

**PHILOSOPHY 2003A: CRITICAL THINKING**  
**CARLETON UNIVERSITY: DR. KENNETH FERGUSON**  
**FALL SESSION 2021**

**COURSE SYLLABUS**

<b>TERM:</b>	Fall Term 2021	<b>OFFICE:</b>	N/A
<b>TIME:</b>	Mon/Wed 2:30-4 PM	<b>OFFICE HOURS:</b>	TBD
<b>LOCATION</b>	Brightspace	<b>PHONE:</b>	Office: (613) 520-2600
<b>INSTRUCTOR:</b>	Dr. Kenneth Ferguson	<b>EMAIL:</b>	<a href="mailto:kenneth.ferguson@carleton.ca">kenneth.ferguson@carleton.ca</a>

**CATALOGUE DESCRIPTION**

PHIL 2003 [0.5 credit]

**Critical Thinking:** Assessment of reasoning and the development of cogent patterns of thinking. Reference to formal logic is minimal. Practice in criticizing examples of reasoning and in formulating one's own reasons correctly and clearly. Open to first-year students.

Lectures three hours a week.

**COURSE DESCRIPTION**

Critical thinking may be defined, roughly, as the systematic evaluation of beliefs (claims, theories, decisions) by rational standards. No skill is more important to success, whether in university, in one's chosen profession, or simply in making reasonable, well informed decisions in the course of everyday life, than the ability to think critically and logically. It is therefore appropriate that one of your courses should be devoted to improving your critical thinking skills. This is the course.

Unfortunately, there is no mechanical set of rules that can be applied to produce good critical thinking. (If there were, you probably wouldn't need this course.) There are, however, a number of informal methods, techniques and procedures, which are very helpful in this task. Extended practice in the use of these techniques will enable you to recognize when an argument is being presented, identify precisely what the premises and conclusion of the argument are, spot any fallacies it happens to commit, and provide an overall evaluation of the argument. As a result of working with these and other methods and techniques, students will be able to greatly improve their reasoning and critical thinking skills.

## Online Course

Please note that this is an entirely online, or “distance”, course. All classes and course lectures will be available for students to access online through Brightspace; no in-person classes will be held. The PowerPoint slides on which lectures will be based will also be posted on Brightspace. In addition, all course assignments, midterms, term papers and exams, etc., will be conducted on or through Brightspace.

## LECTURES

This will be a “blended course”: For most topics, pre-recorded lectures will be posted on Brightspace as the course goes along and will be available for students to access at times convenient for them given the particular time zones in which they reside. In addition to the pre-recorded lectures, some live Zoom meetings will be held periodically during the scheduled class times (i.e. Monday/Wednesday 2:30-4 pm EST) for the purpose of discussion, preparation for midterms and exams, office hours and other purposes. (These Zoom meetings will also be recorded so that students can access them at times convenient for them.)

## SUGGESTED TEXT

There is no text that students must obtain for this course, as readings and other materials will be available either online or on Brightspace. However, some students may find it useful to obtain the following text: *The Power of Critical Thinking*, by Lewis Vaughn and Chris MacDonald, (Oxford, Oxford University Press, 2018). Any recent edition (4<sup>th</sup>, 5<sup>th</sup> or 6<sup>th</sup> would be acceptable.) For students in Ottawa, the Carleton University Bookstore will have some copies available. For students not in Ottawa the text can easily be ordered online (and may also be obtained in digital form). Note again, however, that students are not *required* to obtain this text.

## HOMEWORK

Practice doing exercises is essential to success in improving critical thinking skills. Homework exercises will therefore be assigned for (almost) every topic covered and will be posted on Brightspace. Although they will not be graded, students are strongly urged to do them on their own before they are discussed in the lectures. Detailed answer keys, along with some discussion of homework exercises, will also be posted on Brightspace.

## COURSE REQUIREMENTS

### MIDTERMS

There will be **two midterm exams**, each worth 30% of the overall grade, which will be conducted on Brightspace. The types of questions students will be required to answer on the midterms will be similar to the exercises assigned as homework as the course goes along. (Detailed guides for the midterms will be posted on Brightspace at least a week in advance of the midterms.) The first midterm is scheduled for October 6 and the second for Nov. 8.

## FINAL EXAMINATION

There will be a final exam scheduled during the examination period, worth 40% of the overall grade for the course grade. The format for the final will be similar to that used for the midterms. As in the case of the midterms, a guide will be posted on Brightspace well before the exam.

**For more details about the course content, please see the list of Topics and Readings below.**

### Department of Philosophy and Carleton University Policies (Fall 2021-22)

#### **Assignments:**

Please follow your professor's instructions on how assignments will be handled electronically. There will be NO hard copies placed in the essay box this coming year.

#### **Evaluation:**

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

#### **Deferrals for Term Work:**

If students are unable to complete term work because of illness or other circumstances beyond their control, they should contact their course instructor no later than *three working days* of the due date. Normally, any deferred term work will be completed by the last day of the term. Term work cannot be deferred by the Registrar.

#### **Deferrals for Final Exams:**

Students are expected to be available for the duration of a course including the examination period. Occasionally, students encounter circumstances beyond their control where they may not be able to write a final examination or submit a take-home examination. Examples of this would be a serious illness or the death of a family member. If you miss a final examination and/or fail to submit a take-home examination by the due date, you may apply for a deferral no later than *three working days* after the original due date (as per the University Regulations in [Section 4.3 of the Undergraduate Calendar](#)). Visit the [Registrar's Office](#) for further information.

#### **Plagiarism:**

It is the responsibility of each student to understand the meaning of 'plagiarism' as defined in the Undergraduate or Graduate Calendars, and to avoid both committing plagiarism and aiding or abetting plagiarism by other students. ([Section 10.1 of the Undergraduate Calendar Academic Regulations](#))

#### **Academic Accommodation:**

You may need special arrangements to meet your academic obligations during the term:

- *Pregnancy or religious obligation:* write to your professor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the [EDC](#) website.
- *Academic accommodations for students with disabilities:* The [Paul Menton Centre](#) for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or [pmc@carleton.ca](mailto:pmc@carleton.ca) for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class test or exam requiring accommodation. After requesting accommodation from PMC, meet with your professor to ensure accommodation arrangements are made.
- *Survivors of Sexual Violence:* As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per [Carleton's Sexual Violence Policy](#).
- *Accommodation for [Student Activities](#):* Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

### **Important Dates:**

- |            |   |
|------------|---|
| Sept. 8    | Classes start.  |
| Sept. 22   | Last day for registration and course changes for fall term and fall/winter (two-term) courses.  |
| Sept. 30   | Last day for entire fee adjustment when withdrawing from fall term or two-term courses. Withdrawals after this date will result in a permanent notation of WDN on the official transcript.  |
| Oct. 11    | Statutory holiday. University closed.   |
| Oct. 25-29 | Fall Break – no classes.  |
| Nov. 26    | Last day for summative tests or examinations, or formative tests or examinations totaling more than 15% of the final grade, before the official examination period.   |
| Dec. 10    | Last day of fall term classes. <b><i>Classes follow a Monday schedule.</i></b> Last day for academic withdrawal from fall term courses. Last day for handing in term work and the last day that can be specified by a course instructor as a due date for term work for a fall term course. |
| Dec. 11-23 | Final examinations for fall term courses and mid-term examinations in two-term courses. Examinations are normally held all seven days of the week.  |

- Dec. 23 All take-home examinations are due.
- Jan. 10 Classes begin.
- Jan. 24 Last day for registration and course changes in the winter term.
- Jan. 31 Last day for a full fee adjustment when withdrawing from winter term courses or from the winter portion of two-term courses. Withdrawals after this date will result in a permanent notation of WDN on the official transcript.
- Feb. 21 Statutory holiday. University closed.
- Feb. 22-25 Winter Break – no classes.
- Mar. 29 Last day for summative tests or examinations, or formative tests or examinations totaling more than 15% of the final grade, in winter term or fall/winter courses before the official examination period.
- Apr. 12 Last day of two-term and winter term classes. ***Classes follow a Friday schedule.*** Last day for academic withdrawal from fall/winter and winter courses. Last day for handing in term work and the last day that can be specified by a course instructor as a due date for two-term and for winter term courses.
- Apr. 13 No classes or examinations take place.
- Apr. 14-28 Final examinations for winter term and two-term courses. Examinations are normally held all seven days of the week.
- Apr. 15 Statutory holiday. University closed.
- Apr. 28 All take-home examinations are due.

### **Addresses:**

Department of Philosophy:

[www.carleton.ca/philosophy](http://www.carleton.ca/philosophy)

520-2110

Registrar's Office:

[www.carleton.ca/registrar](http://www.carleton.ca/registrar)

520-3500

Academic Advising Centre:

[www.carleton.ca/academicadvising](http://www.carleton.ca/academicadvising)

520-7850

Writing Services:

<http://www.carleton.ca/csas/writing-services/>

520-3822

MacOdrum Library

<http://www.library.carleton.ca/>

520-2735

## Complete List of Topics and Readings

### I. Introduction

<b>(a) Background on the Nature and Importance of Critical Thinking</b>
<p><b>Reading 1 (online):</b> Mary Heath, "On Critical Thinking", from <i>The International Journal on Narrative Therapy and Community Work</i>, 2012, No. 4., online at:  <a href="http://dulwichcentre.com.au/On-critical-thinking-by-Mary-Heath.pdf">http://dulwichcentre.com.au/On-critical-thinking-by-Mary-Heath.pdf</a></p>
<b>(b) Barriers to Critical Thinking</b>
<p><b>Reading 2 (online):</b> Watch the movie "Twelve Angry Men", directed by Sydney Lumet, available at: <a href="https://www.publicdomainmoviess.com/movie/309-12-angry-men">https://www.publicdomainmoviess.com/movie/309-12-angry-men</a></p>

### II. Analyzing and Reconstructing Arguments

<b>(a) The Basics - Arguments</b>
<p><b>Reading 3 (Brightspace):</b> Exercises on identifying premises and conclusions</p>
<b>(b) Non-Argument and Unstated Premises/Conclusions</b>
<p><b>Reading 4 (Brightspace):</b> Exercises on identifying unstated premises and/or conclusions</p>
<b>(c) Recognizing Arguments</b>
<p><b>Reading 5 (online):</b> Craig Vasey, Arguments and Non-Arguments: Doing things With Words, at: <a href="http://logic.umwblogs.org/arguments-and-non-arguments/">http://logic.umwblogs.org/arguments-and-non-arguments/</a>  <b>Reading 6 (Brightspace):</b> Exercises on recognizing arguments</p>
<b>(d) Structure Diagrams for Arguments</b>
<p><b>Reading 7 (Online):</b> "Introduction to Logic: How to Diagram Arguments", from the website philosophy.lander.edu, online at: <a href="https://philosophy.lander.edu/logic/diagram.html">https://philosophy.lander.edu/logic/diagram.html</a>  <b>Reading 8 (Brightspace):</b> Exercises on structure diagrams for arguments</p>

### III. Validity, Deduction and Induction

<b>(a) The Concept of Validity and the Distinction between Deduction and Induction</b>
<p><b>Reading 9 (Brightspace):</b> Exercises on distinguishing valid and invalid arguments</p>

<p><b>Reading 10 (optional online):</b> Deductive and Inductive Arguments”, Internet Encyclopedia of Philosophy, at: <a href="http://www.iep.utm.edu/ded-ind/">http://www.iep.utm.edu/ded-ind/</a></p> <p><b>Reading 11 (Brightspace):</b> Exercises on inductive and deductive arguments</p>
<b>(b) Using Rules of Inference to Deduce Conclusions from Premises</b>
<p><b>Reading 12 (Brightspace):</b> Exercises on Deductions</p>
<b>(c) Categorical Syllogisms</b>
<p><b>Reading 13 (online):</b> “Categorical Syllogisms”, From the <i>philosophy.lander.edu</i> website, at: <a href="http://philosophy.lander.edu/logic/syll_venn.html">http://philosophy.lander.edu/logic/syll_venn.html</a></p> <p><b>Reading 14 (Brightspace):</b> Exercises for Categorical Syllogisms</p>

#### IV. Informal Fallacies and Other Cognitive Errors

<b>(a) Cognitive Biases</b>
<p><b>Reading 15 (Online):</b> Listen to the lecture on cognitive biases by Kevin deLaplante from the website Criticalthinker.com, at: <a href="http://www.youtube.com/watch?v=dTJLchCHsrc">http://www.youtube.com/watch?v=dTJLchCHsrc</a></p> <p><b>Reading 16 (Online):</b> Jim Holt, “Two Brains Running”, (A review of Daniel Kahneman’s book <i>Thinking Fast and Slow</i>, published by Farrar, Straus and Giroux, 2011) at: <a href="http://www.nytimes.com/2011/11/27/books/review/thinking-fast-and-slow-by-daniel-kahneman-book-review.html?pagewanted=all">http://www.nytimes.com/2011/11/27/books/review/thinking-fast-and-slow-by-daniel-kahneman-book-review.html?pagewanted=all</a></p>
<b>(a) Informal Fallacies</b>
<p><b>Reading 17 (Optional online):</b> Useful website on fallacies: <i>The Fallacy Files</i>, by Gary Curtis, available at: <a href="http://www.fallacyfiles.org/">http://www.fallacyfiles.org/</a></p> <p><b>Reading 18 (Brightspace):</b> Exercises on identifying informal fallacies</p>
<b>(b) Illicit Rhetorical Devices</b>
<p><b>Reading 19 (Brightspace):</b> Persuasion/Rhetoric Exercises</p> <p><b>Reading 20 (Online):</b> Jeffrey Schrank, “The Language of Advertising Claims”, at: <a href="http://home.olemiss.edu/~egjbp/comp/ad-claims.html">http://home.olemiss.edu/~egjbp/comp/ad-claims.html</a></p>

#### V. Sources of Belief and Knowledge

<b>(a) A Priori Knowledge and Background Belief</b>
<p><b>Reading 21 (online):</b> “Critical Thinking’s Dirty Secret: The Importance of Background Knowledge”, from Critical Thinking Academy, available at: <a href="http://criticalthinkeracademy.com/courses/what-is-critical-thinking/lectures/51616">http://criticalthinkeracademy.com/courses/what-is-critical-thinking/lectures/51616</a></p>

**(b) Appealing to Experts**

**Reading 22 (online):** Watch the documentary “The Trouble With Experts”, by Josh Freed, at: <https://www.youtube.com/watch?v=xt46P1Zcwto>

**Reading 23 (online):** Adam Frank, “Why Expertise Matters”, from the website *National Public Radio*, online at: <https://www.npr.org/sections/13.7/2017/04/07/522992390/why-expertise-matters>

**Reading 24 (online):** ‘Michiko Kakutani, The Death of Expertise’ Explores How Ignorance Became a Virtue”, *New York Times*, March 21, 2017, at: <https://www.nytimes.com/2017/03/21/books/the-death-of-expertise-explores-how-ignorance-became-a-virtue.html>

**(c) The Problem of Fake News**

**Reading 25 (online):** “What is fake news? How to spot it and what you can do to stop it” from *The Guardian* newspaper, December 17, 2016, available at:

<https://www.theguardian.com/media/2016/dec/18/what-is-fake-news-pizzagate>

**Reading 26 (online):** Sapna Maheshwari, “How Fake News Goes Viral: A Case Study”, from the *New York Times*, <https://www.nytimes.com/2016/11/20/business/media/how-fake-news-spreads.html>

**(d) Personal Experience, Observation and Memory**

**Reading 27 (online):** Douglas Starr, “False Eyewitness”, from *Discover Magazine*, November, 20 at: <http://discovermagazine.com/2012/nov/04-eyewitness>

**Reading 28 (online):** Elizabeth Loftus, “Creating False Memories”, *Scientific American*,<sup>[SEP]</sup> September 1997, vol. 277 #3<sup>[SEP]</sup> pages 70-75, at:

<https://faculty.washington.edu/eloftus/Articles/sciam.htm>

**Reading 29 (Brightspace):** Exercises on Personal Experience and Memory

**VI. Explanation, Conspiracy Theories and Pseudoscience****(a) Explanation and Conspiracy Theories**

**Reading 30 (online):** “Top 10 Conspiracy Theories”, at: <http://listverse.com/2007/08/21/top-10-conspiracy-theories>

**Reading 31 (online):** “Conspiracy Theories: Who Believes Them and Why, and How to Determine if a Conspiracy Theory is True”, By Michael Shermer and Pat Linse, from the *Skeptics Society*, at: <http://www.skeptic.com/downloads/conspiracy-theories-who-why-and-how.pdf>

**Reading 32 (online):** Fred Clark, “The Full Scope of the Climate Change Conspiracy”, at: <http://www.patheos.com/blogs/slacktivist/2011/08/26/the-full-scope-of-the-climate-change-conspiracy/>

**Reading 33 (Brightspace):** Exercises on Inference to the Best Explanation.

**Reading 34 (Brightspace):** Exercises on Conspiracy Theories and Other Common Errors in the Process of Explanation



### (b) Science and Pseudoscience

**Reading 35 (online):** Frank Wolfs, “Introduction to the Scientific Method”, at:  
[http://teacher.nsr.rochester.edu:8080/phy\\_labs/AppendixE/AppendixE.html](http://teacher.nsr.rochester.edu:8080/phy_labs/AppendixE/AppendixE.html)

**Reading 36 (optional online):** “Feynman On Scientific Method”, (A short talk by the great 20<sup>th</sup> century physicist Richard Feynman on science and pseudoscience). Just enter the title in YouTube.

**Reading 37 (Brightspace):** “Invention and Test”, by Carl Hempel, from Hempel’s book *The Philosophy of Natural Science*, Chapter 2

**Reading 38 (online):** Watch the documentary “Here be Dragons”, written and presented by Brian Dunning, (get it on YouTube by Author and title)

**Reading 39 (optional online):** Rory Coker, Distinguishing Science and Pseudoscience”,  
<https://web2.ph.utexas.edu/~coker2/index.files/distinguish.htm>

**Reading 40 (Brightspace):** Exercises on Science and Pseudoscience

## VII. Induction and Causal Reasoning

### (a) Inductive Reasoning

**Reading 41 (online):** Wesley Salmon, *Logic*, Section 26: “Induction by Enumeration”, at:  
<http://www.ditext.com/salmon/logic.html>

**Reading 42 (Brightspace):** Exercises on Inductive reasoning and argument

**Reading 43 (online):** Wesley Salmon, *Logic*, Section 26: “Analogy”, at:  
<http://www.ditext.com/salmon/logic.html>

**Reading 44 (Brightspace):** “Some Famous Arguments from Analogy”

### (b) Causal Reasoning and Mill’s Methods

**Reading 45 (online):** Garth Kemmerling, “Causal Reasoning”, The Philosophy Pages website, available at: <http://www.philosophypages.com/lg/e14.htm>

**Reading 46: Exercises on Mill’s Methods**

**Reading 47 (online):** “Causal Arguments and Causal Fallacies”, from the California State University at Sacramento website, at  
<http://www.csus.edu/indiv/m/mayesgr/ph14/Handouts/ph14causalFallacies.htm>

**Reading 48 (Brightspace):** Exercises on Causal Reasoning