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 all 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. Indeed, non-reductive, scientific epistemologies were viable within many of the sciences up until WWII when the scientific enterprise was given over largely to technology transfer and material progress. Such non-reductive sciences were influenced in part by an influx of “eastern” ways of thinking in the 18th and 19th centuries that understood the world as much more interconnected than “western” ways of thinking. Though the reductive model of the natural world was never fully realized, it really began to be challenged again from within the sciences with the publication of Rachel Carson’s *Silent Spring*. This book more than any other helped to sound the alarm over how human technologies were degrading much of the planet. Science, in other
words, had not been able to manage the Earth like a machine. These issues, among many others, 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 pages of reading/week. We will have reading discussions most Thursdays, so students should come prepared to discuss the readings of a given week by the Thursday 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. Four Reading Quizzes: 25% of the grade. In order to help you keep up with the course readings and lectures, we will have online quizzes roughly every 4 weeks. The quiz dates are listed in the syllabus below and are to be taken on the date listed in the syllabus. In order to help you with reading, I will make available a reading chart that points toward the types of things I will be looking for in critically reading and analyzing texts.

3. History of Science and Religion Essay: 25% of Grade. Every student must write a 1500-2000 word essay on one historical, religious contribution to the rise of modern science. In this essay, you should describe how the given religious person, concept, or event contributed to the construction of a modern scientific worldview, and how a modern scientific worldview has challenged or changed the tradition from which the person, concept or event came from. You might, for instance, talk about how monotheism influenced the rise of a modern scientific worldview, or how a specific practice like the Islamic Hajj helped to influence the rise of modern science. Or, you might discuss how the idea of a created universe shaped Einstein’s initial rejection of the now-established scientific cosmology which suggests the universe is expanding in all directions. Then, you should discuss how the belief system that contributed to modern science has been changed or challenged by scientific ideas. This essay is due on February 22 by class time.

4. Contemporary Ethical Issues in Science and Religion Essay: 25% of your grade. Toward the end of the course, we will discuss various contemporary issues in science and religion. You should choose one of these issues (or another issue approved by me) to write a 1500-2000 word essay on. In this essay, you will explore the various sides of the “debate” and argue for your own position on the issue. You should focus on building a solid argument for your position, and on detailing the specifics of the various positions held on the issue. The last essay is due on Thursday, April 26th by 11:59pm.

**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

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<th>Grade</th>
<th>Minimum Score</th>
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<tr>
<td>A</td>
<td>96-100</td>
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<tr>
<td>A-</td>
<td>90-95</td>
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<tr>
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<td>D</td>
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<td>F</td>
<td>59 and below</td>
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REQUIRED TEXTS

Important Web Resources
The Center for Theology and the Natural Sciences: [www.ctns.org](http://www.ctns.org)
The MetaneXus Institute: [http://www.metanexus.net/institute/](http://www.metanexus.net/institute/).
The Institute for Religion in an Age of Science: [www.iras.org](http://www.iras.org).
The Ian Ramsey Center: [http://users.ox.ac.uk/~theo0038/index.html](http://users.ox.ac.uk/~theo0038/index.html).

SCHEDULE

Part I:
Religion and Science as Mutually Engaged Phenomena

Week 1 Jan 9 and 11: Intro To Course: What is Religion? What is Science?

T: Intro to course
Th: Lecture and reading discussion
Readings: Barbour, 1-38;

**Week 2 Jan 16 and 18: Epistemological Issues: What is it to know in religion and science**
T: Lecture  
Th: Reading Discussions

**Readings:** Ferngren, 1-30

**Week 3 Jan 23 and 25: A Postcolonial Issue: Whose Religion and Whose Science**

T: Lecture  
Th: Reading Discussion

**Readings:** online

**Part II:**
From the Greeks to Islam to Modern Western Science

**Week 4 January 30 and February 1: China, India, and the Ancient Greeks**

T: Lecture  
Th: Reading Discussion

**Readings:** Numbers 8-34; Ferngren 31-72.

**First Quiz**

**Week 5 February 6 and 8: The Golden Age of Islam**

T: Lecture  
Th: Reading Discussion

**Readings:** Numbers, 35-42; Ferngren 73-92

**Week 6 February 13 and 15: The Scientific Revolution**

T: Lecture  
Th: Reading Discussion

**Readings:** Numbers, 50-106; Ferngren 93-162

**Week 7 February 20 and 22: The Cosmological Turn**

T: Lecture
Th: Reading Discussion

Readings: Barbour, 39-64; Numbers 115-123; Ferngren 299-321

First Essay due on Thursday February 22

Week 8 February 27 and March 1: The Evolutionary Turn

T: Lecture
Th: Reading Discussion

Readings: Numbers, 131-186; Ferngren 177-233.

Second Quiz

Week 9 March 6 and 8: The Ecological Turn

T: Lecture
Th: Reading Discussion

Readings: Barbour, 150-180; Ferngren 345-356.

Week 10 March 13 and 15: Postmodernism, Religion, and Science

T: Lecture
Th: Reading Discussion


Part III: Contemporary Issues in “Science and Religion”

Week 11 March 20 and 22: Creation, Evolution and Intelligent Design: What is the Problem?

T: Lecture
Th: Reading Discussion

Readings: Barbour, 90-118; Numbers, 206-224; Ferngren, 277-298, 334-344.

Week 12 March 27 and 29: The Great Stem Cell Debate

T: Film in Science and Religion
Th: No class; work on final essay, catch up on reading

Readings: Barbour, 119-128;
Third Quiz

Week 13 April 3 and 5: The Mind-Brain Problem
T: Lecture
Th: Reading discussion

Readings: Barbour, 129-149; Numbers 107-114;

Week 14 April 10 and 12: Creativity and Emergence: The place of Humans in the Cosmos
T: Lecture
Th: Reading Discussion

Readings: online

Week 15 April 17 and 19: The Science and Religion of Gender and Sexuality
T: Lecture
Th: Course wrap up

Readings: Ferngren, 357-373. Online reading.

Final Quiz

Final essay due on Thursday April 26th