When and Where?

Lectures (pre-recorded): Watch anytime on our [YouTube channel](#)

Tutorials (live at the portal):

Tuesdays 11-12	Thursdays 1-2
Tuesdays 1-2	Thursdays 3-4
Tuesdays 3-4	Thursdays 5-6

How to Contact You?

Instructor: Hakob Barseghyan (hakob.barseghyan@utoronto.ca).

If you have questions, please, feel free to email me or schedule an appointment. You can also contact your TA's via email:

Head TA: Greg Rupik (greg.rupik@mail.utoronto.ca)

TA: Zachery Brown (zachery.brown@mail.utoronto.ca)

TA: Chris Dragos (chris.dragos@mail.utoronto.ca)

TA: Jessica Hall (jessie.hall@mail.utoronto.ca)

TA: Craig Knox (craig.knox@mail.utoronto.ca)

TA: Aaron Lepp (aaron.lepp@mail.utoronto.ca)

TA: Nick Overgaard (nicholas.overgaard@mail.utoronto.ca)

TA: Clara Steinhagen (clara.steinhagen@mail.utoronto.ca)

What is this Course About?

This is an ***online*** introduction to the key issues in the history and philosophy of science.

In the first half of the course, we will focus on a number of key *philosophical* questions: Can we know anything with absolute certainty? Is there a universal and unchangeable method of science? What is the mechanism of scientific change? What demarcates science from non-science? Can scientific theories provide true descriptions of the world? Is there scientific progress?

In the second half of the course, we will outline the scientific worldviews accepted in different periods of the *history* of science. In particular, we will focus on the key components of the four major scientific worldviews – Aristotelian-medieval, Cartesian, Newtonian, and Contemporary (Quantum-Relativistic).

The major ***goal*** of the course – learn to think critically on the issues of the history and philosophy of science.

What is Online Course?

In a fully online course there is no scheduled lecture time. Every week, you will watch one pre-recorded video-lecture. You will then read the assigned chapter or article and prepare for online tutorial discussion. Our tutorial sessions are live and at the portal.

You can watch the **video-lectures** at any time at your convenience on our YouTube channel. Please watch them in 1080 HD for best quality. The videos will be posted weekly. Once posted, the videos will remain available, so you can always re-watch them as often as you like.

In your online tutorials, you will master a number of analytic **skills** that will allow you to identify problems, conceptions, arguments, analyze and evaluate the soundness and validity of arguments, design new arguments, and complete essays. The participation in our online tutorials is instrumental for your overall success in this course.

What Technology do I need?

Needless to say, you must have access to a computer or a tablet with a Wi-Fi internet connection (or faster) to be able to watch the video-lectures and participate in our online tutorials.

For our online tutorials, we are using **Blackboard Collaborate**, an online Java-app that runs through the portal. This app is like Skype only with tons of useful add-ons, such as breakout rooms, group and personal chats, quizzes, polls, whiteboards, drawing and writing tools, and many more. To set it up, please click here and follow the instructions. The link to the online sessions will be posted at the portal separately.

A **headset** and **mic** are desirable for tutorial activities. If you prefer to chat instead, that is also an option, albeit not the most convenient one. Every tutorial session has a front-TA and a back-TA and, while the former does the regular talking and essentially runs the show, the latter monitors the chat window and, if she finds an interesting question or a comment, she brings it to the attention of the whole seminar by voicing it. However, usually, texting takes much longer than oral speech and it slows down the pace of the tutorial because we have to wait for chat messages to be written and voiced. So, if possible, please participate in your online tutorials with a headset and a mic.

This course requires the use of computers, and of course sometimes things can go wrong when using them. You are responsible for ensuring that you maintain **regular backup copies** of your files, use antivirus software (if using your own computer), and schedule enough time when completing an assignment to allow for delays due to technical difficulties. Computer viruses, crashed hard drives, broken printers, lost or corrupted files, incompatible file formats, and similar mishaps are common issues when using technology, and are **not** acceptable grounds for a deadline extension.

What is Grade Breakdown?

Your final grade for the course will be determined by the following components:

- *Participation*   **10**%   1% per live tutorial session
- *Midterm*   **20**%   March 1 and 3, 2016, online during usual tutorial hour
- *Essay and Peer Reviews*   **35**%   final version due April 11, 2016
- *Final Exam*   **35**%   TBA, in person on the St. George campus

If an unexpected technical issue occurs with a university system (e.g., Portal services, network outage) that affects availability or functionality, it may be necessary to revise the timing or weighting of the assessments.

Assignment extensions and make-up exams will only be allowed in the case of a note from U of T Medical Services confirming an extended period of illness. (For more information, see http://www.artsandscience.utoronto.ca/ofr/calendar/Rules_&_Regulations.html). Otherwise late assignments will be penalized at the rate of 2 marks per day and no assignments will be accepted more than one week after the deadline.

Normally, you will be required to submit the final version of your essay to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, you will allow your essay to be included as source documents in the Turnitin.com reference database, where it will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described at www.turnitin.com.

Where are Course Content and Assignment Instructions?

All course-related content including the links to lectures and tutorial sessions, lecture and tutorial recordings, lecture slides and instructions will be posted at the portal (*Content* folder). Due to the extensive amount of animation, *lecture slides* are not printable, but you can still watch them in PowerPoint. Albeit not mandatory, *supplementary readings* are intended to broaden your knowledge beyond the basic requirements.

What should I Read?

In this course, we will mostly read chapters from Dewitt, R. (2010) *Worldviews: An Introduction to the History and Philosophy of Science*. Wiley-Blackwell. 2nd Edition.

The textbook is available at the UofT Bookstore. All other assigned readings are available at the portal (folder *Content/Required Readings*).

What is the Schedule?

Week	Lectures (Watch Online Anytime)	Homework	Tutorials (Live Online)
Jan 11	Lecture 1: Introduction		
		§ *Chapter 1*	
			Orientation
Jan 18	Lecture 2: Absolute Knowledge		
		§ *Chapter 2, pp. 22-27* § *Chapter 6*	
			DIY: Identify Conceptions
Jan 25	Lecture 3: Scientific Method		
		§ *Chapters 3-5*	
			DIY: Identify Problem
Feb 1	Lecture 4: Mechanism of Scientific Change		
		Barseghyan, H. *The Laws of Scientific Change.* Chapter 4	
			DIY: Identify Arguments
Feb 8	Lecture 5: Scientific Progress		
		§ *Chapter 8*	
			DIY: Problem Summary
Feb 15		*Reading Week – No Classes*	
Feb 22	Lecture 6: Science and Non-Science		
		Hansson, S.O. "Science and Pseudo-Science"	
			DIY: Problem Summary

Week	Lectures (Watch Online Anytime)	Homework	Tutorials (Live Online)
Feb 29	Re-watch lectures 1-6.		
		Revise all previously assigned readings	
			Midterm (30 min, during usual tutorial hour)
Mar 7	Lecture 7: Aristotelian-Medieval Worldview		
		§ *Chapters 9-12* Start working on Essay	
			DIY: Analyse Argument
Mar 14	Lecture 8: Cartesian Worldview		
		Dear, P. *Rev. the Sciences.* Chapter 5. Submit Draft Essay (Mar 14)	
			DIY: Evaluate Argument
Mar 21	Lecture 9: Newtonian Worldview		
		§ *Chapters 18-20, 22* Start Reviewing Essays	
			DIY: Design New Argument
Mar 28	Lecture 10: Contemporary Worldview		
		§ *Chapters 24-25* Submit Essay Reviews (Mar 28)	
			DIY: Design New Argument
Apr 4	Lecture 11: Worldviews: Metaphysical Components		
		§ *Chapters 29* Study Reviews & Edit Essay	
			DIY: Complete Essay
Apr 11		Submit Final Essay (Apr 11)	