

Science and Religion
SYLLABUS
Fall 2012
REL 3160
MWF, 3:00-3:50
PC 439

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All of ... [our] questions are still about a single world, a world so large that it can be rightly described in all these different ways and many more. ... The plurality that results is still perfectly rational. It does not drop us into anarchy or chaos (Mary Midgley, *Science and Poetry*, 82).

The question about which story is truer is not equivalent to which story is more factual, because we weave the facts and the stories in the same cloth, like warp and weft on a loom (Philip Hefner, *Technology and Human Becoming*, 69).

This course starts from the premise that whatever we think of when we think of “religion” and of “science” that they are always-already together in some sense. Whether we are talking about the emergence of what we now know to be western Modern Science, or whether we are talking about traditional ecological knowledge or “post-modern” sciences, religion and science have always influenced one another. The emergence of what we now know as “modern” science, for instance, takes information from the ancient cultures of India, China, and Greece, and would not be possible without contributions to optics, mathematics, and “natural philosophy” during the Golden Age of Islam. Furthermore, “modern” science depends upon learning about flora and fauna (and their properties) from indigenous peoples all over the world. In a very real sense, then, Modern Science is a global phenomenon. On the other hand, the mechanistic understanding of the world is not shared by many cultures outside of what we call “the west,” and the reductive and exploitive version of science that emerges from “mechanism” is challenged by many cultures, religions, and peoples the world over, including practicing scientists. Many emerging “non-reductive” sciences (including in the area of cosmology, physics, neuroscience, and biological sciences) are beginning to see the world outside of the logic of mechanism. Such non-reductive sciences were influenced in part by an influx of “eastern” ways of thinking in the 18th and 19th centuries that understand the world as much more interconnected than “western” ways of thinking. These issues of the mutual influences on the developments in scientific and religious thinking will be examined in this course.

Also explored in this course will be the ethical issues that arise when one takes our place as human beings in the world seriously. Given our scientific and religious understandings of the world, how do we navigate issues such as: cloning, stem cell therapies, our relationship with

other animals, the “controversies” over evolution, global climate change, the mind-brain problem, and the future scenarios of the cosmos that suggest that the universe is either going to freeze (expand into nothingness) or fry (collapse back in on itself). What is the place of science in ethical deliberation and what is the space of ethical/religious deliberation in determining what technologies we ought to develop? These are the types of questions we will address in the second half of the course.

AIM OF THE COURSE

To explore the ethical, cultural, historical and philosophical connections between religious traditions and Western, Modern Science.

REQUIREMENTS

Recognizing that there are many different learning styles, these requirements are designed to provide you with a variety of ways in which you can demonstrate your engagement with the materials in the course.

1. Class Participation: 25%. The first step to doing well in this class is to show up! You can't be a part of the learning community if you are not present. If you have to be absent from the course, please notify me ahead of time. Any more than two absences (unless there are extenuating circumstances) will result in a lowering of your participation grade.

The second step to doing well in this course is to read the materials. I trust that you will read the materials for each week's class. There will be about 60-80 pages of reading/week. We will have reading discussions most Wednesdays, so students should come prepared to discuss the readings of a given week by the Wednesday of the week for which the readings are listed.

The third step to doing well in the class is to speak up during course discussions. I realize that we all exist on a spectrum between introversion and extroversion, but remember that the classroom is as good as all of the voices therein. We all lose if we don't hear your voice at some point(s) throughout the semester.

The classroom is a community of learners. That is, we are all in the process of critically engaging the lectures and course materials together. Learning should be a collaborative process and it will take all of us to learn this semester. Having said that there are some ground rules that should be followed in course discussions and assignments.

1. Confidentiality: Sometimes we are exploring serious issues in the course that may be hard to speak about or give voice too. I expect that students will respect one another's privacy in this course and allow room for this type of exploration.
2. Trust and Respect: The classroom is a learning community and it is only as good as the relationships of the people that make up the classroom. Give your classmates the benefit of the doubt before jumping to conclusions about what is said. Also, be sure to state your opinions, questions, ideas and beliefs in a way that is not intentionally disrespectful to others in the class.
3. Academic Honesty. In all written materials, students will be expected to cite sources. Plagiarizing and “Copying” from other students may result in a failing grade. Grading for written assignments will follow the Rubric that is handed out on the first day.
4. Students should be aware of everyone in the classroom and enable each person to contribute to the conversation. Likewise, each participant should refrain from dominating class discussion.
5. In order to facilitate dialogue, on discussion days we may break out into small groups.

2. Bi-weekly reading/lecture quizzes. 25% of the grade. In order to help you keep up with the course readings and lectures, we will have online quizzes (via the course Moodle) roughly every other week. The quiz dates are listed in the syllabus below and are to be taken on the date listed in the syllabus. On the dates of these quizzes, we will not have “in person” class, but rather you should study and take the quiz on that day. The Quiz dates are: August 21, September 21, October 5, October 26, November 16, November 30.

3. Mid-Term Essay Exam: 25% of Grade. On lectures, readings, and class discussions. This exam will be a take-home exam and will be passed out on October 8th. It is to be handed in via Moodle by class time on October 12th. Since this is a take-home exam, the essays should draw from course readings and lectures and use basic parenthetical citations.

4. Final Essay Exam: 25% of Grade: On lectures, readings and class discussions from the time of the mid-term to the end of class. This exam will be a take-home exam and will be passed out on November 28th. It is to be handed in via Moodle by Monday, December 3rd. Since this is a take-home exam, the essays should draw from course readings and lectures and use basic parenthetical citations.

PLAGIARISM POLICY

This course adheres strictly to FIU’s plagiarism policy:

This Policy views plagiarism as one form of academic misconduct, and adopts the definition of the university’s Code of Academic Integrity, according to which plagiarism is:

the deliberate use and appropriation of another’s works without any indication of the source and the representation of such work as the student’s own. Any student who fails to give credit for the ideas, expressions or materials taken from another source, including internet sources, is guilty of plagiarism.

Examples of plagiarism include, but are not limited to:

1. Term papers acquired online or from other sources;
2. Copying of original material without attribution;
3. Use of other students’ work;
4. Copying and pasting, verbatim, information from Internet sources, without quotation marks and correct citation.

Plagiarism will result in a failing grade for the course and a referral to the College of Arts and Sciences Dean of Students for academic misconduct.

GRADING SCALE

A	96-100	C	72-77
A-	91-95	C-	71, 70
B+	89, 88	D+	69, 68
B	82-87	D	62-67

B- 80, 81
C+ 79, 78

D- 60, 61
F 59 and below

REQUIRED TEXT

- Selection from the *Routledge Companion to Religion and Science*. (bookstore)
- Ian Barbour, *When Science Meets Religion: Enemies, Strangers or Partners* (New York, NY: HarperCollins, 2000).
- Alister E. McGrath, *Science and Religion: A New Introduction* (Wiley 2009; 2nd edition)
- Ronald Numbers. *Galileo Goes to Jail and Other Myths about Science and Religion* (Harvard University Press, 2010).

Important Web Resources

- The Center for Theology and the Natural Sciences: www.ctns.org
- The Metanexus Institute: <http://www.metanexus.net/institute/>.
- The Institute for Religion in an Age of Science: www.iras.org.
- The Ian Ramsey Center: <http://users.ox.ac.uk/~theo0038/index.html>.
- Counterbalance: <http://www.counterbalance.org/>.
- The Center for Process Studies: <http://www.ctr4process.org/>.

SCHEDULE

Part I:

Religion and Science as Mutually Engaged Phenomena

Week 1, August 20, 22, 24: Intro To Course: What is Religion? What is Science?

Readings: Barbour, 1-38; McGrath 1-6, 45-50.

Week 2, August 27, 29, 31: Epistemological Issues: What is it to know in religion and science

Readings: McGrath, 51-83, 120-142; Van Huysteen (online)

August 31: **First Reading/Lecture** Quiz on Moodle (no in-person class)

Monday, September 3: Labor Day, No Classes

Week 3, September 5, 7: A Postcolonial Issue: Whose Religion and Whose Science

Readings: Companion, 381-402; Readings from Sandra Harding Postcolonial Science (online)

Part II:

From the Greeks to Islam to Modern Western Science

Week 4, September 10, 12, 14: China, India, and the Ancient Greeks

Readings: Numbers 8-34; Companion 79-90; Companion 113-123;

Week 5, September 17, 19, 21: The Golden Age of Islam

Readings: Numbers, 35-42; Companion, 45-57; Reading from *Islam and Science* (online)

September 21: **Reading/Lecture Quiz 2** (no in person class)

Week 6, September 24, 26, 28: The Scientific Revolution

Readings: McGrath, 17-32; Numbers, 50-98; Companion 58-68; Bauman *Zygon Article* (online)

Week 7, October 1, 3, 5: The Cosmological Turn

Readings: Barbour, 39-64; McGrath, 151-162; Numbers 115-123; Companion, 93-102, 124-134.

October 5: **Reading/Lecture Quiz 3** (no in person class)

Week 8, October 8, 10, 12: The Evolutionary Turn

Readings: McGrath, 163-174, 193-196; Numbers, 131-151.

October 8: **Hand out Essay Midterm**

October 10:

October 12: **Hand in Essay Midterm**

Week 9, October 15, 17, 19: The Ecological Turn

Readings: Barbour, 150-180; Companion, 487-507; Reading from Ernst Haeckel (online)

Week 10, October 22, 24, 26: Postmodernism, Religion, and Science

Readings: Barbour, 65-89; Numbers, 187-205, 224-234; Companion, 156-168

October 26: **Reading/Lecture Quiz 4** (no in-person class)

Part III: Contemporary Issues in “Science and Religion”

Week 11, October 29, 31, November 2: Creation, Evolution and Intelligent Design: What is the Problem?

Readings: Barbour, 90-118; McGrath, 145-150; Numbers, 152-186, 206-224.

Week 12, November 5, 7, 9: The Great Stem Cell Debate

Readings: Barbour, 119-149; Ted Peters (online)

Week 13, November 12, 14, 16: The Mind-Brain Problem

(online) Readings: McGrath, 174-190; Companion, 285-307; Deacon, *Symbolic Species*

November 16: **Reading/Lecture Quiz 5** (no in person class)

Week 14, November 19, 21: Creativity and Emergence: The place of Humans in the Cosmos

Readings: Companion, 223-230, 578-590; Deacon and Goodenough (online)

Friday November 23: Thanksgiving Holiday, No Classes

Week 15, November 26, 28, 30: The Science and Religion of Gender and Sexuality

Readings: Companion, 69-78; Bauman, *Religion, Nature and Globalization* (chs 4-5, online).

November 28: **(Hand out final exam essay)** (evaluations)

November 30: **Reading/Lecture Quiz 6** (no in class person)

Final Exam: Due on Moodle by **Monday December 3.**