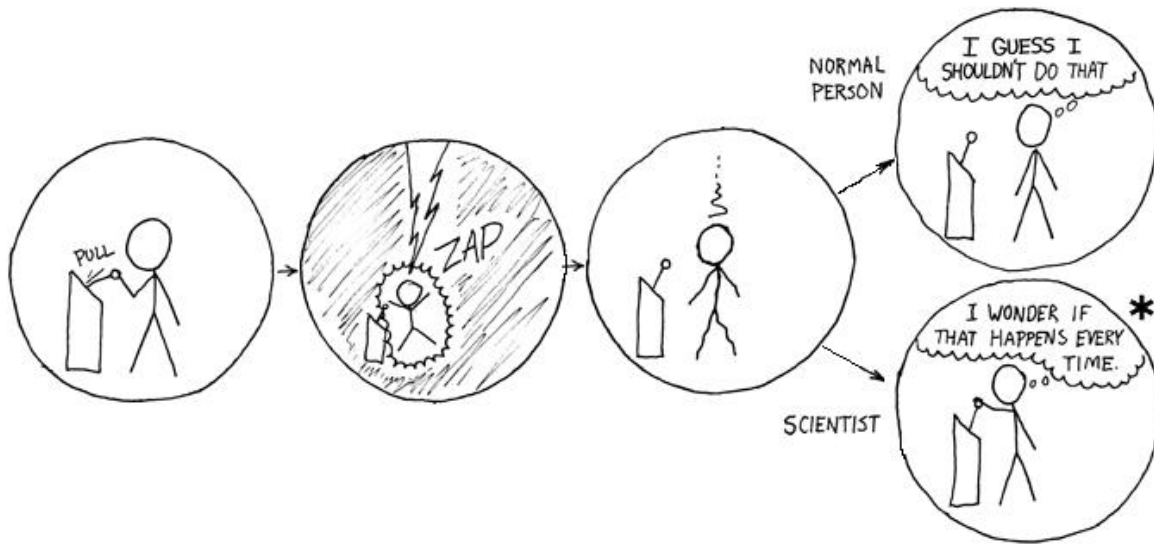


Fall 2009 Syllabus for PHIL 435: *Philosophy of Science*



PHIL.435.001 MWF: 1pm-1:50am (OC 2028)

University of Southern Indiana

Professor: Dr. Garret Merriam

Office Location: LA 3059

Office Phone: (812) 465-1245

Office hours: MWF: 11pm-11:50pm, 2pm-3pm and by appointment

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Course Description: This course examines the nature of science and its relationship to human knowledge. We will consider questions such as: What's the difference between science and 'pseudoscience?' How does science relate to religion? Are all sciences reducible to physics? Does science describe 'reality' or is it just a useful tool? Is science 'objective' or does it have built in biases? How does evidence support a scientific theory? Just what *is* Science, anyway?

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How could you choose avoiding a little pain over understanding a magic lightening machine?

Required Textbook: *Theory and Reality* by Peter Godfrey-Smith. The textbook is available at the bookstore.

Formal Course Outcomes: Upon successful completion of the course, each student should be able to:

- 1) Understand major terms, concepts and theories in the philosophy of science and be able to apply them to novel situations.
- 2) Discuss, both verbally and in writing, various perspectives on major questions in the philosophy of science and formulate coherent and persuasive arguments in support of your conclusions.
- 3) Think for yourself, question your assumptions, and come to your own conclusions.

Slides: I will post the PowerPoint slides on Blackboard for this class, which you can access through your myUSI account. I strongly advise you to download these slides, print them out, and bring them to class.

Grade Break Down:

Reading Quizzes: 15%

First Presentation: 10%

Second Presentation: 10%

First Paper: 15%

Second and Third Papers: 25% each

Your final grade will be determined by the amount of points you have out of a possible 100. You will be graded on a fixed scale rather than a curve: 90% and above is an "A," 80% to 89% is a "B," 70-79% is a "C," etc.

Reading Quizzes: Before we begin talking about each chapter you will have to log on to myUSI and take a quiz on the chapter. It will be a basic reading quiz to show that you (a) read the chapter & (b) have a basic understanding of the content. The quizzes will be 5-10 questions, timed and open book.

Presentations: Each of you will have to make a presentation to the rest of the class explicating some aspect of that week's reading. You must do three

things: 1) summarize (some of) the ideas and arguments in the chapter, (2) critically analyze those ideas and arguments, saying why you agree or disagree, and (3) lead the class in a short discussion.

Papers: There will be three writing assignments, each to be about 4 pages, double-spaced. You will need to demonstrate both an understanding of what you've read and an ability to think about it and criticize it in your own terms. You must email me your papers. In the subject line, please put: "CLASS TIME, NAME, First/Second/Third Paper,"

Tutoring: You have several different opportunities for tutoring: (1) you can come by my office during office hours or by appointment, and I'll tutor you in person; (2) you can call me on the phone: we'll open our books to the same page and I'll help you over the phone; or (3) you can email me with any difficulties and I'll either email you back or contact you by phone.

Tentative Schedule (subject to revision):

Week of 8/31— Course Introduction and Overview

- Syllabus and course mechanics
- A Brief Introduction to Logic and Argumentation
- A Brief History of Science (Antiquity to 1900)

Week of 9/7— Chapter 1

Week of 9/14— Chapter 2

Week of 9/21— Chapter 3

Week of 9/28— Chapter 4

Week of 10/5— Chapter 5

Week of 10/12— Chapter 6 (First Paper Due)

Week of 10/19— Chapter 7

Week of 10/26— Chapter 8

Week of 11/2— Chapter 9

Week of 11/9— Chapter 10 (Second Paper Due)

Week of 11/16— Chapter 11

Week of 11/23— Chapter 12

Week of 11/30— Chapter 13

Week of 12/7— Chapter 15

Week of 12/14— Finals Week (Third Paper Due)

Last day to drop without evaluation: October 30th

Attendance Bonus and Penalty: To give you an incentive to show up, each one of you starts with six bonus points that will be attributed to your final grade. Every time you miss a class, I take two points away from your grade. Hence, you can miss three classes before your extra points run out; after that, it starts eating into your earned points.

Contact Information for the Dean Humanities: If you have a problem with either the class or with me I would appreciate it if you talked to me about it first. But if you feel you cannot talk to me for some reason, you can talk to my department Chair, Dr. Rocco Gennaro. Alternatively, you can contact the Dean of the College of Liberal Arts, David Glassman. He can be reached at dglassman@usi.edu or at (812) 464-1704.

myUSI: Significant portions of this class will utilize blackboard and myUSI. Make sure you have regular access to it and be sure to check it at least once a week, preferably more frequently than that.

Academic Dishonesty: I do not expect this problem to arise, but should you be caught cheating on a paper, or an exam, this may be grounds for your **immediate failure** of the course. Blameworthy ignorance is no excuse. It is your responsibility to know what constitutes plagiarism on a paper. Consult me if you have questions on appropriate citation. Should you be caught cheating, you will also be reported to the Dean of Students.

For Students with Disabilities: If you have a disability, you are encouraged to register for disability support services in the Counseling Center. If you require an accommodation, please let me know by the end of the first week of class. You may be required to provide written documentation to support these accommodations. I will work with you to provide reasonable accommodations to ensure that you have a fair opportunity to perform and participate in class.

Classroom Decorum: I expect you to be respectful in this class, both towards me and towards each other. This means (at the very least!) that you turn your cell phone off during class, refrain from text messaging during class, put down the newspaper during class. Use common sense.

Withdrawal and Drop Policies: It's the student's decision and responsibility to withdraw. You must withdraw *yourself* by the last date to do so. I do not drop students merely for excessive absences. The *only* instance in which I will withdraw you from the class is if your behavior (whether in class or through email) is inappropriate.

If You're Having Difficulty, please contact me. I would like to give everyone an "A" and, to help make that possible, I'm also available to give tutorial help to anyone who needs and wants it. You must, however, let me know that you want the extra help. Also, **if you have any special academic needs, please talk with me about it and bring your documentation.**

Advice for Class and Reading:

1) Show up. Understanding this material will not be easy. Lecture will be a big part of making sense of this course, and to follow the continuous narrative you need to show up regularly. Those who don't attend on a regular basis almost always do worse than those who do.

2) Do the reading BEFORE class. You might be tempted to put off the reading until after lecture, or even not read at all. Resist this temptation. Even though the book can be dense and difficult for many people, the best way to do well in this class is to come prepared to class, and that means reading beforehand. Not to mention, that you'll be tested on the reading before class (see 'Reading Quizzes' above.)

3) Use the slides. I will post the slides on the Blackboard for the course before each class. I highly recommend printing them up, bringing them to class, and taking your own notes on them.

4) Review and Reflect Spend 10 minutes every day in quick review of your notes, and you will retain most of what you have learned. Draw out opinions from your notes and use them as a starting point for your own reflections on the course and how it relates to your other courses. Reflection will help prevent ideas from being inert and soon forgotten.

5) Sit in front. It will help you to truly attend, and it gives the impression that you are someone concerned about what and how much you learn.

6) Listen actively, not passively. Take notes and ask questions, even questions you find embarrassing to ask. The person who dares to *ask* gets an answer and learns something from it. Ask every question you have.

7) Participate in Discussion. The best way to get the most out of class is engage with the material and your fellow classmates. I can lecture the whole class period if it comes to that, but I promise you that will be much less rewarding for you.

8) Read your textbook slowly, carefully, attentively, and before the next class. Read for about 30 minutes every day, rather than the entire reading assignment at once. Use many short study sessions rather than a few long ones.

9) Read with a Highlighter. While you read the book the first time, highlight what you believe are the more important points (and re-read your previous highlights the next day at the beginning of your next 30-minute reading session). Also, look up every unfamiliar word in a good dictionary.

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