**[[1]](#footnote-1)\* Spring 2025 Syllabus** **for**

**PHIL 125:** Philosophy of Science



Instructor: Dr. Garret Merriam

Class Time and Location: MW 11am-11:50am, Douglas Hall 110

Office Hours: MW: 1:30-2:45 pm (and by appointment)

Office Location: Mendocino 3028 and via Zoom, [which you can find here](https://csus.zoom.us/j/82324427939).

Email Address: merriam@csus.edu

**Course Description:**  Study of the philosophical problems that arise in the sciences: the nature of scientific reasoning, the limits and styles of explanation, identifying pseudoscience, values in science, unity and diversity of the sciences, and science's impact on our world view.

**Required Textbook:** *Theory and Reality* (2nd edition) by Peter Godfrey-Smith. The textbook is available online in both physical and digital formats. If you have any difficulty procuring the textbook, please talk to me. A few outside readings will be posted on Canvas in .PDF format.

**Formal Course Outcomes:** Upon completion of the course, you 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 from various perspectives on those questions.

3) Think for yourself, question your assumptions, and come to your own conclusions.

This course satisfies [GE Area B5](https://www.csus.edu/acaf/ge/GE%20Assessment/Area%20B-5.pdf).

**Class Structure--Online Lecture, In-Class Discussion**: This course is an online/in-person hybrid. We meet in person for two hours a week, with roughly one hour a week reserved for online material. I will be posting recorded lectures and quizzes for each week. The basic idea is that you will (1) do the reading, (2) take the reading quiz, (3) watch the recorded lecture, (4) post your thoughts on the lecture using Perusall (see below) (5) show up to class ready to discuss the material. Fairly little lecture will happen in-person; that’s what the online portion of the course is for. Come ready to talk about the material, that’s what in-class time will mostly be dedicated to.

**Grading:**

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| --- | --- | --- | --- | --- |
| Assignment | Due | Value (pt) | Percentage (%) | Letter Grading |
| **Reading Quizzes** | Weekly | 150 | 15 | A = 93-100% |
| **Perusall Video Threads** |  Weekly | 300 | 30 | A- =92-90% |
| **In-Class Discussion** | Weekly  | 300 | 30 | B+ = 89-87% |
| **Oral Presentation** |  | 250 | 25 | B = 86-83% |
| **Total Points**  |  |  1,000  |  100 | B- = 82-80%, etc. |
|  |  |  |  |  |

**Reading Quizzes:** Each week there will be short quizzes on the readings. Each quiz will be 5 questions long, worth 2 points each for a total of 10 points. The purpose of the quiz is to make sure you’ve done the reading, and will focus on the basic facts in the reading. The quizzes are open book, open notes. You will have 10 minutes to complete the quiz.

**Perusall Video Threads**: Since this isa hybrid class, you will need to spend about an hour each week watching recorded lectures. To make sure you are paying attention, as well as to prepare you for our in-class discussion, you will need to make THREE comments on each lecture using Perusall. One comment should be an observation, something that you found interesting or thought provoking and why. Another comment should be a question, something that either doesn’t make sense to you, or that challenges the ideas presented in the lecture. Lastly, you will need to reply to another student’s post, either answering their question, or responding to their ideas with questions of your own. Short perfunctory replies (“This is interesting, thanks for the comment, I had the same question”, etc.) will get no credit. You need to engage substantively with what the other students say for credit. For instructions on how to use Perusall, see Canvas.

In-Class Discussion: Because this is a hybrid course the majority of our in-person time will be dedicated to discussion, which means you need to come to class prepared. To be able to participate effectively you must watch the recorded lectures and participated in the comments Perusall (see above). To get full credit you to talk at least once a week. As with the Perusall threads you need to make thoughtful, substantive points to get credit. Ask thoughtful questions, answer the questions asked by others, show me that you are thinking about the material (even if you don’t understand it).

**Oral examination**: In lieu of a traditional long paper, each of you will meet with me one-on-one in my office to discuss one of the topics we cover in class. You will pick the topic, articulate a thesis, make an argument in support of it, and consider and reply to objections. Notes will be allowed, but the format will be a discussion, not simply reading your notes to me. More detail will be given in class.

**Attendance Bonus and Penalty:** To give you an incentive to show up, each one of you starts with 60 bonus points (out of 1000) that will be attributed to your final grade.  Every time you miss a class without a documented excuse, I take 30 points away from your grade.  Hence, you can miss two classes before your extra points run out; after that, it starts eating into your earned points.

**AI and Academic Misconduct:** Using an Large Language Models (AI text generators) for any class assignments, unless the instructor specifically instructs otherwise is dishonest and will be considered a violation of the [CSUS Academic Honesty policy here](file:///Users/garret/Desktop/Spring%2023%20Syllabi/here.%20%20https%3A/www.csus.edu/umanual/student/stu-100.htm).Submitting any course assignments or prompts to an AI text generator and then submitting the results or any altered form of the results for credit for the assignment in class unless specifically instructed to do so by the instructor will be considered plagiarism, and it could be subject to the full range of sanctions outlined in the university policy.

In addition to using TurnItIn, this course may use rapidly evolving technology (like [this](https://www.npr.org/2023/01/09/1147549845/gptzero-ai-chatgpt-edward-tian-plagiarism)) to help detect when student writing has been assisted by AI technology (like Chat GPT). Improper use of AI technology can be grounds for a charge of plagiarism or other academic misconduct, leading to academic penalties (like failing a course) and administrative penalties (like expulsion from the university), regardless of when the academic misconduct is discovered. It is likely that, in the arms race that is digital technology, what seems like today’s detection-proof AI writing tool will be easy to detect by tomorrow, or next week, or next month.

**S**hould you be caught cheating on a paper, quiz, discussion post or an exam, this may be grounds for your **immediate failure** of the course. ALL incidents of cheating and plagiarism will be reported both to the Department Chair and to the Judicial Officer in the Office of Student Affairs for possible further administrative sanction.

**Late Work Policy**: I am willing to give short extensions on assignments, provided the request is made BEFORE the due date. Otherwise, no late assignments will be accepted.

To prove that you read the syllabus: Beneath the syllabus posting on Canvas there is a tab labeled “Did you read the syllabus?” Click on it and attach a picture of a pet (cat, dog, etc.) I will not grade any of your assignments until you complete this task.

**Reasonable Accommodations:** If you have a documented disability (visible or invisible) and require accommodation or assistance with assignments, tests, attendance, note taking, etc., please see the instructor by the end of the third week of the semester so that arrangements can be made. Failure to notify and consult with the instructor by this date may impede my ability to offer you the necessary accommodation and assistance in a timely fashion. Also be sure to consult with the [Services to Students with Disabilities in Lassen Hall](http://www.csus.edu/sswd/index.html) to see what other campus services and accommodation options are available for you. Students with other types of accommodation requirements, such as English as a second language, are invited to discuss them with the instructors to facilitate understanding and the best learning experience for all. All information will remain confidential.

**Contact Information for the Chair of the Department:** 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. Russell DiSilvestro at rdisilv@csus.edu.

**Course Schedule (Subject to Change)**

Week of 1/20— Course Introduction and Overview: Syllabus and course mechanics

Week of 1/27 — A Brief History of Science (Antiquity to 1900)

* *Theory and Reality* Chapter 1

Week of 2/3— Chapter 2

Week of 2/10— Chapter 3

Week of 2/17— Chapter 4

Week of 2/24— Chapter 5

Week of 3/3— Chapter 6

Week of 3/10— Chapter 7

Week of 3/17— Chapter 9

Week of 3/24— Chapter 10

Week of 3/31— Spring Break (No classes)

Week of 4/7— Chapter 11

Week of 4/14— Chapter 12

Week of 4/21— Chapter 13

Week of 4/28— Chapter 14

Week of 5/5— “Feminist Philosophy of Science”—Sarah Richardson

Week of 5/12—The Replication Crisis in Science

1. \* How could you choose avoiding a little pain over understanding a magic lightning machine? [↑](#footnote-ref-1)