

**UNIVERSITY OF LOUISVILLE
DEPARTMENT OF PHILOSOPHY**

Course Number and Title: PHI 311 -96 - 15253 - INTRODUCTION TO LOGIC
Meeting time and place:
Instructor:
Office location & hours: By arrangement and by appointment
Residence and phone:
E-mail:

Course description: An introductory study of the elements and processes of reasoning, insofar as these can be consciously articulated. The course considers both inductive and deductive reasoning from both the ancient (Aristotelian syllogistic) and modern (Boolean) points of view, as well as a thorough examination of the informal fallacies. - 3 Credits.

Note: This course fulfills a General Education requirement for a course in Logical Reasoning; if it is not used to meet this requirement, it will fulfill a requirement in the General Education Humanities Requirement. – 3 Credits

Course text (required): A Concise Introduction to Logic, Hurley, 10th edition (ISBN: 0-495-50383-5) or, alternatively, A Concise Introduction to Logic, Hurley, 9th edition. (ISBN: 0534585051) This is an expensive text. You should make every effort to obtain cheaper, used copies of this book online well before the course begins.

Course rationale: All courses at the college level should teach and model logical reasoning and critical thinking skills, but they often don't. When they do, they typically teach and model these skills implicitly, not explicitly. Yet, the track record shows that implicit teaching of logic and critical thinking is not producing enough of graduates who have and use these skills. A course wholly devoted to explicitly teaching the principles of logical reasoning is in a better position to give you these skills.

Course goals: At the end of this course, you will be able to:

1. Raise vital questions and problems, formulating them clearly and precisely;
2. Gather and evaluate relevant information;
3. Arrive at well-reasoned conclusions and solutions, testing them against relevant criteria and standards;
4. Think open-mindedly within alternative systems of thought, recognizing and assessing their assumptions, implications and practical consequences;

5. Communicate effectively with others in figuring out solutions to complex problems.

Course Format: Meetings of this course will often be formal presentations, but the typical course meeting will consist of dynamic interaction among and between learners and instructor. I expect you to obtain a copy of the required text and to prepare the assigned reading prior to each class meeting. I require you to interact with the learning group as a whole, as well as with me, your instructor, during the meetings. This is no course for spectators or bystanders!

Learner Evaluation: There will be five objective examinations at the end of each major section of the textbook. These exams are based on the content in the textbook. You will sit for the last exam on the final day of the course, 20 December 2009. I will exercise every student in the assigned readings. This exercise will be a drill that requires a summary and critical evaluation of the assigned readings, and will be an integral part of your participation grade.

The final grade for the course will be calculated on this basis:

Participation	25%
Exams	75%

The criteria for letter grades are mostly based on quantitative, numerical test scores. However, you will be awarded a letter grade according to the following standards:

A - All communication is of exceptionally high quality as a direct result of effort, aptitude and intellectual initiative. Test results show achievement of all learning objectives, with averages in the 90-100 range.

B - Interactions are of high quality, as a direct result of ability and effort. Test results are well above average, in the 80-89 range, showing achievement of most learning objectives.

C - Interaction is of average quality, and the minimal expectations have been fulfilled. Test results are acceptable, showing achievement of important learning objectives, with averages in the 70-79 range.

D - Interactions characterized minimalism, tardiness and absences. Test results are below average, showing few achievements of learning objectives, and range from 60-69.

F - Unsatisfactory interaction and excessive absences. Test results indicate little if any attainment of learning objectives. Poor communication skills, and test scores consistently below 59.

NOTE: I may utilize plus or minus signs after the letter grades if and when I consider such notations to be appropriate reflections of an individual's holistic learning experience in the course.

Please note that the criteria for evaluating the Participation grade in this course are:

1. Attendance at every learning session (60 points)

2. Punctuality (10 points)
3. Attentiveness during presentations, conduct during the learning sessions (10 points)

The following criteria address behavior in the classroom and online:

4. Respect for opinions of others (1 point)
5. Contribution of thoughtful comments (2 points)
6. Posing questions which were helpful to learning (2 points)
6. Seeking personal enrichment by asking questions (2 points)
7. Relating discussions and questions to contemporary events and issues (2 points)
8. Sharing personal experiences and insights with group (1 point)
10. Presentation and attitude revealing achievement of learning goals (10 points)

You may earn 100 points for your Participation grade. Please note that I deduct ten points for each unexcused absence. Being late more than TWICE can result in the loss of 10 points for punctuality

With all these opportunities to enhance your participation grade, with no less than six examinations based on the textbook, with abundant learning situations in the classroom, with both written and oral evidence of your performance, you will easily understand why there is **NO EXTRA CREDIT**. Don't even ask!

Critical Thinking Structures and Standards

This is a course about thinking. We are thinking about our thinking! We examine the way the experts think, the erroneous ways people ordinarily think, and the correct ways we ought to think. You will often be challenged by the conflicts and problems that various arguments raise in your mind. Logic is a form of critical thinking, and critical thinking is a series of skills that will help you to make good decisions about what and whom to believe. Critical thinking skills will help you to understand what the issue is, and will guide you in judging whether the reasons supporting a point of view are strong enough to warrant accepting it.

Higher Order Thinking Skills (adapted from Bloom's Taxonomy)

1. Knowledge
- to recall
(Tell, Name, Show, Match, Label, List)
2. Comprehension
- to understand
(Identify, Review, Discuss, Explain, Recognize)
3. Application
- to use

(Collect, Organize, Illustrate, Report, Do, Operate)

4. Analysis
- to take apart
(Contrast, Compare, Categorize, Classify, Examine)
5. Synthesis
- to create
(Change, Invent, Construct, Adapt, Create, What if...)
6. Evaluation
- to judge
(Justify, Recommend, Prove, Decide, Criticize, Debate)

Notice that critical thinking involves a judgment. That is precisely what we will be doing in this course. In a sense, critical thinking is about evaluation. Another word for evaluation is assessment. We will be assessing, or evaluating, i.e., making judgments about, the worth of the arguments that we examine in the text.

EVALUATION is assessing, judging or trying to determine the significance, worth or value of someone, something, or some event.

Don't confuse subjective preference with objective judgments. Subjective preferences require no justification - they are simply a matter of taste. This will not be a course in liking or disliking any of these arguments or arguers. We will be making judgments about them from the aspect of critical thinking.

Critical Thinking Structures and Standards

Critical Thinking is the art of analyzing and evaluating our thinking with the purpose of improving it.

Critical thinking may be defined in three ways:

- 1) Disciplined, self-directed thinking which exemplifies the perfections of thinking appropriate to a particular mode or domain of thinking.
- 2) Thinking that displays mastery of intellectual skills and abilities.
- 3) The art of thinking about your thinking while you are thinking in order to make your thinking better: more clear, more accurate, or more defensible.

In all of the above, critical thinking makes an evaluation, or a judgment, about a claim. Our governing principle in evaluating a claim is the principle of rational acceptance. According to this principle, it is reasonable to accept a claim if 1) the claim does not conflict with our personal experiences that we have

no good reason to doubt, 2) the claim does not conflict with background beliefs that we have no good reason to doubt, and 3) the claim comes from a credible source.

Critical thinking involves the use of *reasoning*. We define reasoning as the drawing of a conclusion from supporting premises. *Argument* is the technical term for this process. The support in the premises is called evidence. In critical thinking, it is unreasonable to accept any claim without sufficient evidence. As Carl Sagan once put it, “Extraordinary claims require extraordinary evidence.”

Critical thinking has intellectual *standards*. For this course, these standards are: Clarity, Accuracy, Precision, Relevance, Depth, Breadth, Logic, Significance and Fairness.

Clarity is a gateway standard. If a statement or argument is not clear, then we cannot evaluate it. When we clarify, we make a term or statement easier to understand, without confusion or ambiguity.

Accuracy requires our thinking to be free from errors, mistakes, or distortion.

Precision is the quality of being accurate, definite, and exact. The standards and modes of precision vary according to subject and context. A word or statement can be clear and accurate, but not precise. Sometimes, more details are required. (e.g., Jack is overweight.)

Relevance implies close logical relationship with, and importance to, the matter under consideration. A term or statement can be clear, accurate and precise, yet still irrelevant to an issue.

Depth demands more than a mere superficial examination of an issue. An argument or statement lacks depth when it fails to deal with the complexities of the topic under discussion. Deep thinking examines one’s assumptions.

Breadth requires that we are open to ideas and arguments that come from other viewpoints. An argument lacks breadth when it only recognizes the insights or one side of an issue.

Logic insists that conclusions must follow from (i.e. be supported by) premises. When combinations of statements support one another and make sense, that combination is said to be ‘logical.’

Significance suggests that we prioritize our information and continually ask if the issues at hand or the facts of the matter are the most important to the purpose of our argumentation.

Fairness implies treating both or all sides alike without reference to one's own feelings or interests. To be fair means keeping to a standard of rightness or lawfulness without reference to one's own inclinations. Fairness calls for freedom from bias and prejudice for or against any side. Fairness requires honest examination of egocentric and sociocentric thinking.

Critical thinking involves the use of reasoning. There are eight elements to the reasoning process:

1. Purpose, what we are trying to accomplish, our goal or objective
2. Question or Problem we attempt to answer or solve, or issue to address

3. Information, gathering data, facts, observations and experiences
4. Interpretation and Inference, Evaluation and implication of information
5. Concepts, namely theories, definitions, axioms, laws, models, principles
6. Assumptions, that which we take for granted
7. Implications, Consequences of where our thinking takes us
8. Point of View, Frame of Reference, Orientation, Perspective, Slant

Each of these parts has implications for the other parts. These are always present in thinking. Critical thinkers must be aware of each one of these. Critical thinking usually means the evaluation of an objective question. (Subjective evaluations, such as private beliefs, tastes and preferences, are not usually the subject of critical thinking).

Intellectual Virtues

A virtue is a habit. This course promotes the habit of good thinking. There are identifiable intellectual traits of a good thinker that distinguish the narrow-minded, self-serving thinker from the open-minded, truth-seeking critical thinker. These intellectual traits are interdependent. Each is best developed while developing the others as well. They cannot be imposed from without; they must be cultivated by encouragement and example. People can come to deeply understand and accept these principles by analyzing their experiences of them: learning from an unfamiliar perspective, discovering you don't know as much as you thought, and so on. They include: intellectual sense of justice, intellectual perseverance, intellectual integrity, intellectual humility, intellectual empathy, intellectual courage, (intellectual) confidence in reason, and intellectual autonomy. You will find definitions for each of these in the Glossary for this course on **Blackboard**.

COURSE POLICIES

I CARE ABOUT YOU! I CARE ABOUT HOW YOU LEARN AND GROW IN THIS COURSE. MY POLICIES REFLECT MY CARE AND CONCERN, AS WELL AS YEARS OF EXPERIENCE!

ABSENCES: **Learning** requires action and interaction. Your grade for participation requires both your measurable interaction and your physical presence at all the learning sessions. Yet, during any given semester, many of us will experience obstacles, setbacks, illness and even personal tragedy. These are challenges to being present at every class meeting, but I fully expect that you will do your best to be present at all the class meetings. If you have a job, your employer pays you and expects you to be present. In this course, you employ me to provide you with a service. Just as you expect me to be present, I expect you to be available to enjoy the benefits of my services. At most class meetings, I will conduct a formal roll call. It is **YOUR** responsibility to call your presence to my attention if you arrive after the roll call has been taken. If not, I consider you to be absent. Those of you who are missing from more than two of the course meetings will see your participation grade significantly reduced and, in egregious cases, counted as a zero in your final grade calculation. Your participation grade requires you to take responsibility for your assigned readings. Your unexcused absence from a session in which you are assigned to make a presentation is an example of an egregious case of non-participation.

TARDINESS: Sometimes, due to traffic and personal circumstances, being late on occasion for learning sessions is to be expected. Once again, it is YOUR responsibility to call your presence to my attention if you arrive after the roll call has been taken. If not, I consider you to be absent. No matter how late you may be, it is counterintuitive to stay in the hallway until the end of the class! Chronic tardiness tells me that you lack interest in the course, and I will treat your progress toward the learning goals of the course appropriately.

I consider chronic tardiness, sleeping during class, use of earphones to listen to music, use of laptops, placing your head on your desk, or any activity that I perceive to be unrelated to the tasks at hand during the learning sessions to be the equivalent of absences.

As noted above, you have a maximum of two undocumented absences. If serious, documented, circumstances constrain you to be absent from a learning session, you **MUST** contact me by telephone or email me **IMMEDIATELY** prior to the start time of the class or immediately thereafter. For purposes of this course, the word “immediately” in this context means three hours or earlier before the class and no more than four hours after the class. Otherwise, your absence is **NOT** documented. You must provide documentation from a medical professional (for a physician, this means a written note on the physician’s prescription pad), law enforcement officer, clerk of courts, or an obituary notice that mentions your name in order for your absence to be documented.

There are no make-up tests in this course. If circumstances similar to those noted above prevent you from being present for a scheduled test, the policies stated above remain in force. With proper documentation, you may be permitted a different and more challenging exam at my convenience. If you are given a written assignment with a deadline, I will deduct a letter grade for every day that the assignment is late. Be present for all examinations. Don’t even ask for an exception.

There are circumstances in which participation in University-sponsored activities will require your absence from some learning sessions. I support the policies governing such circumstances approved by the Faculty Senate in 1998, and you can find these on **Blackboard**.

PLEASE: If you believe you have obvious flu symptoms, **DO NOT COME TO CLASS!!!** Email me or telephone immediately before or immediately after the class meeting. Flu symptoms are often present for several days and require a physician’s care. Be prepared with the documentation. Otherwise, your absence will not be excused. Be advised: Appealing to flu symptoms to excuse absences loses credibility the more often it is invoked.

ELECTRONIC DEVICES:

You **MUST** not use mobile telephones, iPods, laptop computers, and similar communication technology during the learning sessions. These devices must be turned off before the sessions begin. Learning is an activity that requires your full attention. These devices distract others and prevent you from giving your full attention to the task of learning. I consider the noise of these devices and your use of them, including wearing of earpieces, during learning sessions to be disruptive behaviors. If you have a pressing situation that requires you to monitor a mobile phone, please inform me before the learning session begins.

CLIMATE OF LEARNING:

In order to have a beneficial and productive learning situation when we interact with each other, we require civility and respect at all times from one another and for one another. In other words, we can disagree without being disagreeable. I post rules of civility on **Blackboard**. I ask you to raise your hand when you wish to speak, make a comment or ask a question. This will add to order and civility in the classroom. I treat any disruptive behavior in the classroom strictly in accord with the policies and procedures specified by the Office of Campus Life in the Code of Student Conduct:

<http://campuslife.louisville.edu/cloffice/conduct/index.html>

ACADEMIC INTEGRITY:

Any written work that you submit as your own should **be** your own. You should familiarize yourself with the University's policies on academic integrity before you submit any written work. You should also be aware that this instructor has a long and unfortunate history of experience with plagiarism. I expect a high standard of academic integrity and honesty in this course. Without such integrity, there can be no genuine learning. I strictly enforce and apply high standards of academic integrity to any form of cheating on examinations. You will find the relevant citation from the Student Code of Conduct on Blackboard. I enforce these standards in this course by a zero grade for any violation of academic integrity, and I report the violation to the Academic Dean.

BLACKBOARD, EMAIL AND OTHER COMMUNICATION:

We communicate outside of the classroom mainly through **Blackboard** and system email. You will often find new announcements on your entry page to Blackboard. Become familiar with the many learning opportunities and resources afforded to you through this technology. Posting to discussion boards and interacting with others on **Blackboard** will enhance your participation grade. Your participation on Blackboard requires a high-speed connection. If you have a dial-up connection at your home, Blackboard's band-width demands could be frustrating.

Ours is a business relationship. I ask you to acknowledge receipt of all email that requires some action on your part. Tell me your name and your course. Use business sense for business correspondence. When you send me an email message, please use a business format. Your subject line should not be blank, nor should it contain folksy items like "Hi" and your name and course number should appear clearly. I usually delete items from my inbox that appear to be Spam or less than business-like, and seem to be coming from someone like "sexyboy69@hotmail.com." The more bizarre your email address, the more likely it will end up in my spam or trash folder, and I may never see it. Use the university email address assigned to you.

You should check your university email inbox at least every 48 hours. I communicate with you often from the **Blackboard** site for this course. Similarly, you should log in to **Blackboard** regularly for course announcements.

I want to assure you that I welcome your phone calls at my residence, although I would prefer you to contact me, in person, immediately before or immediately after the learning sessions. I encourage as

much email contact as you prefer. I ask you to identify yourself and use proper email etiquette when you communicate with me and one another in this course.

I am available to you outside the classroom by appointment and on **Blackboard**. I will provide online advice on **BlackBoard** for improvement of your performance on examinations.

LITERACY:

It is sad but true that many high schools do not prepare their graduates for university-level learning. You may be among those who are under-prepared. It is my role to encourage you to believe in and realize your own potential. I want to facilitate your achievement of the learning goals of this course. To that end, I expect high levels of literacy skills from you. I expect you to read assignments from your textbook and other materials that are written for university students. The key to success in this course is to budget your time to read your assignments, and to read with a dictionary.

DISABILITIES:

I will make every effort to work with students with disabilities. If you have a recognized disability of any kind, it is your responsibility to bring this to the attention of the Administration before you contact me.

NOTES:

I reserve the right to modify the course plan, sequence and outline in order to assist you in achieving the learning goals of the course.

This syllabus represents a contractual agreement between us. Your continued presence in the course constitutes an agreement with this contract and the policies of the course.

Remember these thoughtful words from the famous proverb:

“Tell me, and I forget; Show me, and I remember; Involve me, and I understand.”

COURSE MEETING SCHEDULE

DATE	TOPIC	ASSIGNMENT (NEXT TIME)
7	Syllabus, Introduction to basic concepts of thinking Arguments, Premises and Conclusions Recognizing Arguments	READ: Chapter 1.1 1.2 1.3
8	Deduction and Induction Validity, Truth, Soundness, Strength, Cogency Argument Forms: Proving Invalidity	1.4 1.5
9	TEST ONE, Language and Meaning Extension and Intension	2.1 2.2
12	Definitions	2.4-5
13	TEST TWO; Fallacies	3.1-5
14	Fallacies	
15	TEST THREE; Categorical Propositions	4.1-3
16	Immediate Inference	4.4-6
19	TEST FOUR; Categorical Syllogisms	5.1-7
20	Categorical Syllogisms, review and TEST FIVE	

TEST FIVE may be administered locally at a time to be announced.