

**Instructor Availability for Dr. Frank Fair:**

For the first four weeks of the course I can be reached at my SHSU office:  
Office: CHSS 365 Phone: 936-294-1509 email:psy\_fkf@shsu.edu

For the remainder of the semester, I will be out of town, but my university email address will be working and, if necessary, I can be reached by phone at 936-438-7795.

Monday through Friday I will be checking email in the morning regularly, and sometimes in the afternoon. I will only occasionally check email on the weekends.

**TECHNICAL SUPPORT: Contact the SHSU Online Support Desk. Their webpage is at <http://online.shsu.edu/campus/support-desk/index.html>, and the phone number is 936-294-2780, They are available around the clock Mon-Fri, on Sat. 7 am to midnight, and Sun 1 pm to midnight. It is recommended that you check them out early in the semester, especially their statements about system requirements and their responses to top issues.**

**1. CATALOGUE COURSE DESCRIPTION** PHIL 2303 Critical Thinking--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. Credit 3.

**2. CLASS DESCRIPTION:** The overarching goal of a Critical Thinking course is to students teach 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, 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 a 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 (meeting the required Burden of Proof).

**3. COURSE OBJECTIVES/STUDENT LEARNING OUTCOMES:**

A. 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) a third factor 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, students will become aware 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, students will be able to design an experiment to avoid obvious confounding.

B. The student will be able to differentiate and analyze points of view dealing with homework problems that can involve controversial conclusions by working through the problems aloud with members of the class.

**4. SKILL OBJECTIVES:**

A. **CRITICAL THINKING:** The usual introduction to the course is to present concepts such as premise, conclusion, inference indicator words like "since" and "hence," and then the related homework is to look at specific bits of prose to be able to successfully identify those that contain arguments--reasoning for conclusions--versus those that contain other forms of prose such a narratives. What follows the introduction will often 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 needs to 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.

**B. COMMUNICATION SKILLS:** There will be regular homework assignments, usually problems from the textbook, which require students (a) to write up their analyses of the problems assigned and then (b) bring their analyses to class where they serve as the basis for class discussion, either in small groups or as a whole class. The writing and the oral discussion are to be focused on giving reasons why a particular analysis fits a given homework item.

**C. EMPIRICAL AND QUANTITATIVE SKILLS:** 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 as a random sampling error and biased sampling, the use of control groups in experimentation in order to rule out confounding variables, and Bayes' theorem.

**D. SOCIAL RESPONSIBILITY:** 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. etc. This strengthens the students' ability to engage effectively as a participants in regional, national, and global communities.

**5. TEXTS:**        **Lewis Vaughn**                *The Power of Critical Thinking* 5th edition

Note: There is a companion website containing Student Resources for the Vaughn book at

<https://global.oup.com/us/companion.websites/9780199385423/student/>

It is worth a visit to see what may be helpful. For instance, for chap. 3 there are flash cards for key terms, practice quizzes, a chapter summary, and Web links.

**Thomas Gilovich**                *How We Know What Isn't So*

This is a classic covering many of the ways in which we tend to jump to conclusions so that we think we know things when we really do not.

**6. BLACKBOARD:** The syllabus and many other essential handouts, exercise, assignments, etc. are posted on Blackboard.

**7. GRADES:** To determine your final average, divide your overall point total by 500. The grading scale is 90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, and below 60 = F. Your overall point total comes from:

**A. QUIZZES:** The course is broken into three Units, and each Unit has a 40 point quiz for a total of 120 points, and the syllabus quiz at the beginning is worth 5 points for a 125 point total. The quizzes are multiple choice in format and must be passed with a specified score before the student can advance.

**B. EXAMS:** There are 100 point exams after Unit I and Unit II for 200 points, plus a 150 point Final Exam, for a total of 250 points. The exams are cumulative in the sense that some material from previous Units may appear on the exam for a subsequent Unit. All exams are announced in advance, and there will be time for review before each of them. The exams will often involve essay questions and problem solving, applying the concepts learned through the readings, class discussion, and doing homework assignments.

**C. GROUP DISCUSSIONS:** There will be 7 group discussions, the first involving an article about the book *Academically Adrift*, and the remaining six involving various chapters from *How We Know What Isn't So*. The student can earn up to 4 points apiece, depending on participation, for a total of 28 points.

**D. THREE WRITING ASSIGNMENTS WORTH 10 POINTS EACH.** They involve FactCheck.org, the *Skeptical Inquirer* magazine, and Unspinning the Planned Parenthood video.

**E. HOMEWORK:** Since this is a practical course, there will be 12 homework assignments and they are not optional. An acceptable assignment, meaning one on time and with every problem attempted, will **ADD SIX POINTS** to your point total. So if the student does every assignment, the total is 72 points. But **FOUR POINTS WILL BE SUBTRACTED** for every assignment not done acceptably. "Acceptably" means that **EVERY PROBLEM IS ATTEMPTED**, and the assignment is turned in **ON TIME--no excuses accepted**. The homework will largely consist of learning to write and re-write arguments and parts of arguments so that the student learns: (1) to recognize when an argument is present, (2) to discern the parts of argument, (3) to determine the kind of argument, (4) to make judgments about the probative value of arguments, and (5) to produce good arguments. The written homework exercises provide a way for students to clarify their thinking and develop better writing skills. Students are expected to use this feedback to improve their writing and arguments on the exams. This course satisfies the requirements for being listed as Writing Enhanced because students have an opportunity to receive low-stakes feedback on their writing and written assignments, including exams, count for more than 50% of the course grade.

**F. EXTRA CREDIT: The Fallacy Hunt--This is due before the final exam period starts.** Find "classroom usable" examples of the fallacies discussed, but no more than one advertisement. The fallacies must be properly referenced, and you must analyze the argument in the fallacious item and explain specifically how it goes wrong. **Limited to 3 fallacy items and credit of up to 5 points for each item.** Turn in the examples with your analyses. **NOTE THAT YOU NEED TO FIND ORIGINAL EXAMPLES IN THE REASONING OF FAMILY, FRIENDS, COMMERCIALS, NEWSPAPERS, TV ETC.** (There may also be occasional additional extra credit opportunities depending what appears in argumentation in the public sphere.)

**8. STANDARD POLICIES:** Many of the standard policies devised for face-to-face classes do not apply to the online environment—for example the policy about classroom visitors--but each of the standard policies is stated in full on the Blackboard website for this course under Course Documents. Here I have extracted from the full statement a couple of key elements that are still relevant, but the student must download the posting on Blackboard to have the full policy statement. Here are the standard policy matters:

**(1) NOTICE TO PERSONS WITH A DISABILITY: No accommodation can be made until you register with the office of Services for Students with Disabilities. There will be no retroactive accommodations.**

**(2) NETIQUETTE: Exchanges may be critical in the sense of raising challenging points, but they must exhibit a respectful tone and avoid offensive language.**

**(3) ACADEMIC DISHONESTY: Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. I have zero tolerance for any cheating, including plagiarism. Sadly, on more than one occasion I have given students an F for the course because they cheated. Obviously, it is much better to do the work to complete the assignments on time and to do well on the quizzes and exams than to risk that happening. Enough said?**

Here are some relevant websites for further documentation:

(a) University Code of Conduct <https://netreg.shsu.edu/mirror/codeofconduct.html>

(b) Go to <http://www.shsu.edu/syllabus/> for references to the University's policy on Academic Dishonesty, the Observance of Religious / Holy Days, Americans with Disabilities Act – Students with Disabilities, and Visitors in the Classroom.