

Pitt State Pathway

(Undergraduate Course Numbers through 699)

Please check only one:

- Course is **currently** a “General Education” course
- Course is listed in the current catalog, but is **NOT** a “General Education” course
- New course that is **NOT** listed in the current catalog and has **NOT** been legislated through PSU Faculty Senate and/or KBOR
- A. Submission date: **December 18, 2018**
- B. Department: **HPSS**
- C. College: **Arts and Sciences**
If two or more Colleges, please indicate which Colleges will be involved in teaching the course:
Click or tap here to enter text.
- D. Name of faculty member on record for the course (may be Coordinating Professor or Chair):
Bonnekessen
(As faculty of record, I verify all sections agree to address the Core or Essential Studies Element and corresponding Learning Outcome as indicated below.)
- E. Course prefix: **PHIL**
- F. Course number: **207**
- G. Credit hours: **3**
- H. Title of course: **Critical Thinking**
Is this a change in the title of the course? **No**
(If “Yes,” a Revision to Course form will need to be completed and uploaded to the Preliminary Briefcase and will go through the legislation process.)
- I. Will this course require a new course description? **No**
(If “Yes,” please insert new course description here. A Revision of Course form will need to be completed and uploaded to the Preliminary Briefcase and will go through the legislation process.)
Click or tap here to enter text.
- J. Does this course include a co-requisite laboratory course: **No**
If “Yes”, please provide the co-requisite course name and number:
Click or tap here to enter text.
- K. Will this course be available on-line: **No**
If “Yes”, please provide a detailed explanation: **Click or tap here to enter text.**
- L. Semester(s) course will be offered (choose all that apply): **Fall and Spring**
- M. Prerequisite(s): **none**
- N. Co-requisite(s) —other than lab course named above: **none**

O. Select the *Pitt State Pathway* **Core Element** or **Essential Studies Element** based on the identified Learning Outcome to be covered in the course (choose only **one** set):
(Refer to definitions, hierarchy, and rubrics in the *Pitt State Pathway* document)

Select Only One Element

- Communication
 - **Written Communication**
 - Students will communicate effectively.
- Communication
 - **Verbal Communication**
 - *Students will communicate effectively.*
- Quantitative/Analytic Methods and Scientific Literacy
 - **Quantitative/Analytic Methods**
 - *Students will analyze data logically.*
- Global Understanding and Civic Engagement
 - **Human Experience within a Global Context**
 - *Students will explore global systems conscientiously.*
- Global Understanding and Civic Engagement
 - **Human Systems within a Global Context**
 - *Students will explore global systems conscientiously.*
- Global Understanding and Civic Engagement
 - **Natural World within a Global Context**
 - *Students will explore global systems conscientiously.*
- Personal and Professional Behavior
 - **Wellness Strategies**
 - *Students will model productive behaviors purposefully.*

P. Will the course address a **Companion Element**? **Yes**
(Refer to definitions, hierarchy, and rubrics in the *Pitt State Pathway* document.)

If "Yes," please select one: Scientific Inquiry

Q. What is the highest anticipated level of student achievement for the stated learning outcome(s) common across all sections of the course? Note: Sample assessment strategies will be submitted on the representative syllabus. Benchmark
(Refer to definitions, hierarchy, and rubrics in the *Pitt State Pathway* document.)

R. Please submit course syllabus as an attachment, highlighting the following items: course objectives related to Learning Outcome(s), assessment strategies (e.g. exams, course project, etc.), and assessment tool(s) to be used to measure student achievement.

Pittsburg State University
Department of History, Philosophy, and Social Sciences

Course: PHIL 207 – Critical Thinking

Time:

Classroom:

Instructor:

Office Hours:

Office:

Email:

Course Description

- This course introduces and explores the main principles and methods of Critical Thinking: distinguishing between good and bad arguments; identifying common fallacies; developing strong and persuasive arguments; the difference between deductive and inductive reasoning; the difference between theoretical and practical reasoning; constructing logical proofs; the nature of scientific, moral, and legal reasoning; evaluating polls and statistical hypotheses; understanding probability; deciding how to act under uncertainty; identify and be able to respond to irrational techniques of persuasion; and more.
- Students will apply these principles and methods to numerous contexts, including journals, the media, advertising, blogs, and political rhetoric.
- Students will also analyze philosophical matters related to Critical Thinking such as the nature of truth and objectivity as well as the distinction between science and pseudo-science.
- Students will improve their skills in writing clear and compelling argumentative papers and critically analyzing the writings of others.

Required Textbook and Textbook Requirements

- William Hughes and Jonathan Lavery, *Critical Thinking: An Introduction to the Basic Skills, Concise Edition*, Broadview Press, 2016 (henceforth, WL).

Reading Schedule

We will be attempting to keep to this schedule of topics as much as possible. If any changes are made, there will be an announcement made on Canvas or during class time.

- Introduction to Course
- Reasoning and Critical Thinking
- Meaning and Definition
- Clarifying Meaning
- Reconstructing Arguments
- Strategies for Assessing Arguments
- Assessing Truth-Claims
- Assessing Relevance
- Assessing Adequacy
- Deductive Reasoning
- Inductive and Scientific Reasoning
- Arguing Back
- Irrational Techniques of Persuasion

Professor's Philosophy of Grading

- Grades are not given on the basis of the work done, the amount of work done, or the tuition paid. Grades are *earned* by the student and *awarded* by the instructor on the basis of *merit*. It follows that students are neither clients nor customers and that university degrees cannot legitimately be traded, sold, or purchased. A grade of A represents outstanding work; B means work of high quality; a grade of C is awarded when a student shows a basic grasp of the material; D is for work of substandard but passing quality; F means failure. Grammar, spelling, and the quality of reasoning that goes into a student's work are all relevant to the grade awarded. Grammar and spell checks make it much easier to avoid grammatical and orthographical errors.

Course Requirements and Grading

- Exams – 4 @ 100 points each
- Quizzes – 10 @ 20 points each
- Total Course Points – 600
- No extra credit work will be assigned or accepted.

Final Grade

- The final grade is figured as a percentage of the total points earned on quizzes and exams (90% and above = A; 80-89% = B; 70-79% = C; 60-69% = D; 59% and below = F). Students may examine their current standing in the course by checking their scores on Canvas.

Quizzes

- Quizzes (which also covers in-class group projects (of which I am just putting under the heading of 'quizzes')) will be taken in class. There is no set schedule for the quizzes. The quizzes will be based on the assigned readings for that week (see above for schedule).

Makeups for Exams and Quizzes

- In order to retake a missed exam or quiz, you must have a University-related or medically documented justification for the absence on the day of the exam or quiz. You will have seven days from the original exam or quiz date to makeup the exam or quiz. If you miss an exam or quiz, you will receive a zero (0) for that assignment.

Attendance

- There is a fairly aggressive reading list for this course and it is a dialogue driven subject matter. You are expected to attend class regularly, have read the material for that day, and be willing to participate in the discussions of the assigned readings. Unless especially said otherwise, students are responsible for everything mentioned in both the lectures and readings.

Policy Concerning Technology in the Classroom during regular Class Time

- Electronics (cell phones, laptops, tablets, etc.) are not permitted in lecture, during quizzes, or during exams. Please put them away before class begins. If you must use a computer for note-taking in lecture, you may apply for a waiver to this policy by emailing the professors in the first two weeks of class or have the Accommodations Office contact with the information.
- Earphones and headphones are to be taken out/off unless as indicated by Accommodation documentation.
- No photos are allowed to be taken in class without the express approval of the professor.

Policy Concerning Cell Phones during Exams

- On exam days, you are not allowed to use any devices whatsoever. You will need writing implement, preferably a No. 2 pencil (so you can erase). All cell phones and other devices are to be turned off during exams. If your cell phone or other device rings, beeps, dings, or makes any other noises during the exam, you will receive a 0 (zero) for the exam.

Special Information

- *Americans with Disabilities Act* – Pittsburg State University adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, contact the Center for Student Accommodations in the Bryant Student Health Center or call at 235-4309.

Academic Dishonesty:

- Academic Dishonesty will not be tolerated in this course. This University regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. Any act that violates the rights of another student in academic work, is disruptive of proper class order, or that involves the misrepresentation of your own work, will result in penalties up-to and including dismissal from the course with a failing grade. Scholastic dishonesty and academic misconduct include, but are not limited to, cheating on assignments or examinations; plagiarizing (which means misrepresenting as your own work any part of work done by another author); submitting the same or substantially the same paper to meet the requirements of more than one class without the consent of all of the instructors involved; depriving another student of necessary course materials; interfering with another student's work; or disruptive classroom behavior. [Note: disruptive behaviors include but are not limited to actions which interfere with the educational process and/or student learning, insubordination, and those behaviors which diminish or demean the authority a faculty member must enjoy to conduct a class.]
- Pittsburg State University's policy on Academic Misconduct:
<http://www.pittstate.edu/audiences/current-students/policies/rights-and-responsibilities/academic-misconduct.dot>

Contact with the Professor:

- I have listed my contact information above as well as my office hours. Please do not hesitate to come by or speak to me after class if you have anything you would like to discuss. I will strive to answer all emails received during business days within one business day. I will check my email at other times and try to get back to you as soon as possible. If you don't receive an answer, please send me a reminder.
- I will use Canvas frequently to post announcements, discussions, and grades. All communication that I send to you will be through the Canvas messaging system and I expect that all communication I receive from you will use Canvas as well. I will remind you to login to Canvas if you send me regular emails from another account, but, after a few weeks, I expect that you will consistently use Canvas for all communication with the instructor. You are also expected to login to Canvas frequently as I will be posting necessary information as it needs to be relayed to you.

Kansas Board of Regents Course Objectives

By its nature, Philosophy encourages diverse approaches to teaching, and so it is to be expected that different programs and different instructors will approach a Critical Thinking course in a variety of different ways. Consequently, a broad consensus on details of content is not to be expected. However, students will become familiar with the basic concepts and methods of philosophical reasoning and their application in correct reasoning.

Students will:

- I. Recognize the difference between arguments and non-arguments.
 - a. Students will distinguish between an argument and an explanation, report, or illustration.
 - b. Students will identify the premises and the conclusion of arguments.
 - c. Students will recognize components of language and language use relevant to reasoning such as meaning, definition, emotive force, denotation and connotation.
- II. Identify and explain the components of informal reasoning
 - a. The student will be able to recognize and define informal fallacies
 - b. The student will be able to demonstrate an understanding of, and the ability to evaluate, inductive arguments such as analogical arguments, generalizations, arguments from authority, causal inferences etc.
 - c. Students will evaluate the cogency of arguments in specialized areas such as legal, moral, or scientific reasoning.
- III. Identify and apply the basic concepts of logical discourse.
 - a. Students will distinguish formal from informal arguments.
 - b. Students will distinguish deductive validity and soundness and be able to evaluate arguments for each.
 - c. The student will be able to recognize basic argument forms such as modus ponens, modus tollens, disjunctive syllogism, chain, etc.
- IV. Recognize the basic concepts of propositional logic.
 - a. The student will be able to symbolize natural language arguments in propositional logic.
 - b. The student will be able to use truth tables to evaluate the validity/invalidity of arguments in propositional logic.
 - c. Students will demonstrate familiarity with and the ability to use logical operators.

Critical Thinking and General Education

PHIL 208: Logic is part of the PSU Pitt State Pathway. It fulfills the requirement for the element Quantitative/Analytic Methods.

Quantitative literacy and its methods refer to competency in working with numerical data. Students with strong quantitative skills possess the ability to reason and solve problems from a wide array of contexts and everyday life situations. They can create sophisticated arguments supported by objective evidence and can communicate those arguments in a variety of formats (e.g. text, tables, graphs, mathematical equations, etc.) as appropriate. Competency in this element means:

- *Applying* a set of formal tools to interpret, represent, calculate, and analyze quantitative data;
- *Explaining* assumptions and rationale for selecting a mathematical approach to solve a problem;
- *Explaining* assumptions and rationale for selecting a mathematical or formal logical approach to solve a problem;
- *Drawing* and *communicating* conclusions to support decisions.

Upon completion of this course, students will accomplish the following:

- *Applies* tools of analysis and communicate results (Milestone I)

Companion Element: Scientific Inquiry

The scientific method is the systematic approach to understanding the world around us. Through experimentation and hypothesis testing, students will apply analytical skills and appropriate methods of scientific inquiry (i.e. qualitative and quantitative) to solve a variety of research questions. Competency in this element means:

- *Composing* appropriate research questions and hypotheses, drawing from experts, reliable sources, or previously collected data;
- *Collecting, synthesizing, and analyzing* data from multiple sources;
- *Drawing* logical conclusions, assessing for gaps or weaknesses, and addressing potential consequences and implications;
- *Communicating* results using appropriate delivery methods or formats.

Upon completion of this course, students will accomplish the following:

- *Identifies* steps of scientific methods (Benchmark)

Assessment

Assessment will consist of both in-class/take-home quizzes and exams. Exams are a mix of definitions, matching, multiple choice, argument reconstruction, and true/false.

Match each passage to the method of irrational persuasion it best exemplifies.

1. False Confidence	a. Armstrong Ice Cream is the real thing.
2. Loaded Term	b. Financial stability is owning your own home. At the Bank of Mulberry, we can help you achieve that goal.
3. Misleading Statistics	c. I don't know much, but I know about shaving. And I can tell you that these razors are the sharpest on the market.
4. Persuasive Redefinition	d. Sharon bought her house insurance from A&B Insurance. When tragedy struck and her house burned down, A&B had her settled in a new home within a week. And that's why A&B is the best choice for home insurance.
5. Selectivity	e. The employees of FaceNet have an average net worth of over \$4 million. Clearly they are paid very well!
6. Vague Term	f. Why not come down to Thrifty's Antiques and see if we have the deal that's right for you?

Match each question to the question type that best describes it.

1. Loaded Question	a. Are you going to vote for Candidate A, or are you going to vote for Candidate C?
2. Framing Question	b. How can I help you?
3. Open Question	c. Who could value the right of individuals to carry guns more than the right of innocent Americans to feel safe on the streets at night?
4. Restricted Question	d. Why did you decide to attack my client's reputation with these false accusations?
5. Rhetorical Question	e. Could the school district's new abstinence-only sex education program lead to an increase in teen pregnancies?

Matches: _____; _____; _____; _____; _____

Match each description with the name of the cognitive bias.

1. Bandwagon	A. Seeing a probabilistic event as inevitable after it happened and deriding others for not seeing it coming or deluding yourself into thinking you knew it all along.
2. Hindsight Bias	B. Failing to plan for a probable disaster or failure to act when it happens, freezing, the opposite of panic but with quite likely the same negative consequences.
3. Optimism Bias	C. Following the crowd, thinking what others are doing is normal or what is normal is right.
4. Normalcy Bias	D. Believing that when you are right it is because of your hard work and innate talent and when you are wrong it is because of a corrupt system, bad luck, or some other fault outside of your control.
5. Self-Serving Bias	E. Underestimating how long something will take, or how much it will cost, and overestimating its chance of success.

Matches: _____; _____; _____; _____; _____

1. True or false: Counter-examples can only be effective when they are used to argue against a generalization.
 2. True or false: Counter-arguments are intended to point out specific flaws in the construction of an argument, rather than challenging the argument's conclusion directly.
 3. True or false: Theoretical reasoning is a matter of what one ought to do.
 4. True or false: Naming the fallacy an arguer has committed is a sufficient way to explain the weakness in his or her argument.
 5. True or false: According to the authors of *Critical Thinking*, most irrational techniques of persuasion are best treated as fallacies.
 6. True or false: The explaining of a decision after it is made is to rationalize the decision.
 7. True or false: In the sentence "The movie was excellent," "excellent" is a loaded term.
 8. True or false: Expected Value = Outcome x Probability.
 9. True or false: Any attempt to change the topic of conversation is a red herring.
 10. True or false: To delay a decision is a decision itself.
 11. True or false: System 1 thinking processes information slowly.
 12. True or false: System 2 thinking is influenced by experience, emotions, and memories.
 13. True or false: It is often acceptable to include humor in argumentative discussions.
 14. True or false: Humor should never be used as a substitute for rational argument, but it can be used to increase the logical strength of some arguments.
 15. True or false: Probabilities are the average outcomes of a series of random events with identical odds being repeated over a long period of time.
1. For the following analogy, match each aspect of the argument to the appropriate descriptor.
- The semester before last I got terrible grades on my exams, but last semester I studied for fifteen minutes a day and I did really well. I know you weren't happy with your exam results last semester, so you should try studying for fifteen minutes a day this semester—I bet your grades will improve drastically.

1. Subject Case	a. Improvement in scores
2. Analogue Case	b. My grades last semester and the semester before last
3. Target Feature	c. Your grades last semester and this semester

Matches: _____, _____, _____

2. Match each statement to the correct descriptor.

1. Conjunction	a. I didn't pay for parking.
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2. Negation	b. If it doesn't rain, we'll go back to the beach tomorrow.
3. Disjunction	c. In February, my sister celebrated her fifteenth birthday.
4. Implication	d. I really hope that I passed my philosophy test.
5. Simple statement	e. It was cold, but the kids were out on the swing.
6. Complex but not truth-functional statement	f. We can solve the municipal budget problem by raising property taxes or by cutting expenses.

Matches: _____, _____, _____, _____, _____, _____

3. Match each argument to the fallacy it appears to commit.

1. Appeal to Ignorance	a. According to a survey conducted by the Ontario government, more than a third of teenage drivers regularly text while driving. This suggests that the government's efforts to educate teens on the dangers of texting while driving have not been entirely successful.
2. Fallacious Appeal to Anecdotal Evidence	b. According to Reginald O'Reilly, a noted professor of marine biology, F. Scott Fitzgerald was born in 1896 and his novel <i>The Great Gatsby</i> was published in 1935. This means the author was over 35 when the book was published.
3. Fallacious Appeal to Authority	c. If today's teens are allowed to text as much as they want, they will end up writing their schoolwork in the same language they use to text. Then their essays will be so full of bad grammar and words like "LOL" and "OMG" that no teacher will be able to read them. When these people grow up to be adults, their writing will be incomprehensible, and this will mean the end of literature as we know it!
4. Slippery Slope	d. Sure, there isn't any hard evidence that homeopathy works, but there's still so much we don't know about human biology—so I'm going to keep trying it, just in case.
5. Not Fallacious	e. The last time I ordered a book from Amazon, they said it was going to take three days to arrive, but it actually took ten! You should think twice before buying a book from there.

Matches: _____, _____, _____, _____, _____

4. Match each statement to the argument type it applies to.

1. Deductive arguments only	a. In this type of argument, statements are presented in support of a conclusion.
2. Inductive arguments only	b. In this type of argument, the conclusion is implicitly stated in the premises.
3. Both deductive and inductive arguments	c. This type of argument can be used to generate new knowledge.
4. Neither deductive nor inductive arguments	d. This type of argument is only useful for scientific reasoning.

Matches: _____, _____, _____, _____

Match each argument to its argument type.

1. Inductive Generalization	a. 4 of the 10 students I met in Philosophy 101 on the first day of class were philosophy majors. It's likely, therefore, that about 40 per cent of students in the class are philosophy majors.
2. Statistical Syllogism	b. 40 per cent of students who take Philosophy 101 are philosophy majors. Janice is a student in Philosophy 101, so there is a 40 per cent chance that she is a philosophy major.
3. Induction by Confirmation	c. A person who is too drunk to drive safely will not pass this breathalyser test. You did not pass the breathalyser test, so you are probably too drunk to drive.

Matches: _____, _____, _____, _____, _____

For the following example of induction by confirmation, match each aspect of the argument to its appropriate descriptor.

- If cell phones increase the risk of brain cancer, then people will be more likely to develop brain cancer on the side of their head they hold their phones on. We have found that people are indeed more likely to develop brain cancer on the side of their head they hold their phones on, so it is probable that cell phones do increase the risk of brain cancer.

1. Hypothesis	a. Cell phones increase the risk of brain cancer
2. Observation Statement	b. People are indeed more likely to develop brain cancer on the side of their head they hold their phones on
3. Confirming Instance	c. People will be more likely to develop brain cancer on the side of their head they hold their phones on

Matches: _____, _____, _____

Of the following arguments, two have common valid argument forms and two display common fallacies. Match each argument with the appropriate descriptor.

1. Affirming the antecedent	a. Anyone who cares about children voted for the child tax credit. You didn't vote for the child tax credit, so you must not care about children.
2. Denying the consequent	b. Every time you wear that perfume, I get a headache. I have a headache, so I know you're wearing that perfume.
3. Affirming the consequent	c. If you're a vegetarian, then you believe in animal rights. You're not a vegetarian, so you must not believe in animal rights.
4. Denying the antecedent	d. Whenever we reach the end of the month, Katrina complains about the cost of rent. The end of the month is coming up, so Katrina will complain about the cost of rent.

Matches: _____, _____, _____, _____

For each of the following, circle either 'True' or 'False'.

1. True or false: Every deductive argument contains at least one truth-functional statement.
 2. True or false: Only complex statements can be truth-functional statements.
 3. True or false: All complex statements are truth-functional.
 4. True or false: The (inclusive) statement "Ottawa is the capital of Canada or the guitar is a musical instrument" is true.
 5. True or false: The statement "If dogs have feathers, my beagle can learn to fly" is true.
 6. True or false: If an argument is valid, that means its conclusion is definitely true.
 7. True or false: A formally invalid argument can never be strong.
 8. True or false: If an inductive argument is strong, this means its conclusion is definitely true.
 9. True or false: Induction by confirmation is the only legitimate form of scientific reasoning. This means that good scientific research practices require scientists to form a hypothesis before making observations.
 10. True or false: All sound arguments are valid.
 11. True or false: No inductive argument is valid.
1. In the context of argumentation, to think critically means... (select one)
 - A. to focus on the negative
 - B. to point out the flaws in an argument
 - C. to assess arguments based on a set of criteria
 - D. to evaluate premises and conclusions
 2. To assess the adequacy of premises, consider... (select one)
 - A. each premise on its own
 - B. how each individual premise relates to the rest of the argument
 - C. how all the premises together relate to the conclusion
 3. To assess the acceptability of premises, consider... (select one)
 - A. each premise on its own
 - B. how each individual premise relates to the rest of the argument
 - C. how all the premises together relate to the conclusion
 4. To assess the relevance of premises, consider... (select one)
 - A. each premise on its own
 - B. how each individual premise relates to the rest of the argument
 - C. how all the premises together relate to the conclusion

Identify which of the following statements are **empirical** (select all that apply).

- A. $\pi = 3.14159\dots$
- B. You should vote to re-elect the current mayor.
- C. The recent increase in the number of stay-at-home mothers shows an improvement in national values.
- D. There is no life outside our solar system.
- E. The number of stay-at-home mothers is on the rise in North America.
- F. Rashid has never been married.
- G. *Pride and Prejudice* is the greatest novel of all time.
- H. James McBain will win an Oscar next year.
- I. It's usually wrong to tell a lie, but it can be right to lie under some circumstances.
- J. In a recent survey, readers of The New York Times voted that *Pride and Prejudice* is the greatest novel of all time.
- K. Friedrich Nietzsche did not die of syphilis.
- L. It is impossible for a statement to be both true and false in the same sense at the same time.
- M. All mammals are animals.
- N. All dogs bark when they see a cat.

Sort the following rules for assessing arguments into the order in which they should be applied:

- A. Check the Acceptability of the Premises
- B. Look for Counter-Arguments
- C. Identify the Main Conclusion
- D. Identify the Structure of the Argument
- E. Check the Adequacy of the Premises
- F. Identify the Premises
- G. Check the Relevance of the Premises

Order: _____, _____, _____, _____, _____, _____, _____

Answer each of the following.

1. What are the four conditions for when testimonial evidence is acceptable?
2. What are the three conditions for one to be an expert about some domain?