Philosophy 305: Philosophy of Science  
Presession, Summer 2008  

Instructor  
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Course Description  
This course covers central issues in the philosophy of science.  

Textbook  
Peter Godfrey-Smith, *Theory and Reality: An Introduction to the Philosophy of Science*  

Schedule  
The course will meet from 1–3:50pm, Monday through Friday from May 19th to June 6th; the final exam will be on Saturday June 7th at the usual time. Note that there is no class on Memorial Day, Monday, May 25th. We will cover one chapter of the course textbook each day; the chapters will be covered in order.  

Course Requirements  
Students will be graded on the basis of short essay assignments, in-class participation and a final exam. (See “Short Essay Assignments” below.) Students must write four and may write up to six short essay assignments. The average of the four highest grades on short written assignments will each count for 60% on the student’s grade. The final exam will count for 20% of the student’s grade. In-class participation will count for 20% of the student’s grade. Additionally, any student that writes six short essay assignments and receives an average grade of B+ on them is exempt from the final exam. The final exam will be cumulative, in essay format.  

In-class Participation  
Students are expected to come to class having read the relevant chapter for that day’s class. Each class will begin with a lecture presentation of the
material within one chapter of the textbook. Following that, students will break into small groups to discuss one discussion topic for that day. (Each group may have a separate discussion topic.) Each group will be expected to discuss that topic and write a short (about 100 words) description of the results of the small group discussion. Then we will have a classroom discussion of each of the discussion topics.

Each group will hand in the description of the results of their small group discussion at the end of class and include the names of each student in the group on the description. So long as this write-up shows at least some thought and consideration, each student in the group will receive a grade of B for participation that day. Students who also contribute to the classroom discussion in a productive way, will receive an A for that day. The total participation grade is the average of the highest 12 participation grades received during the class.

Short Essay Assignments

Each short essay assignment should address the following prompt:

Carefully describe one idea or argument from a chapter in the textbook. Explain how that idea or argument either threatens or strengthens the idea that we should trust science.1

60-75% of the assignment should describe the idea your assignment is about, the remaining 25-40% of the assignment should explain the relationship between that idea and the idea that we should trust science.

Short Essay Assignments should be 250–400 words long. Note that although they are short, they are expected to be written with the care and attention that a regular essay should be written with: I expect these assignments to be high quality work. Because they are short, the student has the opportunity to attend to the contribution of each word to each sentence, of each sentence to each paragraph and each paragraph to the whole essay; I expect students to give that attention.

Students may turn in a short essay assignment up to two days after covering the chapter in class. For example, a student may turn in a short essay on Wednesday for material covered on Monday or Tuesday. Students are strongly encouraged not to fall behind in this work.

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1 As I write this, I think that all of the material in the course will lend itself to writing with this sort of prompt in mind. However, if exceptions arise, alternative prompts for similar exercises will be provided.
Short essay assignments are designed to have students focus carefully on a small idea or argument within the course and to relate that idea (or argument) to the overall theme of the course. One way thematic way to think of the philosophy of science is that it is the branch of philosophy that concerns itself with whether and why we should trust scientific results. Consequently, each short essay asks the student to explain an idea or argument in the course and relate that idea to the idea that we should trust science. Some of the ideas that we talk about weaken or threaten the idea that we should trust science, other ideas support or strengthen the idea that we should trust science. As you write your short essay, you must explain how a particular idea either threaten or strengthens the idea that we should trust science.

Note that by ‘idea’ I don’t mean a single word or concept such as ‘confirmation’; instead, an idea is something that is expressed by a sentence that is either true or false. For example, ‘hypotheses are not confirmed by observations of their positive instances’ is an idea. As you write your short essays, you should write about ideas in this way. For example, ‘The idea that hypotheses are not confirmed by their positive instances threatens the idea that we should trust science because science has no way to support hypotheses except their positive instances’ is a thesis that you could discuss in a short essay assignment.

Arguments are collections of ideas, some of which are supposed to support another idea, the conclusion. When discussing how an argument relates to the idea that we should trust science, one should address how the conclusion relates to the idea that we should trust science.

The short essay assignments are not research papers. Rather than asking students to learn what other people have thought, they are designed to see that students understand and articulate important ideas about science, and, furthermore, understand how those ideas relate to our trust in science. The textbook, lectures and in-class discussion should provide ample material for students to formulate their ideas for short written assignments. Plagiarism is absolutely forbidden and will not be tolerated. Plagiarists should expect to fail this class.

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2 ‘Plagiarism’ is defined as a representation of the ideas of another person or group as one’s own ideas.