

PHIL 3372-03: Philosophy of Science

Sam Houston State University

Summer 2022 | CRN: 40795

SHSU Online

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Course Description: Students survey topics in philosophy of science, which may include the logic of explanations in the physical and social sciences, the relationship between science and society, and metaphysical or sociological critiques of science. Course content includes attention to historically prominent examples from social and natural sciences that demonstrate the applicability of important concepts from the philosophy of science.

Course Modality (Online): This is designed as a fully online class delivered through SHSU Online. Content delivery will be asynchronous and remote, and all assignments will be completed and graded through the Blackboard system. There may be occasional course meetings scheduled for class review (depending on student demand) but attendance in these will be optional, and recordings will be available for those whom are not able to join.

Accelerated Schedule: This is a summer class which is taught on an accelerated 10-week schedule. It is designed to cover the same material a regular semester over a much shorter time frame. Please prepare accordingly, as you will be expected to log in and complete something every week of the course.

Prerequisites: None, but PHIL 2352 (Critical Thinking) is recommended prior to this course.

Textbook: Steve Gimbel, *Exploring the Scientific Method: Cases and Questions* (Chicago, 2011), ISBN: 978-0-22629-483-4. \$35.

Course Objectives and Learning Outcomes:

1. *Learning fundamental principles, generalizations or theories:* Throughout this course, we will discuss the various approaches to scientific methodology, and the benefits and drawbacks of each.
2. *Learning to apply course material to improve thinking, problem solving and decisions:* Throughout this course, we will be using the various theories to evaluate scientific reasoning within your chosen field of study.
3. *Learning to analyze and critically evaluate ideas, arguments, and points of view:* The papers are designed to understand and evaluate the various methods to understand and evaluate scientific discoveries.
4. *Developing skill in expressing oneself orally or in writing:* The assessments are designed to improve your writing and thinking through the basic terms and distinctions of forms of scientific reasoning, as well as the various forms of scientific explanation.

Writing Enhanced: This is a “W” course, which means that at least 50 percent of your course grade will derive from writing activities designed to help you master course objectives. In this course, your engagement with the course material on the Discussion Board will account for 20% of your course grade, and the Exams (which are worth 80%) will be composed of at least half short answer and short essay questions.

Course Schedule:

June 1–3	Unit #0: Course Orientation and Logic Refresher
June 4–10	Unit #1: Deductivism, Exam #1
June 11–17	Unit #2: Inductivism, Exam #2
June 18–24	Unit #3: Hypothetico-Deductivism
June 25–July 1	Unit #4: Paradoxes of Confirmation
July 2–8	Unit #5: Falsification, Exam #3
July 9–15	Unit #6: Confirmation Holism,
July 16–22	Unit #7: Semantic Modeling, Exam #4
July 23–29	Unit #8: Critical Views
July 30–Aug 3	Unit #9: Review, Exam #5 (Final Exam)

Important Dates:

Add/Drop Deadline	June 6th
Independence Day (no class)	July 5th
Q-Drop Deadline	July 11th
Course Final	August 3rd

Exams: There will be five exams given throughout the course, including the cumulative final exam. Their approximate dates appear in the schedule above. The best four of five exams will be counted into calculating your final grade. Each exam (except for the cumulative final) will cover from 1-3 Units each. The exams will open approximately 3-5 days ahead of the due date, and you are welcome to take the exam at your convenience during that period. *There will be NO “make-up” opportunities on the exams.*

More information on each of the types of assignments and how they will be evaluated is available under a separate “Assignment Guidelines” sheet, posted on [Blackboard](#).

The following weighting will be used to calculate your course grade:

Exams (best 4 of 5): 4 x 20% ea.	= 80%
Discussion Board (best 8 of 10) x 2.5% ea.	= 20%

Your rounded average of these assignments will determine your grade, based on the following scale:

A	100% – 89.5%
B	89.4% – 79.5%
C	79.4% – 69.5%
D	69.4% – 59.5%
F	59.4% – 0%

Academic Dishonesty: Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. Please be aware that plagiarized work and any form of academic dishonesty will result in an “F” on the assignment. [SHSU Academic Policy Statement 810213](#) outlines the definition of academic honesty and the related disciplinary procedures.

You should also familiarize yourself with [Academic Policy Statement 900823](#), which outlines the procedures for students to file an academic grievance should you wish to appeal your grade for reasons other than academic dishonesty. Please read through these policies carefully.

Course Evaluations: In accordance with University policy every student will have an opportunity at a specified date and time near the end of the semester to complete a course evaluation form from the IDEA course evaluation system.

For University policies on Student Absences on Religious Holy Days, Students with Disabilities, and Visitors in the Classroom you may view to the official statements on the SHSU Website, <http://www.shsu.edu/syllabus/>

Expectations, Suggestions and Mandates for an efficient class:

1. This is a fully-online class, offered asynchronously through SHSU Online. An online class is not easier or less work than a traditional online class. In fact, they are usually harder and require more work. Self-motivation is key to succeed in an course like this. If you are not reading the assigned texts and watching the corresponding lecture videos, this is analogous to not showing up to class in an in-person class. Do not expect to be able to “Google” your way through this course.
2. Try to complete the week’s work early. Waiting until the due date to begin the week’s assignment is not advisable. Some of the assignments may take several hours to complete.
3. Especially true in philosophy more than most other subjects, diligence is important. Some of the reading will be difficult since we are looking at some of the most profound ideas in the history of the world. The difficulty of the subject is indirectly proportional to the amount of work put into the course.
4. Expect to have up to five hours a week of reading and thinking each week in order to earn an “A” for the course. Additionally, for these reasons, active participation in the course—which includes reading the assigned texts and watching the corresponding lecture videos—is of vital importance. *If you do not regularly log in or keep up with the reading and videos, do not expect to pass this class!*
5. Please feel free to make mistakes. We all will from time to time—including your omniscient instructor.
6. Please feel free to make an appointment to discuss the material you do not understand. Waiting until the last moment in the semester to catch up is not advisable. I am excellent at fixing small problems, but horrendous at fixing large ones. The only difference between small and large problems is time.
7. Have fun! The material is only as dry as you make it out to be. Sharpening one’s mind can be an exhilarating process.