Chapter 1
Socratic Pedagogy & Methodology

PRELIMINARIES—SYLLABUS, RESEARCH & DEVELOPMENT, CAREERS, AND BEYOND

Course Material, Technology, Other Resources (CT Labs or clinics: Appendix)

Syllabus

- How to do well in critical thinking
- Code of (e)-classroom and ethical conduct
- Proposed Thematic list of research projects
- Grading tips, rules, and thinking errors
- More fallacies and dialectical thinking tips
- Cooperative learning strategies (CLSs) 1 through 11
- Canvas, MyCsn, Onground, Hybrid, and Logic-Math-Ethics-Science-Tech-Globalization (LMESTG)
- Beyond this class
- Careers through critical thinking, philosophy, natural and social sciences, liberal arts, humanities, etc.

Suggested TV Viewing

History channel, discovery, arts and entertainment, midnight University, UNLV and CSN channels, Annenberg PBS, and infinite number of traditional and e-colleges worldwide, including in French, German, Spanish, Portuguese, Mandarin, Arabic, …

Internet/Website/Social Media Interactions

Websites and social media abound. Please check with computer CSM labs, UNLV labs, or the public libraries. Please check on any of the net channels that indicate logic, deduction, induction, probability, rhetoric, persuasion, classics, philosophy, history of ideas, Western civilization, religion and theology, history of science, ethics, history of economics and politics, law and jurisprudence, psychology, methodology, natural philosophy—physics—astronomy, or such. Also, you may want to visit philosophic (e)-encyclopedias via the web, available in various languages. Also, CANVAS, MYCSN, FB, TWT, LVP, AND MORE WILL ASSIST YOU IN EXCELLING AS A CRITICAL THINKER, DOER, or PROFESSIONAL

Course Content and Brief Description

It is, indeed, logical & fair to maintain that one cannot grow successfully intellectually and/or professionally, without some exposure to, and training in, formal logic or, at the minimum, informal logic or critical thinking. Logic (Greek, *Organon*) is the foundation for any serious correct reasoning and practice. It is at the heart of any rigorous mathematics, sciences (social and natural), and humanities, and the arts. Invented single-handedly by the philosophical giant Aristotle (384–322 BCE), it is the instrument/apparatus to any proper reasoning and dialectical doing throughout all theory, production, and practice. Critical thinking, on the other hand, though much less formally- or mathematically-driven, is the rational, diligent, and deliberate decision of whether we ought to accept, reject, or suspend judgment about a claim, statement, or proposition, as well as the extensive level of confidence with which we accept or reject it (deduction, induction, abduction, statistical significance, data mining accuracy, sound predictive analytics, etc.)

Critical Thinking in the Real World or Applied Logic

Contrary to some misled popular views, critical thinking has nothing to do whatsoever with "attacking," "putting down," "mocking," "degrading," or such. For, nothing could be further from the truth. Critical thinking is the open-minded, objective, and constructive evaluation of one's own positions or arguments, others' views and contentions, or the objective assessment and logical help from others in rendering one's (others') claims and thinking (and doing) *clear, careful, consistent, concrete, concise, critical,* and *cogent* (The 7 C's)—the seven (7) pillars sine qua none to logical thinking, doing, reflecting, behaving, listening, talking, reading, writing, behaving, interacting, and much more.

We shall, then, in this introductory course, begin with the molecular/atomistic (word) components of a claim (its truth value (TV)—logical and scientific, its divergence from other forms of written and spoken languages, the vital concepts of issue, prejudice/bias/distortion, critical thinking and clear writing, analytics or research essays, informal fallacies or *faux pas* (French for 'false steps,' now Anglicized) claims' appraisal, nonargumentative persuasion, pseudo reasoning, Aristotelian Logic, explanations, Statistics, …. We shall tackle arguments per se, including their understanding and assessment, deductive arguments via the basics of categorical logic and truth functional logic, introduction and inductive arguments all the way to the basics of statistical generalization and probability theory, causal arguments, and applied arguments to law, medicine, morality, politics, economics, psychology, psychiatry, sociology, the sciences, the arts, and so forth. Throughout this course, as well as within our CT (e)-Clinics or (e)-Labs, as well as the lectures and (e)-lectures (see the Appendix of your book, please.), the learner shall acquire an abundance of skills to thinking and deciding, premised on rational thought and the truth. In a word, critical thinking is universally, procedurally, and timely (*everywhere, everyhow,* and *everywhen*) applicable!

Course Objectives

Upon successful completion of this course, the student/learner must reasonably be able to accomplish the following:

1. Define and illustrate the foundations and types of words, claims, propositions, and/or statements, as well as issues, explanations, thought, arguments, and LMESTG-21st-century-and-beyond sound actions (logically valid and empirically true). Likewise, the learner should be able to explain how we identify/spot an issue and settle it via a valid, justified, and optimal (efficient, 1st best, efficacious) argument (contention). Thus, one will be objectively assured in differentiating between facts and opinions; distinguishing among objective and subjective claims; and, critically, diagnosticating one's (others) beliefs, opinions, positions, persuasions, biases, assertions, descriptions, arguments and counter-arguments (proofs and counter-proofs), and explanations ceteris paribus (inter alia or other variables/constants being equal)
2. Understand and explain the basics of critical thinking and clear writing, including the principles of organization; writing relevancy and focus; good writing practices; communicative types to avoid; and clarity, or the holistic applicability of the 7 C's, in writing-listening-reading-talking (vocally or non-vocally), via terms' exact definitions; unambiguous (univocal) claims, precise words, and propositions; comparative statements; persuasive writing; and multicultural and socially diverse communication/cyber-communication .
3. Comprehend and assess all kinds of claims/statements/propositions. Hence, one needs show whether a claim conflicts with our personal data and observations or with our background knowledge. One is expected to assess the credibility of the source by experts, eyewitness observations, reference work, official or government publications, the news media, and the epiphenomenal cyberspace highway or World Wide Web, Social Media, iClouding, etc.
4. Interpret and evaluate non-argumentative persuasion. Notice should be essentially made of slanders; euphemisms and dysphemisms; definitions, explanations, and persuasive comparisons; stereotypes; innuendos; loaded questions; weaslers; down-players; hyperbole; proof surrogates; analogies; assumptions; statistics; probabilities; hypotheses testing; estimation; causation; and, in particular your CT Rules (R1-R35, along with the *latinized* and *non-latinized* 22 fallacies, fully delineated in CH. 7 of your book); ...
5. Show the value of critical thinking or traditional/informal logic and point out such pseudoreasoning comportments and fallacies (mistakes, errors, imperfections, etc.) as a smokescreen or red herring, equivocation, subjectivity, the appeal to force/ignorance/pity, common practice, peer pressure and the bandwagon, wishful thinking, scare tactics, straw man, surrogation, tu qou que, apple polishing, horselaugh/ridicule/sarcasm, indignation, two wrongs make a right, ad homina, the genetic fallacy, the burden of proof, the straw man, false dilemma, the slippery slope, and begging the question, 'it depends'/circumstantial biases, powerless speech, inter alia.

6. Introduce and explain, or *explicate* (*French, 'expliquer,' Anglicized*), arguments and explanations, explanations and justifications, the diverse types of explanations, as well as demonstrate how to pinpoint weak arguments (deductive, inductive, abductive) and explanations (e.g., testability, non-circularity, relevancy, reliability, consistency, etc.), and spot explanatory comparisons or weak analogies, presumptions, amphibolies, and more.
7. Appreciate, identify, translate, and distinguish among arguments. That is, describe their anatomy, form, or structure; show good/bad, valid/invalid, and strong/weak arguments; present deduction and induction theories; explain the central notion of premises and assumptions, explicit and implicit; distinguish arguments from window-dressing; define and exemplify *explanans* and *explananda*; and, overall, evaluate arguments' validity, truth, soundness, and efficacy, as well as systematically (and courteously) raising plausible critiques and counter-critiques (or objections and counter-objections, counter- and counter-counter-objections, and so forth.)
8. Discuss and examine deduction through categorical logic by using such theories (syllogisms, categories, square of opposition) and techniques, as translation; formal proofs (inference, equivalency, DeMorgan's); truth-tables; truth-trees; formal proofs; Venn diagrams; and an initiation to statistical and probability forms of thinking and mathematics; or LMESTG, overall.
9. Pinpoint and explicate truth-functional logic: translation from English to symbolics and vice versa, claim variables, truth-tables, elementary valid argument patterns, conditional proofs, and truth-functional equivalencies.
10. Introduce and account for the theory of inductive logic by ways of analogies; representativeness and bias; statistical sample size; random systematic errors; confidence levels; inductive fallacies and criteria; untrustworthy polls and surveys; and, especially false causation (causation v. correlation).
11. Define, explain, typify, exemplify, and interpret causal arguments, causation and populations, and appeal to the basics of statistics and probabilism.
12. Apply, situate, understand, and appreciate critical thinking as it relates to language and real world applications to moral reasoning, legal reasoning, medical reasoning, technical and cyber-reasoning, economic and business reasoning, scientific reasoning (astronomy, physics and chemistry, biology and marine biology, zoology, geology and climatology, computing & artificial intelligence, aesthetic and literary reasoning, investment reasoning, risk management reasoning, and political/legal and geopolitical reasoning (please see your Logic (e)-clinics or (e)-labs).

Course Organization and Students'/Learners' (e)-Responsibilities

This course shall be organized around facilitative teaching and collaborative learning or 'Cooperative Learning Strategies, CLSs: Please see your lectures, e-lectures, labs/elabs, as well as the availability of this author/professor over office and e-office hours, Canvas, or other learning management systems (LMSs), social media, and other cyber-methods, 24/7!! Starting off, we shall emphasize the easiness and excitement in acquiring many critical thinking knowledge, skills, algorithms, and applications. Learners are motivated and

required to maintain high levels of preparedness, logical/scientific discussions [(e)-discussions (Canvas or others), notifications, assignments, files, syllabi, conferences, collaborations, smart-thinking/tutoring, Chat, Tegrity, Labs, Attendance, Help Desk, …), academic activities, and global citizen responsibility. Henceforth, students must come to class/e-class always prepared beforehand to foster their learning capacity of critical thinking concepts, methods, skills, and strategies. That is, through consistently CT reading/cyber-reading and understanding/(e)-understanding, and working out essays/cyber-essays and exercises/cyber-exercises, the (e)-learner(s) shall secure her/his/their success. After all, nothing is impossible should one apply oneself to be open-minded, careful, persistent, LMESTG-centric, and hard/smart/ethical working.

Course Requirements

The learner/(e)-learner must read assigned chapters before coming to class/(e)-class, (e)-participate and (e)-ask questions without fear or bias, (e)-work out (e)-problems and (e)-research projects, (e)-interact with (e)-Dr. Sarri, (e)-take all mock tests, exams, labs, and do homework projects. Therefore, in so doing, everyone is assured a superior, not just a passing, (e)-grade. Your total (e)-grade is based upon; (1) a midterm examination; (2) a take-home research critical thinking project; (3) a final exam; and, (4) regular attendance and lab participation. Accelerated summer e-classes may be less exigent, due to their brevity (4 weeks in lieu of 16 weeks, albeit (e)-reading is massive and e-assignments are weekly). **There will be no make-ups, please, in fairness and justice for all!**

Attendance Policy

(e)-Attendance and (e)-punctuality are required—onground, hybrid, or online. Physically, missing class twice, for whatever personal reasons, shall result in a 20% loss from the final grade. Moreover, excessive absences (defined as three times or more) shall lead to a failing grade. Last, being late twice or leaving class early twice will be the equivalent of one absence. Obviously, as you know, such a policy aims not at hurting your grade. Rather, it shall enormously benefit you. It is established in fairness to everyone in class, indiscriminately. As economists would argue, it shall minimize your opportunity costs, opportunity disutilities, etc., while fostering your academic and professional welfare/prosperity. For cyber-classes, please, your promptness, or punctuality, is required. 24/7 interactions with (e)-Professor Sarri and/or with (e)-classmates are WELCOME ☺

Grading Policy

Grading is *fair and merciful*! Course grade will be based on: (a) one midterm exam at 25%; (b) attendance, labs/clinics, and participation at 20%; (c) a take home critical thinking project at 30% (student may choose his/her own project); and, (d) a final exam at 25%. (e)-Tests may come in a variety of pedagogical ways, depending whether the CT delivery is onground, online, or hybrid—multiple choice questions (MCQs), true/false (T/F), clinical summaries (pros, cons, solutions, careers), short essays (SEs), term projects, extra-credit papers, and more. All exams are open books and open notes. All exams and research projects shall be preceded by (e)-practice exams and thorough essay writing. Indeed, onground

or online, CT requirements are rigorous and will be systematically enunciated or posted via Canvas or other LMSs, as well as consistently emailed, your way, via MyCsn and/or equivalent modalities.

So, please stay tuned! This professor/author welcomes clarifying any ambiguity, 24/7, and is committed to responding to your every CT need promptly and professionally!

Finally, your total grade (onground, online, or hybrid) will be assigned as follows:

A	90–100%	B–	70–74	D+	55–59
A–	85–89	C+	67–69	D	50–54
B+	80–84	C	64–66	D–	< 50
B	75–79	C–	60–63		

Learner Conduct

It is vital that you ought to conduct yourself well. The enjoyment and learning ability in this (e)-course are based on collective respect between students and between students and professor. Thus, disturbances and/or making noise of any sort shall impede (e)-course efficiency. Consequently, we must all strive to bring about positive learning by informing the professor, ahead of time, if one is leaving before class adjourns; by taking a closer seat to the door if one is arriving late or leaving early; and/or by being always courteous and respectful to, being respected by, your (e)-classmates and (e)-professor.

Academic-Professional-Social Dishonesty

Includes, but not limited to: (i) plagiarism (submitting (an)other author(s)' or student(s)' work(s), as one's own); and, (ii) receive and/or provide illegitimate help during (e)-exams/(e)-assignments. Such (e)-misconduct or (e)-misbehavior shall automatically result in a failing (e)-grade for all players involved. Frankly, if one cheats (e)-academically, one may equally cheat (e)-socially and (e)-professionally, (e)-Las Vegas-wide or (e)-worldly!!!

How to Do Well in Philosophy, Informal Logic, Applied Logic, or Critical Thinking

Indeed, philosophy is the mother of all disciplines, fields, areas, and/or applications to both our natural and human worlds. Furthermore, philosophy is an all-encompassing universe of study that gives problems to many (e)-students. For, it may be too general and abstract, insofar as it involves all domains of life/existence (an extremely *utilitarian good* in a 21st century, over-specialized, and (e)-global. And, too precise in the sense that it is centered on dialectical thinking AND formal logic or mathematical thinking (Logic is the mother of mathematics). Its generality and precision are, therefore, welcome benefits for those aspiring to be academically rigorous, communally/globally accountable, and professionally and ethically successful.

Notice, also, that philosophy is not necessarily difficult. It may simply be different for the new student! Its language, principles, reasons, perspectives, and applications are countless (economics and finance, natural sciences, law, medicine and health care, social sciences, literature, arts, sustainability, and the e-world and technology). Hence, through

familiarizing one with its history, language, and valuable applications, one shall tremendously benefit from its inherent problem-solving capacity. As a result, knowing some of its language, history, and approaches are important, but you must also be able to put that information into *ACTION*. For example, you may use the Socratic Method, thereby enriching one's mind and boosting one's life meaning and life purpose. You may also use Aristotelian, Theologic, Utilitarian, Marxian, Existential, Evolutionary, Critical, Constructivist, De-Constructivist, Hermeneutic, Kantian, and/or World Eclectic approach(es) to shed light on such complex moral, economic, and political matters, as: abortion, violence, racism, terrorism, euthanasia, cloning, wealth, poverty, environmental degradation, democracy, wars, diseases, hunger, global aid, space exploration, global development, and international peace.

Having said this, how can you do well in (e)-philosophy? Well, first the bad news. There is clearly no magic. The good news, however, is that there are a few ingredients to success in (e)-philosophy and (e)-critical thinking.

1. **(e)-Practice, (e)-practice, and (e)-practice.** For many (e)-students, this is where the answer lies. If so, then one must consistently read the text, prepare for the (e)-lectures-discussions, ask (e)-questions, make (e)-friends or (e)-classmates to (e)-study/(e)-discuss collectively, and link what one (e)-reads and (e)-learns from (e)-class to everyday life concerns.
2. **(e)-Attend (e)-class regularly.** Though not an all-encompassing panacea, regular and timely (e)-class attendance is fundamental for better performance in philosophy. The material is linked together and many ideas, arguments, counter-arguments, and applications discussed in one (e)-session will be used in subsequent (e)-sessions, (e)-assignments, (e)-tests, and (e)-research projects. It is vital, thus, that you maintain a habit of regular, attentive, and uninterrupted (e)-class attendance; so, that you don't get out of step with the progress and flow of your (e)-course.
3. **Do not leave it to the last minute.** This is self-explanatory. For, obviously, if you leave your (e)-readings, (e)-exam preparations, and/or (e)-research project development and writing to the last minute, then results will be poor and frustrating. (e)-Philosophy, like any other (e)-discipline, is best learned in small, consistent, and regular doses. Hence, study regularly, attend (e)-class, and give yourself rewards for your hard work.
4. **Ask (e)-questions and get (e)-answers.** That is, be demanding. If you do not understand or you are having problems in following a particular philosopher or philosophic topic, then ask for clarification. Re-read and re-think. To put it bluntly, do not expect a bolt of lighting to flash and provide you with the answer. That is, do not make (e)-philosophy/(e)-critical thinking harder by avoiding asking for elucidation. Please (e)-ask questions during (e)-class, by calling or making an appointment, emailing, or catching me around campus, online, or in a hybrid manner. Consequently, make sure that you get the (e)-answers. In college, (e)-learning is, indeed, your responsibility. And, please do not forget to be patient, cooperative, and understanding with yourself, your (e)-peers, (e)-professor(s), and (e)-college!

(e)-Classroom Code of Ethics

1. Please, always, categorically respect your (e)-classroom, your (e)-classmates, your (e)-college, and your (e)-professor(s). That is, treat everyone equally and with respect, *and* demand the reverse. Therefore, never (e)-mock, (e)-interrupt, (e)-call names, (e)-gossip, or (e)-make noises. Please (e)-demand the same in/from them.
2. Please make all your (e)-classmates feel that there is something in them.
3. Please be as enthusiastic about the success of others as you are about your own.
4. Please (e)-address your concerns or frustration in a positive, polite, professional, and private manner with your professor and/or the NSHE.
5. Please understand that there are no stupid questions in this (e)-class. That we are all here to (e)-learn and (e)-enjoy.
6. Please always arrive and leave your (e)-class on time.
7. Please kindly advise your professor, in one written/emailed sentence, and before hand, if you are to be (e)-absent. Also, please understand that missing (e)-class/(e)-exercise twice or more may hurt your interests and success in this (e)-class or that you may be asked to (e)-withdraw or attend another
8. (e)-class
9. Please understand that, for your own interests and in fairness to your
10. (e)-classmates, there will be no make-ups in this (e)-class.
11. Please provide so much time to your (e)-academic and professional growth that you have no time to criticize others.
12. Please attempt to forget about the mistakes of the past. Hence, press on the greater achievements of now and tomorrow.
13. Please do not drop out from (e)-class, or, please *never ever give up*! By working for the best, and expecting the best, you will succeed and prosper.
14. Please realize that your (e)-college and your (e)-professor(s) is (are) here to (e)-listen, help, and make you succeed. Thus, to create opportunities for you and thereby help you change, for the better, your life and that of your loved ones ☺

(e)-Critical Thinking Projects, Research & Development (R&D)

Indeed, students are entitled to suggest their own project ideas for this course, as long as said-proposals bear upon our subject matter. It is advisable, however, to pick a CT topic, based on your "endless" list of themes in this book, especially the present chapter. Furthermore, I recommend the use of Form & Style, or any subsequent editions ((e)-check out at your NSHE libraries) an, please, feel free to use any stylistic approach, from MLA to APA, Oxford, Harvard, Chicago, Sarri, etc., to assist you in preparing your long/short philosophic essays/clinics (This book is full of guidance and/or methodological insights/tips.) Moreover, you are encouraged to review your projects with our NSHE writing, tutorial, TRIO, and/or (e)-centers (in addition to (e)-peers, (e)-advisors, (e)-employers, (e)-speakers, friends, relatives, partner, spouse, fiancé, girlfriend, boyfriend, etc.).

The length of an adequate project, furthermore, should be determined by the nature of your study. The average length is about six pages *solo* (maximum not to exceed 10 pages) or ten pages (not to exceed 15 pages) *duo* (working with another responsible student; more than two will not be graded, please), error free, and cleanly presented. Also, quality paper should be used, following correct form and style: the margins should be one inch on the left side of the paper and an equal 1 inch on the remaining three sides. Double-spacing, 12 point font, short quotes with commentaries, and other stylistic equivalents are required, along with your chosen style: MLA, APA, Chicago, Dr. Sarri, …

Lastly, as a matter of organized format and logical methodology, I suggest the following:

A. Preliminaries:
   1. Title page with title, name, and date.
   2. Table of contents.
   3. Introduction.

B. Text or Body of Your Project

Part I

1. Statement of the problem (essay).
2. Purpose of the project (study).
3. Anticipated results.
4. Rationale and theoretical framework of the study.
5. Definition of technical terms and acronyms.
6. Extent and limitations of the study.

Part II

1. Historical background, only is pertinent.
2. How is this topic relevant to your present class?
3. A critique of available literature vis-à-vis your project, if any. Students may with to make preliminary comments, meticulously, if these have direct bearing on an understanding of the problem under study.
4. Critical Assessment:
   a. What are the strengths of the thesis, view, the issue, or theory under investigation? Conceptual? Substantive (metaphysics, epistemology, bioethics, economics, law, religion, technology, music, film, business, politics, money, sex, rhetoric, aesthetics, etc.)? Critical thinking? Logical? Scientific? Meta-Scientific?
   b. What are its fallacies, its pseudo-reasoning, weaknesses, strengths, explanations, causation, correlation, deduction, induction, etc. (list and analyze internal and external objections)?
   c. What are the possible counter-objections (rebuttals) to said-objections? Provide significant examples when relevant. Pay close attention, equally, to the clarity of your writing in terms of organization, focus, ambiguities, precision, weak analogies, and uncritical writing/thinking.

Part III

1. Are you in favor of one or the other, or both sides of the issue? If so, why? If not, why not? If both (compromise), how and why both?
2. Are you in favor of an outside view or conclusion? Why and how?

3. Delineate any pseudo-reasonings. Identify explanations and causations or associations (correlations)? Specify the deductive and/or inductive forms of the arguments for, against, or other alternative solutions, or possible solutions to the issue.
4. What are the adequate language usages (physics, economics, law, theology, medicine, etc.), syllogisms, meaning, logic, justification, statistics, and real world critical thinking applications of your topic?

C. Concluding Remarks
   1. Please summarize what you have accomplished.
   2. Recommendations for further study.

D. Bibliography: Traditional and Cyber
   1. This is expected to be a listing of selected works that have been important in the development of the ideas behind your project: three (3) traditional sources AND three (3) cyber-sources: current, logical, verifiable.

E. Appendix (optional)
   1. An appendix should be used for materials that supplement the text but are not appropriate for inclusion in it.

F. School-to-Career (STC) and/or School-to-Life (STL): In two (2) paragraphs, please specify the challenges you have encountered (lack of data, sources, time conflict, or such) and the opportunities you have discovered (career and/or life enrichment) in researching and doing this CT project.

G. Index (Nominal and/or Conceptual) and Glossary (Optional)

PROJECT DEADLINE IS ON THE DAY OF THE (e)-FINAL EXAM. NO EXCEPTIONS, please, viz., manage your time optimally? Should you decide to (e)-hand in your project before then, please feel free to do so.

Nota Bene (N.B.): The above is a succinct, basic Socratic (the great Socrates, c. 470 BCE–400 BCE) Approach to doing logical and philosophic (all sciences, arts, etc.) research and development (R&D). Other rational and empirical methods abound, including, but not limited to, *positivism*, *phenomenologism*, and *critical theory*.

List of Proposed Topics

Please carefully, thoughtfully, and critically develop and clearly write a research project that argues both sides of a particular, significant issue. Your project must *transcend* reporting and/or historical recounting. It ought to have an *introduction*, a *thesis* or a problem statement, an *antithesis* (arguments against and for, critiques and counter-critiques, examples and counter-examples, …), a *synthesis* (results of your study and logical/philosophic remedies, or cures, to the problem(s), and, please, do not forget the *conclusion* (recap your topic and present a short outlook).

Exactly, please structure and justify your argument(s) for/against (pro- and con-), and promote a specific important issue or problem (scientific, social, moral, legal, artistic, technical, political, economic, worldly, etc.). Make sure that your premises (assumptions, initial claims, hypotheses) are clearly identified, measurable, realistic, and achievable (if any) and reasonable.

Similarly, unequivocally show defenses to both conclusions to the issue at hand. Then, present a synthesis that may derive from the strengths of both sides to the issue or yet an external alternative to the thesis, antithesis, or synthesis *in liaison* with the issue under examination. Further, make sure that connectives, transitional words, data compilation, evidence, proof, testing, support, reliability, predictability, and justification are represented to strengthen your essay and research. Finally, revise as many time as you can muster, and do not forget to orderly cite your bibliography and references as well as attach any relevant, additional material and exhibits (interviews, surveys, questionnaires, pictures, photos, or such).

Hints: Inject the indicator "whether," or a similar relational linguistic device, in front of your theme/essay/project/research development, and will easily morph it onto an issue, problematic, concern, or such. For example, "Whether God (Infinite, the Absolute, the Un-originated Originator, the Super-Mind, …) Exists." You will, then, demonstrate whether this claim (statement, proposition) is true, false, and/or indeterminate, predicated on the arguments/explanations, for and against, as well as your gathered, plausible critiques, counter-critiques, examples, counter-examples, internal and external dialogues, debates, controversies, and so on.

1. Student athletes should be given special leniency when the professor assigns course grades.
2. One the whole, it seems that people are more conservative than they were a generation ago.
3. Women are stronger than men.
4. Men are stronger than women.
5. Love is blind.
6. Sexual intercourse is when a man and a woman intend to produce offspring.
7. The ozone blob will devour the earth.
8. Gay marriages are unnatural.
9. Jail times should be shortened.
10. Rehabilitation is more efficacious than punishment.
11. The death penalty is morally wrong.
12. Former President Bill Clinton's infidelities are a matter of private, not public, concerns.
13. All politicians are crooks.
14. Many lawyers are liars.
15. Many physicians are money hungry and are not genuine health care providers.
16. Clean needles benefit society.
17. Restaurants ought to be smoke-free.
18. Buying term papers or research projects makes sense.
19. Gun laws should be repealed.
20. Prostitution is okay.
21. Affirmative action is desirable.
22. Sex before marriage is wrong.
23. Everyone should use a bicycle for his or her main means of transportation.
24. Financial aid should be denied to anyone under a 4-point grade point average.

25. Using reliable condoms can significantly reduce contracting AIDS through sexual contact.
26. Photos of deadbeat parents ought to be posed on the internet and in post offices.
27. Smoking is bad for your health.
28. Moderate consumption of marijuana may be good for your health.
29. Wine is good for your liver.
30. The Japanese (Chinese, Arabs, Jews, Americans, …) are good at math.
31. Killing Iraqi people is wrong.
32. Changing Saddam's regime was morally praiseworthy.
33. Bentley is the best luxury car.
34. No spacecraft landed on Mars in 1997; the photographs were fake.
35. There is an infinite God.
36. There is no God.
37. There is a human soul
38. There is no human soul.
39. Miracles are true.
40. Miracles are only illusions.
41. Elvis is alive.
42. The CIA started the cocaine epidemic in the ghettos in order to control and pacify African Americans and Hispanics.
43. Every student should be required to take either critical thinking or mathematics, but not both.
44. Students in public high schools should be required to wear uniforms.
45. All students in this college should be required to take a course in physical education.
46. Democracy is the best form of government.
47. Homelessness is a shame in any society.
48. Everybody should have a job.
49. Entrepreneurial ability is the key to becoming wealthy.
50. Cats and dogs should be legally prohibited from roaming in cities.
51. People should own wildlife if they can afford it.
52. Basketball players are overpaid.
53. Football players are overpaid.
54. Baseball players are overpaid.
55. College professors are underpaid.
56. Police officers are usually brutal and abusive.
57. Firemen are involved in dangerous work.
58. Soldiers are involved in dangerous work.
59. It is easier for a camel to go through the eye of a needle than for a rich man to enter the kingdom of God.
60. Critical thinking (and logic) is like learning to drive a car. It requires practice; you cannot just learn it as theory. That is why I give you so many messy arguments to examine.
61. Just as alcohol and tobacco are legal, we should legalize the use of marijuana.
62. The average income of a woman in the United States is only 80% that of a man.

63. Sex is unlikely to cause heart attacks.
64. Birth causes death.
65. Death causes birth.
66. Animal experimentation is morally wrong.
67. Taking critical thinking has caused me to become a successful person.
68. Virtue is the love of wisdom.
69. In Las Vegas, one should always be at home.
70. In Las Vegas, one should always be out.
71. All my friends should consider critical thinking.
72. Pets promote one's health.
73. One should always tell the truth, under all circumstances and without exceptions.
74. Gossip is inherently wrong.
75. All forms of discrimination (race, gender, age, nationality, origin, accent, disability, weight, height, etc.) are morally abhorrent.
76. One ought to never use people as a means to an end.
77. Pleasure is happiness (*Ataraxia, Eudamnia, Bliss*) or vice versa.
78. Pleasure is more important than justice.
79. Justice is more important than pleasure.
80. Western/Eastern medicine is more efficient than Eastern/Western medicine.
81. Monogamy is better than polygamy.
82. Investing in the stock market is far better than investing in forex, commodities, mutual funds, bonds, or options.
83. We must help other countries in need.
84. A child going to bed hungry is a horrible phenomenon in this country or anywhere else.
85. The Affordable Care Act ("Obamacare") is adequate/inadequate.
86. Millions of adults in this materially rich country of ours cannot read.
87. Time is better than money.
88. Money is better than time.
89. Divorce is morally wrong.
90. Assisted suicide should be legalized.
91. MTV is enlightening.
92. The Internet/Social Media is/are economically and socially productive.
93. The Internet/Social Media is useless.
94. Some judges are crooks.
95. Some district attorneys are corrupt.
96. Some sheriffs are crooks.
97. Obama is more intelligent than George W. Bush.
98. George W. Bush is more intelligent than Obama.
99. Attacking Syria (N. Korea, Russia, …) will trigger the killing of more innocent life.
100. Judaism, Christianity, Islam, Buddhism, Hinduism, Confucianism, Baha'ism, and other major religious and philosophic doctrines have peace and love as a shared common denominator.

My Grading Symbols and Common Fallacies to Avoid

A	AMBIGUOUS	NOB	NOT OBVIOUS
AHA	AD HOMINEM ARGUMENT	NSO	NON-SEQUITUR (doesn't follow)
AN	ARGUMENT NEEDED		
AUTH	"TRUE" BECAUSE OF AN AUTHORITY	OS	OWN STYLE
		PN	PREMISE NEEDED
BC	BE CAREFUL	PRQ	PLEASE READ THE QUESTION
BQ	BEGGING THE QUESTION		
CN	CONCLUSION NEEDED	R	RHETORICAL
D	DEVELOP THIS	S	WHAT IS THE SIGNIFICANCE OF THIS
E	ENGLISH		
EA	EMOTIONAL APPEAL	SCC	SEE CLASS CORRECTIONS
EN	EXAMPLE NEEDED	SW	SHOW WORK
EQ	ESSAY QUESTION	T	TRANSITION
FA	FALLACY OF ADDITION	TBS	TRUE BY STIPULATION
FC	FALLACY OF CAUSATION	TNS	THIS NEEDS SUPPORT
FD	FALLACY OF DIVISION	U	UNCLEAR
FN	FACTS NEEDED	UP	UNREFERRED PRONOUN
I	IRRELEVANT	UTT	UNEXPLAINED TECHNICAL TERM
K	KNOWLEDGE ON THE ISSUE REQUIRED		
MC/TF	MULTIPLE CHOICE/ TRUE-FALSE	V	VAGUE
		WEM	WHAT EXACTLY DO YOU MEAN
MST	MUDDLED STYLE	WMS	WORDS MEAN SOMETHING
NAC	NOT A CONCLUSION		
NAQ	NOT ANSWERING THE QUESTION	WW	WRONG WORD

More Critical Thinking Mistakes to Avoid

The various abbreviations/conventions listed below will be used as a kind of shorthand notation in criticizing papers. They are adapted mostly f rom Jon Wheatley's *Prolegomena to Philosophy*.

Auth: Using an authority. There are no authorities in philosophy; that is, there is no person such that, if he/she said something, that thing is therefore true. In general, if the only argument for a point is that someone else made it, then there is no argument for that point and it is best dropped.

BQ: Begging the question. One begs the question when one fails to answer it, usually by answering another very much simpler question instead. Here is an example: suppose that the question is "Can one keep a promise by accident?" The following answer would beg every question of interest here: "If by 'keeping a promise' one means just physically doing what one has said one will do, then keeping a promise by accident is perfectly possible." This begs the question because everything that is

interesting (and hard) about the original question lies in whether keeping a promise does involve solely physically doing what one has said one will do.

BRQ: Bad rhetorical question. It is a good idea to avoid rhetorical questions altogether in writing philosophy. It is my experience that just when students think everything is obvious, major difficulties arise. However, rhetorical questions can be used legitimately. They are used when the answer to the question is obvious and this obvious answer is correct. One gets a bad rhetorical question when one or the other of these conditions is not filled. Here's an example taken from a student's paper. "Who would ever suppose that man should act from duty alone?" The "obvious" answer was "No one." The correct answer is "To take one example, the very great German Philosopher Immanuel Kant (1724–1804), in his various formulation of his Categorical Imperative law, demonstrates …"

EA: Example needed. This occurs when an illustration would greatly increase the effectiveness or intelligibility of a claim.

E: English. That is, bad English. I am not talking here about splitting infinitives or ending a sentence with a preposition, which does not matter at all. Bad English in a student's paper is usually a matter of ambiguity, vagueness, or unintelligibility with a grammatical origin (e.g., an amphiboly).

I: Irrelevance. When you write a philosophy paper, go through every word and ask yourself of every sentence whether it bears on the original problem, and whether it moves us further towards the solution of that problem. If any sentence does not fill both these conditions, then cross it out, drop it without remorse!

MST: Muddled style. I write this when there is muddling in your paper. That is, I find that the error(s) is (are) stylistic in origin rather than philosophical. To correct it (them), you should just think through what you want to say more clearly. Examples or illustrations are helpful.

NAQ: Not answering the question. Questions are set quite carefully to lead you into an interesting philosophical problem. By not answering the question, you often avoid the problem to the detriment of your paper. In general, make sure you always answer the question asked. Then, when you have done so, it is of course your privilege to go on to discuss other similar questions if you think that will be interesting, relevant, and/or significant.

NOB: Not obvious. I write this when you offered something obvious when it is not obvious (usually when it is just wrong, as well).

NS: Non-sequitur. This is self-explanatory. You have a non-sequitur when you say, or imply, that one statement follows from another when it does not.

TBS: True by stipulation. Here's an example. Someone says, "By 'pain' I mean that state someone is in when they moan and groan and cry out." It then follows, with no trouble at all, that no one can ever pretend to be in pain by moaning, groaning and crying out. But the solution is spurious, circular, or tautologous (redundant, repetitive). For, it is not advancing one's/societal knowledge that what "pain" means is the state someone is in when they moan and groan and cry out, over and over again. The possibility of pretense has been stipulated out of existence, which is not a useful way to solve a philosophical (economic, scientific, legal, medical, …, problem.

TNS: This needs support. I write this opposite any statement which is offered as obvious, or is in anyway unsupported, and which needs some form of support.

URP: Unreferred pronoun. The mistake is self-explanatory, but it is so common that it is worth emphasizing. When you read over a draft of any paper you write, please always ask yourself of every pronoun, whether it completely unambiguously referrs to some suitable noun or noun phrase.

UTT: Unexplained technical term. This is a special case of WEM (below). When you use a term in an unusual or special sense, it is necessary to explain exactly what you take the term to mean. Failure to do this prevents the reader from fully understanding your point.

WEM: What exactly does this mean? Problems of intelligibility occur when one uses a term or makes a point that is obscure or ambiguous. This problem can be avoided by a more clear and precise formulation of one's points.

WMS: Words mean something. Used when you assume that words mean nothing or can mean anything one chooses. They shall mean one of the many variations on this error.

Beyond This Class: (e)-Academic Pursuits, My (e)-AFE Program, (e)-Careers, (e)-Entrepreneurship,

Critical thinking, CT, is first and foremost an analytic/synthetic/practical, problem-solving skill. Namely, by quickly learning the concepts, formula, techniques, methods, and universal applications of CT you will learn how to think analytically, thus, rationally and scientifically solve and/or support any scientific, social, artistic, medical, legal, and liberal arts topic, challenge, or issue.

Not only does CT shed a guiding light on the major issues of our times, but actively seeks to analyze them, identify them, clarify them, factually test them, and ultimately bring about solutions for sound conclusions that enhance societies' growth and development. CT, indeed, deals with language, communications, images, thinking, data gathering, experiments' designs, factual description and summaries, probability and likelihood, syntheses, evidence and proofs, sampling, estimation hypotheses or claims testing, categorical data, generalizations, quality control, forecasting, time management, human resources, planetary or globalization efficiency and optimization, and, above all, interpretation, analysis, and synthesis of our language, thought, and human practice. It is, further, worth pinpointing that just as a Democratic Citizenry ought to be literate and factual, it ought equally be logical, or CT-centered savvy. Emotions, feelings, sentiments, beliefs, opinions, words, ideas, terms, phrases, images, thought processes, claims, expressions, phrases, issues, statements, propositions, arguments, counter-arguments, inferences and conclusions, derivations and deductions, and communication overall: symbolic, gesture-based, spoken, written, cyberspace-oriented, etc., maybe fallacious, misleading, if not downright dangerous should we not expose it to the meticulous tests, canons, and machinery of CT and logic.

Therefore, as a problem-based science and art, CT and logic shall enhance your ability to think critically and scientifically. They shall equally equip you to rationally deal with your everyday life and expose you, along with other studies, to the most competitive

and rewarding career or entrepreneurial opportunity in globalization, money and finance, languages, technology, the medical arts, law, literature, theology, metaphysics, epistemology, esthetics, history of philosophy and science, bioethics, or philosophy of psychiatry, to name some crucial ones. Exactly, CT will easily allow one to succeed in wealth creation, leadership, marketing and sales, financial planning and engineering, statistics, experiment designs, research methodology, high tech and computer science, biology, business, social sciences, management, labor, organizational strategy and behavior, banking and finance, money and investments, securities and portfolio management, international economics and politics, history, geography, the arts, education, social sciences, tourism and resort management, culinary arts, friendship and family harmonies, world interfaith dialogue, and so on. In a word, CT, at its heart, is a very practical art. It is the coherent part of clarifying language and communication, so desperately needed in our complex, global world of today. Learn it. Do not be afraid of it. Use it. Enjoy it. Then, reap its rewards!

Careers and Job Opportunities Through CT and Related Fields

Careers and opportunities in critical thinking, liberal arts, the humanities, and related fields are abundant. Finding out about them is equally abundant. Obviously, one may want to start with cyberspace and the Internet. For, these days, virtually all companies, universities, hospitals, the government, world organizations, schools, resorts and hotels, and charitable foundations advertise via the World Wide Web. Look up www., plus the name of the organization, followed by .com for private firms, .edu for educational institutions, .gov for the government, or .org for organizations, *inter alia*, plus jobs or careers or internships or placements to find what you desire with a degree and training in critical thinking, philosophy, mathematics, liberal arts, humanities, neuro-sciences, cardio-sciences, natural sciences, social sciences (specially Economics and Finance), leadership and management, artificial intelligence, and countless other fields—current and developing, globally!

Traditionally, the US federal Government (but, also, world organizations, public and private) puts out numerous publications and they are all available via the Net or at your University and Community Colleges of Nevada libraries. Some prominent publications are: OOH (Occupational Outlook Handbook) or O*Net on the www; DOT (Dictionary of Occupational Titles) with over 20,000 different kinds of jobs; or GOE (Guide for Occupational Exploration). You may also wish to ask your NSHE counselor or career services for assistance, resume design, and/or your professors for guidance, references, or recommendations. The bourgeoning world of social media (Google & Google+, You Tube, LinkedIn, FB, Twitter, Flickr, 4-Square, Pinterest, and countless others from around our rapidly exponentially connected world) is equally crucial.

So, after you finish this introductory course, you may want to major in philosophy, nanotechnology, global trade and finance, brain or heart sciences, philosophy of world religions, international law, medicine, economics, etc. You shall need advanced courses in philosophy, logic, humanities, statistics, applied mathematics, computer science, biology, physics, applied ethics, politics, media, micro/macroeconomics, AFE, neuro-economics, international economics, finance and banking, and the like. You may want to specialize in the environment, the government, research and analysis, economic planning and development, urban and city health statistics, and so forth. If you choose to pursue your education

and training after your undergraduate studies, you can go on to obtain your Masters degree or Doctorate degree (PhD) in applied philosophy, logic and computing, etc. And, equivalently, you may choose to go for your MBA, MPA, CFA, CFP, CWS, …, to work for the growing areas of financial engineering and mathematical finance, the public sector or politics, as well as 21st century law, health care, neuro-psychology, computer sciences, 21st century music, the arts, social sciences, economics, or such, CT is a vital subject that *must* enhance your career opportunities and contribute to our world economic and cultural development and ecology.

Today, many applied philosophers work for the government and business firms. They also work for international organizations like the United Nations, the FAO, the UNESCO, the WHO, the World Bank, the IMF, the OECD, the EEC, and so forth. You may choose to prepare and work/research in the academe via becoming a college professor, a post-doc, a researchers, …. That is, you may also consider going for postgraduate studies and philosophy, applied philosophy (philosophy of law, philosophy of medicine, philosophy of science, philosophy of social sciences, and so forth) or related areas. And, with the explosion of logical applications to computation, informatics, artificial intelligence, robotics, smart telephony, social media, the Internet, the Extranet, Globalization Logic, nanotechnology, cyber-robotics, and a hundred others one is definitely required to be familiar with the science and art of Logic's basics to succeed in today's Global Economy, Society, Polity, Ecology, and Sustainability. In other words, whatever one's scientific, social science, artistic, or humanities orientations, one is encouraged to appreciate one or more studies of Applied Logic, Critical Thinking, or Informal Logic. Indeed, for those who are mathematically and statistically driven, studying formal logic (symbolic, modal, computational, and so forth) is paramount!

Last, please do NOT forgot to enroll in my very successful (e)-Applied Financial Economics, e-AFE (money, investment, banking, world trade & finance), particularly Economics 274, Economics 275, and Economics 276 (Practica or Internships). Please inquire with my assistant: erica.otoole@csn.edu (Cheyenne campus) for details. Thanks.