

# Course Schedule

**IMPORTANT: ALL TIMES EASTERN** - Please see the [University Policies](#) section of your Syllabus for details.

Week	Modules	Readings and Other Assigned Material	Activities and Assignments	Begin Date	End / Due Date	Weight %
Week 1	<b>Module 01:</b> Introduction  <b>Module 02:</b> Computing Machinery and Intelligence (Turing)	<b>Mind:</b> Chapter 1  <b>Readings:</b> <a href="#">Turing</a> (PDF)	Introduce Yourself		May 8, 2015	Ungraded
Week 2	<b>Module 03:</b> Logic	<b>Mind:</b> Chapter 2  <b>Readings:</b> <a href="#">McCarthy</a> (PDF)	<b>Begin</b> <a href="#">Assignment 1</a>	<b>Assignment 1 Topics and Information</b> and the <b>Assignment 1 Dropbox</b> will be available May 13, 2015 at 12:05 AM		
Week 3	<b>Module 04:</b> Rules	<b>Mind:</b> Chapter 3  <b>Readings:</b> <a href="#">Simon</a> (PDF); <a href="#">Newell</a> (PDF); <a href="#">Pinker</a> (PDF)				
Week 4	<b>Module 05:</b> Concepts	<b>Mind:</b> Chapter 4  <b>Readings:</b> <a href="#">Smith</a> (PDF)	<b>Submit</b> <a href="#">Assignment 1</a>		May 27, 2015, at 11:55 PM	<b>15%</b>
Week 5	<b>Module 06:</b> Analogy	<b>Mind:</b> Chapter 5  <b>Readings:</b> <a href="#">Gentner and Markman</a> (PDF)				
Week 6	<b>Module 07:</b> Images	<b>Mind:</b> Chapter 6  <b>Readings:</b> <a href="#">Kosslyn</a> (PDF); <a href="#">Dennet</a> (PDF); <a href="#">Glasgow and Papadias</a> (PDF)				

Week 7	<b>Module 08:</b> Connectionism	<b>Mind:</b> Chapter 7  <b>Readings:</b> <a href="#">Churchland and Sejnowski</a> (PDF)	<b>Begin</b> <a href="#">Midterm Exam</a>	<b>Midterm Exam Questions and the Midterm Exam Dropbox</b> will be available Jun 19, 2015 at 12:05 AM		
Week 8	None.	<b>There are no readings for this week.</b>	<b>Submit</b> <a href="#">Midterm Exam</a>		June 24, 2015, 2014 at 11:55 PM	<b>25%*</b>
Week 9	<b>Module 09:</b> Neuroscience  <b>Module 10:</b> Emotions	<b>Mind:</b> Chapters 9 and 10  <b>Readings:</b> <a href="#">Thagard</a> (PDF); <a href="#">Oatley</a> (PDF)	<b>Begin</b> <a href="#">Assignment 2</a>	<b>Assignment 2 Topics and Information and the Assignment 2 Dropbox</b> June 30, 2015 at 12:05 AM		
Week 10	<b>Module 11:</b> Consciousness	<b>Mind:</b> Chapter 11  <b>Readings:</b> <a href="#">Crick and Koch</a> (PDF)				
Week 11	<b>Module 12:</b> Embodiment  <b>Module 13:</b> Dynamical Systems	<b>Mind:</b> Chapter 12, pp. 191-197 and pp. 198-204  <b>Readings:</b> <a href="#">Eliasmith</a> (PDF); <a href="#">Brooks</a> (PDF)				
Week 12	<b>Module 14:</b> Intentionality  <b>Module 15:</b> Externalism  <b>Module 16:</b> Conclusion	<b>Mind:</b> Chapter 12, pp. 193-195 and Chapter 13  <b>Readings:</b> <a href="#">Searle</a> (PDF); <a href="#">Clark and Chalmers</a> (PDF)  <b>Web:</b> <a href="#">Hauser</a>	<b>Prepare for</b> <a href="#">Final Exam</a>	<b>Study Questions</b> will be available on July 23, 2015		<b>35%*</b>
			<b>Submit</b> <a href="#">Assignment 2</a>		July 22, 2015 at 11:55 PM	<b>25%</b>

\* As a means of recognizing and rewarding improvement, the [final exam](#) will be weighted at 40% and the midterm exam at 20% for students who achieve a better grade on the final than on the midterm.

## Final Examination Arrangement and Schedule

In courses with a final exam, students who are **exclusively** taking online classes must [provide examination arrangement information](#), using [Quest](#), by **Friday, May 22, 2015**. (Students taking one or more on-campus classes in addition to an online class within the same term do not need to provide exam centre information. Those exams will automatically be scheduled to be written at the University of Waterloo.) Examination schedule details will be available on [Quest](#) approximately four weeks prior to the exam date. For instructions on how to find exam information, go to the [Quest Help](#) page.

## Official Grades and Course Access

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Official Grades and Academic Standings are available through [Quest](#). Your access to this course will continue for the duration of the current term. You will not have access to this course once the next term begins.

# Contact Information

## News

Your instructor uses the **News** widget of the **Course Home** page to make announcements during the term to communicate new or changing information regarding due dates, instructor absence, etc., as needed. You are expected to read the **News** on a regular basis.

To ensure you are viewing the complete list of news items, you may need to click **Show All News Items**.

## Discussions

A **General Discussion** topic\* has also been made available to allow students to communicate with peers in the course. Your instructor may drop in at this discussion topic.

## Contact Us

Who and Why	Contact Details
<b>Instructor</b> <ul style="list-style-type: none"> <li>Course-related questions (e.g., course content, deadlines, assignments, etc.)</li> <li>Questions of a personal nature</li> </ul>	<p><b>Post your course-related questions</b> to the <b>Ask the Instructor</b> discussion topic*. This allows other students to benefit from your question as well.</p> <p><b>Questions of a personal nature</b> can be directed to your instructor.</p> <p>Instructor: Phillipe Beriault  <a href="mailto:pberiault@uwaterloo.ca">pberiault@uwaterloo.ca</a></p> <p>Your instructor checks email and the <b>Ask the Instructor</b> discussion topic* frequently and will make every effort to reply to your questions within 24-48 hours, Monday to Friday.</p> <p>For contact with the Philosophy Department, email <a href="mailto:phil-online@uwaterloo.ca">phil-online@uwaterloo.ca</a> or phone +1 519 888 4567, ext. 32449.</p>
<b>Technical Support,</b> Centre for Extended Learning <ul style="list-style-type: none"> <li>Technical problems with Waterloo LEARN</li> </ul>	<p><a href="mailto:learnhelp@uwaterloo.ca">learnhelp@uwaterloo.ca</a></p> <p>Include your full name, WatIAM user ID, student number, and course name and number.</p>

<b>Learner Support Services,</b> Centre for Extended Learning <ul style="list-style-type: none"><li>◦ General inquiries</li><li>◦ WatCards (Student ID Cards)</li><li>◦ Examination information</li></ul>	<u><a href="#">Useful Information for Students in Online Courses</a></u> <u><a href="mailto:extendedlearning@uwaterloo.ca">extendedlearning@uwaterloo.ca</a></u> +1 519-888-4002  Include your full name, WatIAM user ID, student number, and course name and number.
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\*Discussion topics can be accessed by clicking **Connect** and then **Discussions** on the course navigation bar above.

# Course Description and Objectives

## Course Description

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Cognitive science is the interdisciplinary study of mind and intelligence, operating at the intersection of psychology, philosophy, computer science, linguistics, anthropology, and neuroscience. This course will survey the different methodologies and theoretical contributions of these disciplines to questions such as mental representation, the nature of expertise, and consciousness. It will focus on a fundamental question in cognitive science research: What kinds of representations must be postulated to explain human intelligence or to develop computer intelligence?

## Objectives

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In this course:

- Students should become familiar with the development of Cognitive Science from its inception ca. 1950 and its response to challenges up to the present time
- Students should come to understand the chief concerns of Cognitive Science, e.g., mind, thinking, and intelligence
- Students should grasp the relevance and basic contributions of the various disciplines relevant to Cognitive Science
- Students should develop their competence at reading and understanding the literature of Cognitive Science through analysis of selected readings
- Students should exercise their skills at analyzing the merits of Cognitive Science as an account of mind
- Students should enhance their skills at communicating their insights into Cognitive Science, with emphasis on drawing and supporting conclusions through written exposition

*This online course was developed by Cameron Shelley, with instructional design and multimedia development support provided by the Centre for Extended Learning.*

# About the Course Author

## Cameron Shelley

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Cameron Shelley obtained his Ph.D. in Philosophy at the University of Waterloo in 1999. He has taught Cognitive Science at the University of Waterloo since 2003. He enjoys reading, writing, thinking, drinking, skiing, skating, paddling, and owns a cat.

Please note that the course author is not involved in the ongoing delivery and administration of this course. Communication regarding course content should be addressed to the instructor listed on the [Contact Information](#) page.

# Materials and Resources

## Textbooks

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### Required:

1. Thagard, Paul. (2005). *Mind: Introduction to Cognitive Science*. 2nd Edition. The MIT Press.
2. *Book of Readings*, University of Waterloo, Revised 2012.

The readings can be accessed as PDF files via the [Course Schedule](#) in the Readings column. If desired, they can also be purchased in hardcopy through [BookLook](#).

For textbook ordering information, please contact the [Waterloo Bookstore](#).

For your convenience, you can compile a list of required and optional course materials through [BookLook](#) using your Quest userID and password. If you are having difficulties ordering online and wish to call the Waterloo Bookstore, their phone number is +1 519 888 4673 or toll-free at +1 866 330 7933. Please be aware that textbook orders **CANNOT** be taken over the phone.

## Resources

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- [University of Waterloo Library](#) (Services for Students Taking Online Courses)



# Grade Breakdown

The following table represents the grade breakdown of this course.

Activities and Assignments	Weight (%)
Introduce Yourself	Ungraded
Module Discussions	Ungraded
Assignment 1	15%
Midterm Exam	25%*
Assignment 2	25%
Final Exam	35%*

\* As a means of recognizing and rewarding improvement, the final exam will be weighted at 40% and the midterm exam at 20% for students who achieve a better grade on the final than on the midterm.

# Course Policies

## Course Access Policy

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This course requires regular access to the Waterloo LEARN course site. Your instructor will use this site for communicating important information concerning course matters, returning graded assignments, etc. A reliable internet connection and regular checking of the course site (at least twice a week) is therefore mandatory.

## Late Policies

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### **ESSAY ASSIGNMENTS:**

Late submission of essay assignments will be penalized at the rate of 10% of the value for the assignment per day late. This policy will apply without exception unless a documented excuse of sufficient weight (e.g., a medical emergency) is provided to the instructor.

### **MIDTERM TAKE HOME EXAM:**

Late submissions will ordinarily not be accepted.

# University Policies

## Submission Times

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Please be aware that the University of Waterloo is located in the **Eastern Time Zone** (GMT or UTC-5 during standard time and UTC-4 during daylight saving time) and, as such, the time that your activities and/or assignments are due is based on this zone. If you are outside the Eastern Time Zone and require assistance with converting your time, please try the [Ontario, Canada Time Converter](#).

## Accommodation Due to Illness

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**If your instructor has provided specific procedures for you to follow if you miss assignment due dates, term tests, or a final examination, adhere to those instructions.** Otherwise:

### MISSED ASSIGNMENTS/TESTS/QUIZZES

Contact the instructor as soon as you realize there will be a problem, and preferably within 48 hours, but no more than 72 hours, have a medical practitioner complete a [Verification of Illness Form](#).

**Email** a scanned copy of the Verification of Illness Form to your instructor. In your email to the instructor, provide your name, student ID number, and exactly what course activity you missed.

Further information regarding Management of Requests for Accommodation Due to Illness can be found on the [Accommodation due to illness](#) page.

### MISSED FINAL EXAMINATIONS

If you are unable to write a final examination due to illness, seek medical treatment and provide confirmation of illness to the Centre for Extended Learning within 48 hours by emailing a scanned copy of the completed University of Waterloo [Verification of Illness Form](#) to support your request for accommodation. In your email, provide your name, student ID number, and the examination(s) missed. You will be REQUIRED to hand in the original completed form at the time you write the make-up examination, which should be within a week of having missed your exam. The original completed form must be received before you are able to write a re-scheduled exam.

Further information about [Examination Accommodation Due to Illness](#) regulations is available in the Undergraduate Calendar.

## Academic Integrity

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In order to maintain a culture of academic integrity, members of the University of Waterloo community are

expected to promote honesty, trust, fairness, respect, and responsibility. **If you have not already completed the online tutorial regarding academic integrity you should do so as soon as possible.**

Undergraduate students should see the [Academic Integrity Tutorial](#) and graduate students should see the [Graduate Students and Academic Integrity](#) website.

Proper citations are part of academic integrity. Citations in CEL course materials usually follow CEL style, which is based on APA style. Your course may follow a different style. If you are uncertain which style to use for an assignment, please confirm with your instructor or TA.

For further information on academic integrity, please visit the [Office of Academic Integrity](#).

## Discipline

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A student is expected to know what constitutes [academic integrity](#) to avoid committing an academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration, should seek guidance from the course instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to [Policy 71 - Student Discipline](#). For typical penalties, check [Guidelines for the Assessment of Penalties](#).

## Appeals

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A decision made or penalty imposed under [Policy 70 - Student Petitions and Grievances](#), (other than a petition) or [Policy 71 - Student Discipline](#), may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals](#).

## Grievance

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A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70 - Student Petitions and Grievances](#), Section 4. When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

## Final Grades

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In accordance with [Policy 19 - Access To and Release of Student Information](#), the Centre for Extended Learning does not release final examination grades or final course grades to students. Students must go to [Quest](#) to see all final grades. Any grades posted in Waterloo LEARN are unofficial.

## AccessAbility Services

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[AccessAbility Services](#), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodation to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term and for each course.

## Accessibility Statement

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The Centre for Extended Learning strives to meet the needs of all our online learners. Our ongoing efforts to become aligned with the [Accessibility for Ontarians with Disabilities Act \(AODA\)](#) are guided by [University of Waterloo AccessAbility Services Policy](#) and the [World Wide Web Consortium's \(W3C\) Web Content Accessibility Guidelines \(WCAG\) 2.0](#). The majority of our online courses are currently delivered via the Desire2Learn Learning Environment. Learn more about [Desire2Learn's Accessibility Standards Compliance](#).

## Use of Computing and Network Resources

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Please see the [Guidelines on Use of Waterloo Computing and Network Resources](#).

## Copyright Information

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### UWaterloo's Web Pages

All rights, including copyright, images, slides, audio, and video components, of the content of this course are owned by the course author, unless otherwise stated. These web pages are owned or controlled by the University of Waterloo, Centre for Extended Learning. By accessing the web pages, you agree that you may only download the content for your own personal, non-commercial use. You are not permitted to copy, broadcast, download, store (in any medium), transmit, show or play in public, adapt, or change in any way the content of these web pages for any other purpose whatsoever without the prior written permission of the course author and the University of Waterloo, Centre for Extended Learning.

### Other Sources

Respect the copyright of others and abide by all copyright notices and regulations when using the computing facilities provided for your course of study by the University of Waterloo. No material on the Internet or World Wide Web may be reproduced or distributed in any material form or in any medium, without permission from copyright holders or their assignees. To support your course of study, the University of Waterloo has provided hypertext links to relevant websites, resources, and services on the web. These resources must be used in accordance with any registration requirements or conditions which may be specified. You must be aware that in providing such hypertext links, the University of Waterloo has not authorized any acts (including reproduction or distribution) which, if undertaken without permission of copyright owners or their assignees, may be infringement of copyright. Permission for such acts can only be granted by copyright owners or their assignees.

If there are any questions about this notice, please contact the University of Waterloo, Centre for Extended Learning, Waterloo, Ontario, Canada, N2L 3G1 or [extendedlearning@uwaterloo.ca](mailto:extendedlearning@uwaterloo.ca).

