

PHIL 2303-01: Critical Thinking
Sam Houston State University
Fall 2022 | CRN: 81487
T/Th 9:30-10:45 AM | Smith Hutson 186

Instructor: Dr. Thomas Brommage
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Office Hours: M/W 3-3:50 PM;
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Course Description: Designed to improve students' ability to think critically. The course covers the fundamentals of deductive reasoning, the identification of common fallacies, and an introduction to inductive reasoning, as well as sensitizing the students to some of the ways information is distorted, e.g., by advertising and news management.

Prerequisites: N/A

Required Textbook: Bailin and Battersby, *Reason in the Balance: An Inquiry Approach to Critical Thinking*, 2nd ed. (Hackett, 2016). ISBN: 978-1-62466-477-9. \$50.

Core Objectives and Learning Outcomes: The overarching goal of a Critical Thinking course is to teach students methods that are used generally across cultures to differentiate between strong or valid inferences and those inferences that are weak or invalid. To this end topics covered include the deductive and inductive reasoning involved in testing hypotheses, generalizing on the basis of samples, the basics of comparative experimental design, and an emphasis on recognizing and explaining various fallacious inferences such as jumping too quickly from a correlation to a cause and effect conclusion, and classics like Straw Man, Ad Hominem, Begging the Question, and False Dilemma. One of the central goals of the course is to better equip students, to recognize and assume their responsibilities as citizens in a democratic society by learning to think for themselves, by engaging in public discourse about issues in a way that strives to present fairly the various sides of an issue (avoiding the Straw Man), that does not prematurely close off discussion (avoiding Begging the Question), that focuses on relevant considerations (avoiding Ad Hominem), that considers a full range of options (avoiding a False Dilemma), and that seeks and uses the best evidence available. This course will be primarily taught in a lecture format. Students are encouraged to ask questions during the lecture.

1. Students who complete the course should recognize and apply reasonable criteria for the acceptability of social research. Thus, the student will become aware of the need to think in terms of testable hypotheses, hypotheses that generate predictions that can be compared with data. Furthermore, if we say that the data support a particular hypothesis because its predictions came true, the student will recognize that we must first conceive of and rule out alternative possible explanations before we simply accept that the hypothesis has been confirmed. To that end students will note that if the occurrence of A is correlated with the occurrence of B, this may be because (a) A causes B, (b) B causes A, (c) C causes both A and B, or (d) chance. Homework exercises discussed in class will deal with a number of

specific illustrations of this principle. In addition, student will become aware of the fact that generalizations need to be supported by samples that are large enough and relatively unbiased—not simply by a vivid anecdotes that typically provide biased samples of size one. Again, homework examples will present a variety of cases for analysis. Finally, student will be able to design an experiment whose results avoid (at least obvious) confounding.

2. The student will be able to differentiate and analyze differing points of view by dealing with homework problems that can involve controversial conclusions and by working through these problems in class.

Skill Objectives:

1. *Critical Thinking: Analyzing and critically evaluating ideas, arguments, and points of view.* The usual introduction to the course is to present concepts such as premise, conclusion, inference indicator words like “since” and “hence,” and then the homework is to look at specific bits of prose to be able to successfully identify those that contain arguments—reasoning for conclusions—versus other forms of prose such a narratives. What follows the introduction will involve practice in distinguishing deductive reasoning—reasoning where the truth of the premises would absolutely guarantee the truth of the conclusion—from inductive reasoning wherein if the premises (the evidence, data, etc.) are true they render the conclusion to some degree more likely to be true than false. This matter of degree then will be explored with specific homework examples. Finally, there is a set of mistakes in reasoning that are wide-spread such as False Dilemma, Begging the Question, Straw Man, Ad Hominem, etc. After becoming familiar with the terminology, the students are asked to apply the fallacy labels to specific examples of reasoning and to give an explanation of why a label fits as a way of expressing the particular mistake.
2. *Communication Skills: Developing skill in expressing oneself orally or in writing.* There will be regular homework assignments, usually problems from the textbook, which require students (a) to prepare analyses of the problems assigned and then (b) review these analyses in class as we discuss the homework problems. These exercises will emphasize the importance of precise expressions and relevant evidence to effective communication.
3. *Empirical and Quantitative Skills: Learning appropriate methods for collecting, analyzing, and interpreting numerical data.* This objective involves the manipulation and analysis of numerical data or observable facts resulting in informed conclusions. To this end the basics of the logic of hypothesis testing, using both inductive and deductive reasoning, are presented in a step-by-step fashion. This includes familiarizing students with concepts such a random sampling error and biased sampling, the use of control groups in experimentation in order to rule out confounding variables, and probabilistic reasoning.
4. *Social Responsibility: Learning to apply knowledge and skills to benefit others and serve the public good.* Fundamental to the concept of responsibility is the ability to give reasoned explanations for specific courses of action. Often the examples in the homework relate to giving reasons in response to issues that have presented or may present themselves to people in the course of their lives as citizens. The point of the process in the classroom is to stress careful analysis of the reasoning and to offer a diagnosis of its strength or weakness based on consideration of the evidence, how it was procured, whether there is importantly relevant information that has been neglected, etc. This will strengthen students’ ability to engage effectively as a participant in regional, national, and global communities.

Course Schedule: Please note that dates of assignments are approximate, and subject to change based on the pace of the course.

Aug 22 –26: <i>The Nature of Inquiry</i>	Ch. 1 (pp. 3-20); Ex. #1, 2, 7, 10
Aug 29 – Sept 2: <i>The Spirit of Inquiry</i>	Ch. 2 (pp. 25-47); Ex. #3; Exam #1
Sept 5 – 9: <i>Induction and Deduction</i>	Ch. 3 (pp 55-70); Ex. #1, 3, 5
Sept 12 – 16: <i>Fallacies of Evidence</i>	Ch. 4 (pp. 75-95)
Sept 19 – 23: <i>Fallacies of Inference</i>	Ch. 4 (pp. 96-100); Ex #1, 4; Exam #2
Sept 26 – 30 <i>Analogical Arguments</i>	Ch. 5 (pp. 105-115); Ex. # 1, 2
Oct 3 – 7: <i>Causal Explanations</i>	Ch. 5 (pp. 115-126); Ex. #3
Oct 10 – 14: <i>Expertise and Authority</i>	Ch. 6 (pp. 133-154); Ex. #1, 2
Oct 17 – 21: <i>Rhetorical Fallacies</i>	Ch. 7 (pp. 161-179); Ex. #3, 7; Exam #3
Oct 24 – 28: <i>Statistical Inference</i>	Probability Handout
Oct 31 – Nov 4: <i>Scientific Method(s)</i>	Ch. 12 (pp. 293-327); Ex. #2, 4
Nov 7 – 11: <i>Experimental Evidence</i> ...	Ch. 13 (pp. 335-366); Ex. #1, 2; Exam #4
Nov 14 – 18: <i>Aesthetic Judgment</i>	Ch. 14 (pp. 371-403)
Nov 21 – 25: <i>Ethical Judgment</i>	Ch. 15 (pp. 409-427); Ex. #1, 2, 4; Exam #5
Nov 28 – Dec 2: <i>Review for Final</i>	Final Exam Review
Dec 6: <i>Final Exam</i>	Exam #6 (10:15 AM – 12:15 PM)

Important Dates:

First Day of Class	Tuesday, August 23rd
Add/Drop Deadline	Wednesday, August 31st
Q-Drop Deadline	Wednesday, October 26th
Thanksgiving Break (no class)	Thursday November 24th
Final Exam	Tuesday, December 6th (10:15 AM – 12:15 PM)

Evaluation: There will be six exams due throughout the course. The best five scores on these exams will be used to calculate your final grade. In addition to the exams, your attendance and in-class participation will be graded. More information on requirements and evaluation of the various types of assignments will be available under a separate “Assignment Guidelines” sheet, posted on [Blackboard](#).

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

Exams (best 5 of 6; x 15% ea.)	75%
Attendance and Participation	25%

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

Attendance and Participation: An attendance sheet will be distributed most class days. It is your responsibility to sign-in on the official roll sheet, otherwise you will be considered absent. Your attendance will be judged as a percentage of the number of days that you attend class. Everyone will have two (2) absences that will not count against his or her grade (should you not use these two “freebies,” your grade will be adjusted up accordingly). For example, if I take attendance 22 times in the semester, and you have attended 18 of those meetings, your attendance grade would be a 91% (18/22). Aside from the two automatically excused absences, *no additional absences will be considered excused* except when required by law or university policy.

Your participation grade will be a qualitative measure based on your effective in-class participation. For this measure, “effective” participation is a function of the quality—not the quantity—of your participation. In most cases, your participation grade will be no higher than your attendance grade—since, of course: if you’re not there, then you can’t participate.

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.

Classroom Conduct: Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cell phones must be turned off before class begins. Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

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. 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.
2. 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.
3. Expect to spend up to five hours a week of reading and thinking about the material outside of class in order to get an "A" for the course. Additionally, for these reasons, attendance is of vital importance. *If you do not attend class or keep up with the reading or exercises, do not expect to pass this class!*
4. Please arrive to class on time and expect to stay the entire duration of the class. If this is an impossibility, please make every attempt to notify me in advance of tardiness or absence.
5. Please come to class prepared (i.e., any reading assigned read, any questions concerning exercises or lectures prepared, etc.)
6. Please be respectful of each other in the class. There will be times when students disagree about a topic discussed in class. This is a didactic process, not a combative one.
7. Due to the great excess of material and limited time in which we must cover, please do not create a disruption for those people who are attempting to learn. Disruptions include blurting out answers, name calling, chiding each other, snoring, etc. Laughing at the Instructor's jokes is obviously exempted from this policy. In addition, personal audio devices (except those in use to record lectures) and loud crunching snack foods are prohibited from the classroom.
8. Please feel free to make mistakes. We all will from time to time—including your omniscient instructor.
9. 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.
10. Have fun! The material is only as dry as you make it out to be. Sharpening one's mind can be an exhilarating process.