELIGION**

**Th 26 August      Course Introduction      Mod: SF**

What is this course about? What are the expectations?

Exercise: Ice Breaker

**Tu 31 August      Interpreting Texts: Introduction      Mod: DR**

Adler 96-113: "Coming to Terms with an Author."

B&I 1-10: "Introduction," D. Alexander and R. Numbers.

Exercise: Graffiti Wall

**Th 2 September      Interpreting Texts: Analytical reading      Mod: SF**

Adler 114-136: "Determining an Author's Message."

Barbour2000ScienceReligion.pdf: "Four Views of Science and Religion," 7-38.

**Tu 7 September      Religion & Science: What is Science?      Mod: DR**

Marks ix-xii, 1-24: "Preface" and "Science as a Culture and as a 'Side'."

**Th 9 September      Religion & Science: What is Religion?      Mod: SF**

Lincoln2006HolyTerrors.pdf: "The Study of Religion in the Current Political Moment," 1-18.

**Tu 14 September      Analyzing Science: How does science work?      Mod: DR**

Marks 50-73: "Normative Science."

**Th 16 September      Analyzing Myth: Are these stories true? If so in what sense?      Mod: SF**

Smart1996Myth.pdf: "The Mythic or Narrative Dimension," 130-165.

**Tu 21 September Science as Myth or Narrative? Mod: DR and guest Juli Fellows**  
*S&R* 171-179: "Science versus Religion: A Conversation with my Students."

**Th 23 September A Buddhist Creation Case Study: Aggañña Sutta and the Brahmajāla Sutta.**  
**Mod: SF and guest Oliver Freiberger (Dept. of Asian Studies)**  
*AggaññaSutta.pdf*: "On Knowledge of Beginnings," 407-415, 75-77.

## 2. CRUCIAL TOPICS

**Tu 28 September Human Evolution Mod: DR**  
Excursion to Physical Anthropology Teaching Lab.

**Th 30 September Evolution & Natural Selection Mod: DR**  
*B&I* 248-275: "Evolution and the Idea of Social Progress."

**Tu 5 October Genesis 1-3 in Ancient Near Eastern Contexts.**  
**Mod: SF and guest: Na'ama Pat-el (Dept. of Middle Eastern Studies)**  
Readings TBA.

**Th 7 October Creationism Mod: DR**  
*B&I* 302-328: "Creationism, Intelligent Design and Modern Biology."  
[Http://creationwiki.org/Young\\_earth\\_creationism](http://creationwiki.org/Young_earth_creationism)

**Tu 12 October Genesis 1-3 in Modern Contexts Mod: SF [DR in Pittsburg]**  
*Wilkinson2009Genesis1-3.pdf*: "Reading Genesis 1-3 in the Light of Modern Science."

**Th 14 October Creationism Mod: DR**  
*Johnson2001EvolutionAsDogma.pdf*: "Evolution as dogma: The establishment of naturalism," 59-76  
*WedgeStrategy.pdf*: a leaked internal memo (1998) from the Discovery Institute, 1-6.

**Tu 19 October Intelligent design: The watchmaker Mod: DR**  
*B&I* 88-113: "Biology in the service of natural theology: Paley, Darwin and the Bridgewater Treatises."  
*Dawkins1996Watchmaker.pdf*: "The Blind Watchmaker," 181-185.

**Th 21 October Intelligent design: Irreducible complexity Mod: DR**  
*Behe2007Complexity.pdf*: "Irreducible Complexity: Obstacle to Darwinian Evolution," 352-370.  
*S&R* 89-98: "Skepticism's Prospects for Unseating Intelligent Design," 89-98.

## 3. BACKSTORY: HISTORY OF THE DEBATES

**Tu 26 October History of the Bible in English Mod: SF**  
Excursion to the Harry Ransom Center: early English translations, a first edition King James Bible.

**Th 28 October History of Science: Biology and the modern synthesis Mod: DR**  
*Marks* 103-128: "The Problem of Creationism."

**Tu 2 November Darwin, the Church, & the Bible: an overview Mod: SF**

Larson2007CreationEvolutionDebate.pdf: *The Creation-Evolution Debate*, 1-54.

**Th 4 November Evolution, Science, & Religion in America.**

**Mod: SF and guest: Tom Tweed (Dept. of Religious Studies)**

Readings TBA

**Tu 9 November Scopes Trial Mod: SF**

Moore1998ScopesAftermath.pdf: "Creationism in the US: II. Aftermath of the Scopes Trial," 568-577.

**Th 11 November Dover Mod: SF**

*R&SD* 55-92: "Darwin, God, and Dover: What the Collapse of 'Intelligent Design' Means for Science and Faith in America."

Behe2006Dover.pdf: "Whether Intelligent Design is Science," Introduction and pp. 5-10.

#### **4. SYNTHESSES: GOD, HUMANS, SCIENCE, RELIGION, MORALITY, EVOLUTION, AND THE UNIVERSE.**

**Tu 16 November Autonomous: Non-Overlapping Magesteria? Mod: DR**

*S&R* 191-204: "Non-Overlapping Magesteria."

*S&R* 205-209: "You Can't Have it Both Ways: Irreconcilable Differences?"

**Th 18 November Atheism Mod: SF**

*S&R* 31-40: "A Designer Universe?"

*B&I* 329-351: "The Ideological Uses of Evolutionary Biology in Recent Atheist Apologetics."

**Tu 23 November Conflict: Religion vs. Science? Mod: DR [SF at Conference]**

*R&SD* 125-153: "Religion vs. Science?"

*S&R* 73-79: "Holy Wars: An Astrophysicist Ponders the God Question."

Th 25 November NO CLASS - THANKSGIVING

**Tu 30 November Racism Mod: SF**

Marks 198-229: "The Rise and Fall of Colonial Science."

**Th 2 December Closing Remarks**