

FYSE 107 — SCIENCE AND RELIGION COURSE INFORMATION

Revision 1[A]

You are responsible for knowing the full contents of this document!

1 The topic

Cloning, embryonic stem cells, vaccinations, evolution and intelligent design: all of these topics are, within some context or other, modern sources of debate. In each such conflict, battle lines are typically drawn between the scientists and the religious. Each debate highlights a different aspect of the possible disagreements between science and religion. For example, the fight over stem cells centers on ethical choices—*what we should (not) do?*—where the disagreement over evolution focuses on nature itself—*how does the universe work?*

The conflict between science and religion is not new. Nonetheless, it is also not *that* old. Science as we now know it appeared roughly 400 years ago, buffeted along by the Enlightenment. In contrast, the core of the dominant, western, religious traditions was forged more than 5,000 years ago, and Christian theology and philosophy was set on its way 1,600 to 1,800 years ago. In the short period of the co-existence of western religion and modern science, however, the battle between these two has been continual, even though the types of battles have changed substantially. As the list of topics above makes clear, the disagreement has hardly ended.

Must there *be* a conflict? Some claim that the trouble began because religion overstepped its bounds: that it made assertions about the workings of nature. Once science came upon the scene, (some claim) it pushed religion back into its rightful domains of ethics, morals, society, and the metaphysical, leaving the physical world to science alone. Of course, science has now, according to some, also overstepped its bounds, claiming that there is no metaphysical world and that ethics/morals/society are evolved psychological traits that, at least in principle, can be addressed scientifically as well. If science would just stick to studying the physical world, and religion stick to questions of what we *ought* to do, there would be no conflict. At least, that's the claim.¹

Is that view correct? Has all of this fighting just been a correction of property lines, leaving us now with small skirmishes as the dust settles? Or is the conflict deeper? Can we truly say that science (and its parent, philosophy) have nothing meaningful to say about ethics? What if our ethical sense is a complex but biologically evolved trait? Can we really expect religion to cede authority over areas that science has not (some believe) conclusively explained, such as the origins of man, the origins of the universe, consciousness, and ethical behavior? Isn't it dangerous to leave things like ethics, morals, and social structures to "materialists"?² Look at what happened with the fascists and communists, after all, not to mention the "social darwinists".

This question is our central focus: what is the nature of the conflict between science and religion? We may find that it does not, after all, need to exist at all. Or we may find that they are doomed to an unending struggle. If the latter, we must examine the trends in this battle, and forge guesses about where it may be headed. Along the way, we are likely to address associated questions: *Can a scientist really be a believer? Is religion all faith and no reason? Is knowledge that cannot be*

¹See Stephen Jay Gould's notion of *non-overlapping magisteria*.

²Here, *materialism* is the belief that there is no spiritual world, and thus only the physical universe; it should not be confused with notions of consumerism.

communicated really knowledge at all?

2 Discussion, critical reading, writing well

This course is **not** a lecture-based course—at least, it should not be if I am doing my job well. I plan not to stand at the front of the class, explain the material, and lay out the possible interpretations. This course will be driven by *you*. The goal, for each class meeting, is to begin discussion on one reasonably focused aspect of our material and begin debating amongst ourselves. Not only must you be prepared to participate, but you must approach the discussions (and indeed the whole course) with an *open mind*. You must be ready to admit that someone else’s argument is persuasive, and that you are choosing to change your opinion and/or your thinking.

Such discussion will be possible only if we maintain decorum. Everyone believes *something*—we could not go from day to day without adopting some default expectations on which we rely. Thus, everyone has some kind of vested interest in this debate. No viewpoint can avoid legitimate criticism. Yet this is an academic environment, where rational criticism is our responsibility. Inevitably, some aspect of our beliefs will come under attack in the reading, during a discussion, during one of my (brief!) moments of lecturing, or in the feedback that I will provide to your writing.

We must give and receive criticism with a goal towards **learning**. It should never be our aim to win the debate for the sake of winning, nor to defend our beliefs because the criticism makes us uncomfortable. We can only learn if we turn our critical eye inward, seriously considering the critique provided by others. We can only do **that** comfortably if the assertions that each of us makes are given respectfully, thoughtfully, and rationally. **There will be no room in this course for personal attacks, passionate but unreasoned defenses, or any other form of thoughtless statements.**

That said, we must be unafraid to voice our criticisms. Each of us **should**, at some moment or other, say something blasphemous to someone else’s ears. We should not seek to do so for its own sake, but because we should not fear an honest attempt at skepticism, inquiry, and exploration. No legitimate question should be out-of-bounds if we are to cut through the impassioned, often political stances taken in the public discourse on these topics.

To be prepared for these discussions and debates, **reading the assigned material is crucial**. Don’t skim. Don’t pass your eyes unthinkingly over the words so that you can claim to have “done the reading”. Read **thoughtfully**. Prepare to poke holes in any simple claims that people (including me) might make. I will attempt not to assign overly burdensome volumes of text; in exchange, I expect you to know full well what you’re talking about when each class meetings begins.

Writing well will be essential for this course. This is the type of material in which it is easy to jumble together a number of complex concepts while saying nothing at all. Such writing will be roundly rejected. Instead, our mantra will be, *be brief, be brilliant, be done*. To do so, you must think carefully about what you are claiming and how you will support that claim. You must then be prepared to work not only at the initial writing, but also the self-editing stages that must follow to produce polished text.

3 Details, part 1: Lectures, attendance, and scheduling conflicts

We will meet twice weekly for a 80 minutes each. The class lectures are **TTh from 11:30 am to 12:50 pm in Seeley Mudd 204**. As mentioned above, these meetings will contain less lecturing and more discussing. Be prepared for every class meeting.

You are responsible for the material presented and discussed in every class session. There is no attendance policy, but I strongly recommend that you attend all class meetings. If you miss one, it is your responsibility to obtain the material that you missed.

If you must miss a class meeting due to illness, please contact me as soon as is reasonable. We will then make arrangements to address the material and discussion that you may have missed.

If you must miss a class meeting due to another commitment (e.g., a musical performance, an athletic contest), then do **not** contact me. How you choose between scheduling conflicts is for you to decide. If you choose to miss a class meeting in order to do something else, then you are responsible for the material that you miss; moreover, you should not expect that I will help you to address that missed material. If any work is due at the time of the class meeting that you miss, then I expect you to submit it **beforehand**.

4 Details, part 2: Texts and online materials

There are five texts that we will use (and that you must obtain) for this course. All of them will be available³ at Amherst Books, 8 Main St, in town. Note that you may buy the books anywhere you like, and the choice of form (hardback, paperback, e-book) is unimportant. Also note that one of the books is available for free as a download.

1. Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution*, ISBN-13: 978-0743290319.
2. Francis S. Collins, *The Language of God: A Scientist Presents Evidence for Belief*, ISBN-13: 978-1416542742.
3. Thomas S. Kuhn, *The Structure of Scientific Revolutions*, ISBN-13: 978-0226458083.
4. Seth Mnookin, *The Panic Virus*, ISBN-13: 978-1439158654.
5. Andrew D. White, *A History of The Warfare of Science with Theology in Chistendom*. ISBN: 978-0879758264. In the public domain and available at Project Gutenberg in various forms.

There will also be other materials, usually provided online at the Documents page from time to time. If you need help with any of these files, let me know, and either I or the folks in Desktop Computing Services can help you.

³As of this writing, these books have not yet been ordered.

5 Details, part 3: Assignments and deadlines

Both reading and writing assignments will be posted on the Assignments page. They will always be posted in a timely fashion, appropriately ahead of their deadline, so as to give you reasonable time to complete each. The deadlines will be very clearly stated. I will also announce such assignments during class times, but I will assume that their appearance on the Assignments page (which you should check regularly) is sufficient notice.

Written assignments must be turned in by their deadline. **Late submissions will be given a failing grade.** You are thus better served by submitting something incomplete before the deadline than by trying to perfect it and handing it in late.

Here are the critical rules regarding extensions for an assignment:

- If you fall ill, are injured, or must handle some other emergency, then you should notify me of your need for an extension at the first reasonable moment. I will expect, in these circumstances, that the Dean of Students office can corroborate that your situation would merit an unexpected extension on a deadline.
- If some important (non-emergency) circumstance will impinge your ability to submit work by its deadline, then you must contact me at least 48 hours prior to the deadline to request an extension. I will try to respond in a timely fashion, and depending on the nature of your request, I may or may **not** grant the extension. Some examples of acceptable reasons for extensions are: A sudden request for a job interview, just-in-time scheduling of a post-season athletic contest (for a student in good standing), personal emotional distress (again verifiable through the Dean of Students).
- There are a number of common circumstances that do **not** merit extensions. Specifically, I expect you to handle any foreseeable conflicts between coursework and other responsibilities by doing your work early. For example, athletic events, musical performances, or other extracurricular commitments that were scheduled more than 1 week prior to a deadline will not constitute a reason for an extension. Similarly, there will be times when coursework from all of your classes will pile up. Telling me that you also have a lab, a paper, and an exam at around the same time is **not** a reason for an extension; you are expected to carry the workloads from all of your classes.

If you find that you are having problems with the assignments, do not hesitate: come to see me. We will find ways to keep you on track.

6 Details, part 4: Grading

Your grade will be determined by the following distribution:

- **30%—Class participation:** I will observe your readiness for class discussions and the insight revealed by your statements. Note that this component of your grade is a substantial fraction of its total; those who sit silently, and those who are not prepared to participate meaningfully, will find themselves unhappy with their final grades.

- **70%—Regular writing assignments:** The papers assigned throughout the semester will count for the great majority of your grade.

7 Details, part 5: Academic honesty

- Academic honesty can be a difficult thing to define well. Naturally, you must do your own work. However, one of the strengths of a small, residential college such as this one is your peer group; discussion of the material with others is a natural and beneficial thing to do. Thus, I hope here to make more clear what constitutes academic dishonesty, as well as its penalties.
- In general, discussing the work with another student is always acceptable. However, observing another person's work, in any form, with or without that person's permission, is unacceptable. Likewise, sharing your work, in any form, with another student is unacceptable.
- To make this issue more concrete, let's consider a written paper. You are allowed to discuss the material on which you have been asked to write with others. You may **not view** another person's writing, nor may you show yours to another student. Furthermore, note that you may discuss the background material with another student, but that you should not discuss or formulate the ideas that will appear in your writing with another person. In short, understand together, but formulate your own ideas for your writing.
- **Penalties:** If I think that you have been academically dishonest but I do not believe that I can prove it, then we will have a discussion about the uncomfortable similarity between your work and another's; however, there will be no penalty. In such circumstances, I assume that you may have unknowingly or unwittingly crossed the collaborative line in discussing material with another student.
- If I am certain that you have been academically dishonest—submitting work that is exceedingly similar to another student's, or submitting work that clearly comes from an outside source—**then you will fail this course, and the case will be reported to the Dean of Students.** You are far better off submitting half-baked, poor work than trying, in the panic of an approaching deadline, to copy another's work and submit it as your own.

A Revision history

- **Revision 0 [2011-Jul-19]:** The initial, complete version.
- **Revision 1 [2011-Sep-06]:** Added the location of the class.