

## **Religion 104: Religion and Science**

**MWF 9:30 – 10:25, SOM 102**

**Prof. M. G. Hamner, [mghamner@syr.edu](mailto:mghamner@syr.edu); Mon/Wed. 1:45-2:45 p.m., 512 HL  
T.A., Patty Giles**

Is the relationship between religion and science one of warfare or harmony? How would you decide? Based on what concepts, history, or other criteria? Some have argued that the debates between faith and reason, or between belief and fact, have defined the last century and, indeed, can be seen to define the entire modern history of Western Europe and the United States. This course sets out to explore the range and influence of these debates, paying special attention to Galileo and Darwin.

### **Learning Outcomes**

The objectives of this course are three-fold.

1. To explore what constitutes ‘science’ and what constitutes ‘religion.’ These terms are not self-evident, and their epistemology has changed over the centuries.
2. To teach students some of the history of the hostility, overlap, and support evidenced in the exchanges between research scientists and religious authorities. Studying this history should give students the skills and insights sufficient for entering into contemporary debates.
3. To give students the opportunity to use those skills and insights by providing class time to primary texts and to contemporary debates.

### **Required writings:**

- Phil Dowe, *Galileo, Darwin, and Hawking: The Interplay of Science, Reason, and Religion*. Available at the SU bookstore.
- Course pack available at the Copy Center in Marshall Square Mall. These readings are marked with an “\*” in the syllabus.
- Online selections of primary sources. Please print these out for class, or upload them to the computer you bring to class.

### **Requirements**

Students will be assessed by writing and by examination.

1. Attendance and Participation. I assume you will attend lectures, but will not take attendance every session. Evidence of persistent absence, however, will count against you. I expect you to ask questions and participate in class conversation, either vocally or by email. (10%)
2. Three Quizzes on vocabulary, name identification, and date identification. The dates for these quizzes are listed in the syllabus. Terms will be drawn from readings and lectures. The purpose of these is to encourage you to keep up with the readings, and to come to class. (10% each = 30%)
3. One midterm exam: identification of passages from primary sources, and short answers to questions about specific concepts or persons. (25%)
4. One cumulative final exam: This exam will include questions like the midterm exam for the material covered *since* the midterm, and then will also include 1-3 synthetic questions that will require you to think about the issues covered over the entire course of the semester. (35%)

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#### **Official Policies:**

**Academic Integrity:** The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The Policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academicintegrity.syr.edu/>.

**Disability Statement:** Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309 (315) 443-4498 and have an updated accommodation letter for the instructor. Accommodation and related support services such as exam administration are not provided retroactively and must be requested in advance. For more information about services and policy, visit the Office of Disability Services website at <http://disabilityservices.syr.edu/> or contact the office at the addresses below:

Syracuse University	Phone: (315) 443-4498
Office of Disability Services	TDD: (315) 443-1371
804 University Avenue Room 309	Email: odssched@syr.edu
Syracuse, NY 13244-2330	

**Emergencies and Religious Holidays:** Please inform me in writing (email) if you must miss class, a film screening, or a paper due date. In fairness to the other students, if you do not notify me *before* the class, screening or due date, I cannot allow you to make up the work. *This policy includes emergencies, deaths in the family, and medical conditions.* By university policy, if you will miss class or assignments because of a religious holiday, I need to be informed in writing *one week* before the holiday. Travel days around the holiday are not excused.

**GROUND RULES:** Ensure your full attendance and participation grades by regarding the following:

- Please speak with respect and care for those who might disagree with you.
- Please use gender neutral language.
- Please respect the class process and your peers: come to class on time.
- If you must leave during class, please don't return.
- Please turn off your cell phones, blackberries, iphones and other identity extensions.

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### **Syllabus of assignments**

#### **Week 1: Introduction and Basic Framework**

Mon	Aug 25	Introductions
Wed	Aug 27	Read: Dowe, “Introduction” (1-8), selection on Plato’s Forms*
Fri	Aug 29	Read: selection on Aristotle’s Four Causes*

#### **Week 2: Early models of cosmology**

Mon	Sep 1	<b>Labor Day: no class</b>
Wed	Sep 3	Read: Copernicus* (full text is available at <a href="http://www.webexhibits.org/calendars/year-text-Copernicus.html">http://www.webexhibits.org/calendars/year-text-Copernicus.html</a> ) See a model of Ptolemy’s theories at <a href="https://people.scs.fsu.edu/~dduke/ptolemy.html">https://people.scs.fsu.edu/~dduke/ptolemy.html</a> )
Fri	Sep 5	Read: Dowe, pages 16-22, and Plato’s <i>Timaeus</i> lines 27c-34a (line numbers listed on the Greek side of the page) at <a href="http://www.ellopos.net/elpenor/physics/plato-timaeus/genesis.asp">http://www.ellopos.net/elpenor/physics/plato-timaeus/genesis.asp</a>

#### **Week 3: The Patristic period and the Reformation**

Mon	Sep 8	Read: Dowe, pages 22-26 and Augustine*. (For those interested in the Church Fathers, you may wish to see excerpts from Aquinas on creation at <a href="http://www.nd.edu/~afreddos/translat/aquinas1.htm">http://www.nd.edu/~afreddos/translat/aquinas1.htm</a> ).
Wed	Sep 10	Read: Dowe, pages 26-29; Calvin*. (Those interested in the Protestant Reformation will enjoy Luther’s 95 Theses at <a href="http://www.iclnet.org/pub/resources/text/wittenberg/luther/web/ninetyfive.html">http://www.iclnet.org/pub/resources/text/wittenberg/luther/web/ninetyfive.html</a> ).
Fri	Sep 12	<b>Quiz #1</b>

#### **Week 4: Galileo**

Mon	Sep 15	Dowe, pages 29-39
Wed	Sep 17	Read: <i>Starry Messenger</i> , <a href="http://www.bard.edu/admission/forms/pdfs/galileo.pdf">http://www.bard.edu/admission/forms/pdfs/galileo.pdf</a>
Fri	Sep 19	<i>Starry Messenger</i> , continued. I strongly suggest you begin reading the “Letter to the Grand Duchess Christina (see link under Sept. 22)

#### **Week 5: Galileo, continued**

Mon	Sep 22	Read: “Letter to the Grand Duchess Christina,” <a href="http://www.fordham.edu/halsall/mod/galileo-tuscany.html">http://www.fordham.edu/halsall/mod/galileo-tuscany.html</a>
Wed	Sep 24	Read: Sentence and Apology*
Fri	Sep 26	Read: scenes from Brecht’s <i>Galileo</i> *

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### **Week 6: Hermeneutics or the Art of Interpretation**

Mon	Sep 29	Read: Dowe, pages 40-56
Wed	Oct 1	Read: Osiander's foreword to Copernicus's <i>De Revolutionibus</i> at <a href="http://www.webexhibits.org/calendars/year-text-Copernicus.html">http://www.webexhibits.org/calendars/year-text-Copernicus.html</a>
Fri	Oct 3	<b>Quiz #2</b>

### **Week 7: The Development of the Scientific Method**

Mon	Oct 6	Read: Dowe, page 57-69
Wed	Oct 8	Read: Dowe, pages 70-81
Fri	Oct 10	Read: Bacon, <i>novum organum</i> , Author's Preface, at <a href="http://www.constitution.org/bacon/nov_org.htm">http://www.constitution.org/bacon/nov_org.htm</a>

### **Week 8: Midterm**

Mon	Oct 13	Video clips on astronomy to assess Bacon's legacy
Wed	Oct 15	In-class review
Fri	Oct 17	<b>Midterm Exam</b>

### **Week 9: Miracles**

Mon	Oct 20	Read: Dowe, pages 82-91
Wed	Oct 22	Read: Dowe, pages 91-103
Fri	Oct 24	Further discussion of miracles. Next week requires a bit more reading, so I recommend you get a head start.

### **Week 10: Darwin**

Mon	Oct 27	Read: Dowe, pages 104-112, and Paley*
Wed	Oct 29	Read: Dowe, pages 113-124.
Fri	Oct 31	Read: Darwin, selections from his <i>Origin of Species</i> at <a href="http://www.literature.org/authors/darwin-charles/the-origin-of-species/">http://www.literature.org/authors/darwin-charles/the-origin-of-species/</a> . Read the summary of Chapter 4 (at the end), and as much of Chapter 14 as you can. I also recommend the Introduction and Preface, but I'm not requiring them.

### **Week 11: Darwinism**

Mon	Nov 3	Read: Dowe, pages 125-136
Wed	Nov 5	Read: Richards*. This text is more complicated than Dowe. Read it for <i>how</i> he presents the history of evolutionary theory. I'll let you know in class which details you have to know.
Fri	Nov 7	In-class screening of parts of <i>Inherit the Wind</i> (Kramer, 1960). I recommend watching the entire film. It's a Bird, Videotape PN1997 I54 1999.

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**Week 12: Cultural reverberations of *Origin of Species***

Mon	Nov 10	Read: Dowe, pages 137-141
Wed	Nov 12	Read: Larson, “The Scopes Trial”*
Fri	Nov 14	Read: Numbers, “Creationism since 1859”*

**Week 13: Big Bang Cosmology**

Mon	Nov 17	Read: Dowe, pages 142-158
Wed	Nov 19	Read: Dowe, pages 158-169
Fri	Nov 21	<b>Quiz #3.</b> Further discussion of Cosmology

**Week 14: Thanksgiving**

Mon	Nov 24	Recent media articles on religion and science: TBA
Wed	Nov 26	<b>No class: Thanksgiving Holiday</b>
Fri	Nov 28	<b>No class: Thanksgiving Holiday</b>

**Week 15: God, Chance, and Providence**

Mon	Dec 1	Read: Dowe, pages 170-178
Wed	Dec 3	Read: Dowe, pages 178-190
Fri	Dec 5	Further discussion and in-class review

**Final Exam review will be announced by Ms. Giles. Final exam schedule is set and posted by the University. See**

**[http://registrar.syr.edu/students/finalexams/f2008\\_sc\\_finalexams.pdf](http://registrar.syr.edu/students/finalexams/f2008_sc_finalexams.pdf)**

**Our class exam is set for Friday, December 12, from 12:30 – 2:30 p.m.**