

# 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 %
1	<u>Module 01: Introduction</u>  <u>Module 02: Computing Machinery and Intelligence (Turing)</u>	<b>Mind:</b> Chapter 1  <b>Readings:</b> <u>Turing</u> (PDF)	<u>Introduce Yourself</u>			Ungraded
2	<u>Module 03: Logic</u>	<b>Mind:</b> Chapter 2  <b>Readings:</b> <u>McCarthy</u> (PDF)	<u>Essay Assignment 1</u>	<b>Wednesday, May 11, 2016 at 12:05AM</b>		
3	<u>Module 04: Rules</u>	<b>Mind:</b> Chapter 3  <b>Readings:</b> <u>Simon</u> (PDF); <u>Newell</u> (PDF); <u>Pinker</u> (PDF)				
4	<u>Module 05: Concepts</u>	<b>Mind:</b> Chapter 4  <b>Readings:</b> <u>Smith</u> (PDF)	<u>Essay Assignment 1</u>		<b>Wednesday, May 25, 2016 at 11:55 PM</b>	15%
5	<u>Module 06: Analogy</u>	<b>Mind:</b> Chapter 5  <b>Readings:</b> <u>Gentner and Markman</u> (PDF)				
6	<u>Module 07: Images</u>	<b>Mind:</b> Chapter 6  <b>Readings:</b> <u>Kosslyn</u> (PDF); <u>Dennet</u> (PDF); <u>Glasgow and Papadias</u> (PDF)				
7	<u>Module 08: Connectionism</u>	<b>Mind:</b> Chapter 7  <b>Readings:</b> <u>Churchland and Sejnowski</u> (PDF)	<u>Midterm Take-home Examination</u>	<b>Wednesday, June 15, 2016 at 12:05 am</b>		
8	None	<b>There are no readings for this week.</b>	<u>Midterm Take-home Examination</u>		<b>Wednesday, June 22, 2016 at 11:55 pm</b>	25%*
9	<u>Module 09:</u>	<b>Mind:</b> Chapters 9	<u>Essay</u>	<b>Wednesday,</b>		

	<a href="#">Neuroscience</a> <a href="#">Module 10: Emotions</a>	and 10 <b>Readings:</b> <a href="#">Thagard</a> (PDF); <a href="#">Oatley</a> (PDF)	<a href="#">Assignment 2</a>	<b>June 29, 2016 at 12:05 am</b>		
10	<a href="#">Module 11: Consciousness</a>	<b>Mind:</b> Chapter 11 <b>Readings:</b> <a href="#">Crick and Koch</a> (PDF)				
11	<a href="#">Module 12: Embodiment</a> <a href="#">Module 13: Dynamical Systems</a>	<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)				
12	<a href="#">Module 14: Intentionality</a> <a href="#">Module 15: Externalism</a> <a href="#">Module 16: Conclusion</a>	<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 Examination</a>	<b>Study Questions Available Thursday, July 21st, 2016 at 12:05AM</b>		
			<a href="#">Essay Assignment 2</a>		<b>Wednesday, July 20th, 2016 at 11:55 PM</b>	<b>25%</b>
<b>Final Examination</b>	<a href="#">Final Examination</a>					<b>35*</b>
* As a means of recognizing and rewarding improvement, the Final Examination will be weighted at 40% and the Midterm at 20% for students who achieve a better grade on the Final than on the Midterm.						

## Final Examination Arrangements and Schedule

Please carefully review the information about [final examinations for online courses](#), including dates, locations, how to make examination arrangements, writing with a proctor, and deadlines.

If you are taking **any on-campus courses**, you will automatically be scheduled to write your exam on campus. No action is required.

If you are taking **only online courses**, do one of the following:

- If your **address in QUEST is within 100 km** of an [examination centre](#), you must choose an exam centre in [Quest](#) by **Sunday, January 17, 2016**. This must be done each term.
- If your address in Quest is **more than 100 km from an exam centre**, you must **arrange for a proctor**. Please review the guidelines and deadlines for [writing with a proctor](#). This must be done each term.

Your online course exam schedule will be available in Quest approximately four weeks before your exam date(s). Instructions on how to find your schedule are posted on the [Quest Help](#) page.

University of Waterloo Senate-approved [examination regulations and related matters](#) can be found on the Registrar's

website.

## 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
<p><b>Instructor</b></p> <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: Phillippe Beriault  <a href="mailto:pberiaul@uwaterloo.ca">pberiaul@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>
<p><b>Technical Support,</b> Centre for Extended Learning</p> <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>
<p><b>Learner Support Services,</b> Centre for Extended Learning</p>	<p><a href="#">Useful Information for Students in Online Courses</a></p> <p><a href="mailto:extendedlearning@uwaterloo.ca">extendedlearning@uwaterloo.ca</a></p>

- General inquiries

+1 519-888-4002

- WatCards (Student ID Cards)

Include your full name, WatIAM user ID, student number, and course name and number.

- Examination information

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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 or the Module landing pages. If desired, you can purchase a 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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- [Library services for co-op students on work term and distance education students](#)



# Grade Breakdown

The following table represents the grade breakdown of this course.

Activities and Assignments	Weight (%)
Introduce Yourself	Ungraded
Module Discussions	Ungraded
Essay Assignment 1	15%
Midterm Take-home Examination	25%*
Essay Assignment 2	25%
Final Examination	35%*

\* As a means of recognizing and rewarding improvement, the Final Examination 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 and Department Policies

## Course and Department Policies

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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 EXAMINATION**

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 have a medical practitioner complete a [Verification of Illness Form](#). Email a scanned copy to the Centre for Extended Learning (CEL) at [extendedlearning@uwaterloo.ca](mailto:extendedlearning@uwaterloo.ca) within 48 hours of your missed exam. Make sure you include your name, student ID number, and the exam(s) missed. You will be REQUIRED to hand in the original completed form before you write the make-up examination.

After your completed Verification of Illness Form has been received and processed, you will be emailed your alternate exam date and time. This can take up to 2 business days. If you are within **150 km** of Waterloo you should be prepared to write in Waterloo on the [additional CEL exam dates](#). If you live outside the 150 km radius, CEL will work with you to make suitable arrangements.

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, 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**

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### **Other Sources**

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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).