

# Cognitive Science

A Co-operative Education Option is available. See the Co-operative Education section of this Calendar.

## Graduation Requirements

In addition to the requirements listed below, students must satisfy:

1. the University regulations (see the *Academic Regulations of the University* section of this Calendar),
2. the University regulations including the process of Academic Performance Evaluation (see the *Academic Regulations of the University* section of this Calendar).

Students should consult the Undergraduate Co-ordinator when planning their program and selecting courses.

## Program Requirements

### Cognitive Science with Specialization in Philosophical and Conceptual Issues Bachelor of Cognitive Science Honours (20.0 credits)

#### A. Credits Included in the Major CGPA (15.5 credits)

<b>1. 1.0 credit from:</b>	1.0
FYSM 1607 [1.0]	Cognitive Science: Thinking and Knowing
FYSM 1400 [1.0]	Cognition: A Scientific Exploration of the Mind
CGSC 1001 [0.5]	Mysteries of the Mind
PHIL 1301 [0.5]	Mind, World, and Knowledge
<b>2. 1.0 credit in:</b>	1.0
CGSC 2001 [0.5]	Introduction to Cognitive Science
CGSC 2002 [0.5]	Theories and Methods in Cognitive Science
<b>3. 1.0 credit in:</b>	1.0
CGSC at the 3000-level or higher	
<b>4. 0.5 credit in:</b>	0.5
COMP 1005 [0.5]	Introduction to Computer Science I
<b>5. 0.5 credit from:</b>	0.5
CGSC 4001 [0.5]	Artificial Intelligence for Cognitive Scientists
COMP 4106 [0.5]	Artificial Intelligence
<b>6. 0.5 credit in:</b>	0.5
LING 1001 [0.5]	Introduction to Linguistics I
<b>7. 1.0 credit in:</b>	1.0
LING 2005 [0.5]	Linguistic Analysis I
LING 2007 [0.5]	Phonetics
<b>8. 0.5 credit from:</b>	0.5
PHIL 2501 [0.5]	Introduction to Philosophy of Mind
PHIL 3502 [0.5]	Mind and Action
<b>9. 0.5 credit from:</b>	0.5
PHIL 2001 [0.5]	Introduction to Logic
PHIL 2520 [0.5]	Introduction to Philosophical Logic
<b>10. 0.5 credit from:</b>	0.5
PHIL 2301 [0.5]	Introduction to the Philosophy of Science
PHIL 2504 [0.5]	Language and Communication

PHIL 3104 [0.5]	The Roots of Analytic Philosophy	
PHIL 3301 [0.5]	Issues in the Philosophy of Science	
PHIL 3306 [0.5]	Symbolic Logic	
PHIL 3501 [0.5]	Philosophy of Cognitive Science	
PHIL 3502 [0.5]	Mind and Action	
PHIL 3504 [0.5]	Pragmatics	
PHIL 3506 [0.5]	Semantics	
PHIL 3530 [0.5]	Philosophy of Language	
CGSC 3004 [0.5]	Philosophy and Cognitive Science	
<b>11. 2.0 credits in:</b>		2.0
PSYC 1001 [0.5]	Introduction to Psychology I	
PSYC 1002 [0.5]	Introduction to Psychology II	
PSYC 2001 [0.5]	Introduction to Research Methods in Psychology	
PSYC 2700 [0.5]	Introduction to Cognitive Psychology	
<b>12. 0.5 credit from:</b>		0.5
NEUR 2200 [0.5]	Biological Foundations of Behaviour	
PSYC 2307 [0.5]	Human Neuropsychology I	
<b>13. 1.5 credits from:</b>		1.5
<b>a. Thesis Stream</b>		
CGSC 3908 [0.5]	Honours Seminar in Cognitive Science	
CGSC 4908 [1.0]	Honours Thesis	
<b>OR</b>		
<b>b. Coursework Stream</b>		
i. 1.5 credit at the 3000 level or higher in CGSC, COMP, LING, NEUR, PHIL, or PSYC		
<b>14. 4.5 credits in the specialization:</b>		4.5
<b>a. 4.0 credits from:</b>		
PHIL 2301 [0.5]	Introduction to the Philosophy of Science	
PHIL 2504 [0.5]	Language and Communication	
PHIL 2540 [0.5]	Personal Identity and the Self	
PHIL 3104 [0.5]	The Roots of Analytic Philosophy	
PHIL 3140 [0.5]	Epistemology	
PHIL 3301 [0.5]	Issues in the Philosophy of Science	
PHIL 3306 [0.5]	Symbolic Logic	
PHIL 3501 [0.5]	Philosophy of Cognitive Science	
PHIL 3502 [0.5]	Mind and Action	
PHIL 3504 [0.5]	Pragmatics	
PHIL 3506 [0.5]	Semantics	
PHIL 3530 [0.5]	Philosophy of Language	
PHIL 4210 [0.5]	Seminar in philosophy of Language or Linguistics	
PHIL 4220 [0.5]	Seminar in philosophy of Mind or Cognition	
PHIL 4230 [0.5]	Seminar in Metaphysics, Epistemology, or Philosophy of Science	
PHIL 4503 [0.5]	Special Topic in Philosophy of Computing	
PHIL 4504 [0.5]	Special Topic in Philosophy of Computing	
PHIL 4505 [0.5]	Semantics II	
PHIL 4701 [0.5]	Special Topic in Logic	
PHIL 4702 [0.5]	Special Topic in Logic	
PHIL 4703 [0.5]	Special Topic in Philosophical Logic	

PHIL 4704 [0.5]	Special Topic in Philosophical Logic	
CGSC 3004 [0.5]	Philosophy and Cognitive Science	
b. 0.5 credit from:		
PHIL 4503 [0.5]	Special Topic in Philosophy of Computing	
PHIL 4210 [0.5]	Seminar in philosophy of Language or Linguistics	
PHIL 4220 [0.5]	Seminar in philosophy of Mind or Cognition	
PHIL 4230 [0.5]	Seminar in Metaphysics, Epistemology, or Philosophy of Science	
PHIL 4503 [0.5]	Special Topic in Philosophy of Computing	
PHIL 4504 [0.5]	Special Topic in Philosophy of Computing	
PHIL 4505 [0.5]	Semantics II	
PHIL 4701 [0.5]	Special Topic in Logic	
PHIL 4702 [0.5]	Special Topic in Logic	
PHIL 4703 [0.5]	Special Topic in Philosophical Logic	
PHIL 4704 [0.5]	Special Topic in Philosophical Logic	
<b>B. Credits not included in the Major (4.5 credits)</b>		
<b>15. 4.5 credits in free electives.</b>		<b>4.5</b>
<b>Total Credits</b>		<b>20.0</b>

**Note:** Normally, students may not offer more than one credit of independent study (eg. CGSC 4801 Independent Study and CGSC 4802 Independent Study) in their total program, including independent study credits taken through other departments.

### Cognitive Science with Specialization in Language and Linguistics Bachelor of Cognitive Science Honours (20.0 credits)

#### A. Credits Included in the Major CGPA (15.5 credits)

<b>1. 1.0 credit from:</b>		<b>1.0</b>
FYSM 1607 [1.0]	Cognitive Science: Thinking and Knowing	
FYSM 1400 [1.0]	Cognition: A Scientific Exploration of the Mind	
CGSC 1001 [0.5]	Mysteries of the Mind	
PHIL 1301 [0.5]	Mind, World, and Knowledge	
<b>2. 1.0 credit in:</b>		<b>1.0</b>
CGSC 2001 [0.5]	Introduction to Cognitive Science	
CGSC 2002 [0.5]	Theories and Methods in Cognitive Science	
<b>3. 1.0 credit in:</b>		<b>1.0</b>
CGSC at the 3000 level or higher		
<b>4. 0.5 credit in:</b>		<b>0.5</b>
COMP 1005 [0.5]	Introduction to Computer Science I	
<b>5. 0.5 credit from:</b>		<b>0.5</b>
COMP 4106 [0.5]	Artificial Intelligence	
CGSC 4001 [0.5]	Artificial Intelligence for Cognitive Scientists	
<b>6. 0.5 credit in:</b>		<b>0.5</b>
LING 1001 [0.5]	Introduction to Linguistics I	
<b>7. 1.0 credit in:</b>		<b>1.0</b>
LING 2005 [0.5]	Linguistic Analysis I	
LING 2007 [0.5]	Phonetics	

<b>8. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2501 [0.5]	Introduction to Philosophy of Mind	
PHIL 3502 [0.5]	Mind and Action	
<b>9. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2001 [0.5]	Introduction to Logic	
PHIL 2520 [0.5]	Introduction to Philosophical Logic	
<b>10. 0.5 credit from:</b>		<b>0.5</b>
CGSC 3004 [0.5]	Philosophy and Cognitive Science	
PHIL 2301 [0.5]	Introduction to the Philosophy of Science	
PHIL 2504 [0.5]	Language and Communication	
PHIL 3104 [0.5]	The Roots of Analytic Philosophy	
PHIL 3301 [0.5]	Issues in the Philosophy of Science	
PHIL 3306 [0.5]	Symbolic Logic	
PHIL 3501 [0.5]	Philosophy of Cognitive Science	
PHIL 3502 [0.5]	Mind and Action	
PHIL 3504 [0.5]	Pragmatics	
PHIL 3506 [0.5]	Semantics	
PHIL 3530 [0.5]	Philosophy of Language	
<b>11. 2.0 credits in:</b>		<b>2.0</b>
PSYC 1001 [0.5]	Introduction to Psychology I	
PSYC 1002 [0.5]	Introduction to Psychology II	
PSYC 2001 [0.5]	Introduction to Research Methods in Psychology	
PSYC 2700 [0.5]	Introduction to Cognitive Psychology	
<b>12. 0.5 credit from:</b>		<b>0.5</b>
NEUR 2200 [0.5]	Biological Foundations of Behaviour	
PSYC 2307 [0.5]	Human Neuropsychology I	
<b>13. 1.5 credits from:</b>		<b>1.5</b>
<b>a. Thesis stream</b>		
CGSC 3908 [0.5]	Honours Seminar in Cognitive Science	
CGSC 4908 [1.0]	Honours Thesis	
<b>OR</b>		
<b>b. Coursework stream</b>		
1.5 credits at the 3000 level or higher in CGSC, COMP, LING, NEUR, PHIL, or PSYC		
<b>14. 4.5 credits in the specialization:</b>		<b>4.5</b>
<b>a. 2.0 credits in:</b>		
LING 3004 [0.5]	Syntax I	
LING 3007 [0.5]	Phonology I	
LING 3505 [0.5]	Semantics I	
LING 3601 [0.5]	Language Processing and the Brain I	
<b>b. 1.5 credits from:</b>		
LING 3001 [0.5]	Language Typology and Universals	
LING 3005 [0.5]	Morphology I	
LING 3101 [0.5]	Historical Linguistics I	
LING 3504 [0.5]	Pragmatics	
LING 3603 [0.5]	Child Language	
LING 3801 [0.5]	Structure of a Specific Language	
<b>c. 1.0 credit from:</b>		
LING 4004 [0.5]	Syntax II	
LING 4007 [0.5]	Phonology II	
LING 4505 [0.5]	Semantics II	

LING 4601 [0.5]	Language Processing and the Brain II	
<b>B. Credits not included in the Major (4.5 credits)</b>		
<b>15. 4.5 credits in free electives</b>		<b>4.5</b>
<b>Total Credits</b>		<b>20.0</b>

**Note:** Normally, students may not offer more than one credit of independent study (eg. CGSC 4801 Independent Study and CGSC 4802 Independent Study) in their total program, including independent study credits taken through other departments.

### Cognitive Science with Specialization in the Biological Foundations of Cognition Bachelor of Cognitive Science Honours (20.0 credits)

<b>A. Credits Included in the Major GPA (15.5 credits)</b>		
<b>1. 1.0 credit from:</b>		<b>1.0</b>
FYSM 1607 [1.0]	Cognitive Science: Thinking and Knowing	
FYSM 1400 [1.0]	Cognition: A Scientific Exploration of the Mind	
CGSC 1001 [0.5]	Mysteries of the Mind	
PHIL 1301 [0.5]	Mind, World, and Knowledge	
<b>2. 1.0 credit in:</b>		<b>1.0</b>
CGSC 2001 [0.5]	Introduction to Cognitive Science	
CGSC 2002 [0.5]	Theories and Methods in Cognitive Science	
<b>3. 1.0 credit in:</b>		<b>1.0</b>
CGSC at the 3000 level or higher		
<b>4. 0.5 credit in:</b>		<b>0.5</b>
COMP 1005 [0.5]	Introduction to Computer Science I	
<b>5. 0.5 credit from:</b>		<b>0.5</b>
COMP 4106 [0.5]	Artificial Intelligence	
CGSC 4001 [0.5]	Artificial Intelligence for Cognitive Scientists	
<b>6. 0.5 credit in:</b>		<b>0.5</b>
LING 1001 [0.5]	Introduction to Linguistics I	
<b>7. 1.0 credit in:</b>		<b>1.0</b>
LING 2005 [0.5]	Linguistic Analysis I	
LING 2007 [0.5]	Phonetics	
<b>8. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2501 [0.5]	Introduction to Philosophy of Mind	
PHIL 3502 [0.5]	Mind and Action	
<b>9. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2001 [0.5]	Introduction to Logic	
PHIL 2520 [0.5]	Introduction to Philosophical Logic	
<b>10. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2301 [0.5]	Introduction to the Philosophy of Science	
PHIL 2504 [0.5]	Language and Communication	
PHIL 3104 [0.5]	The Roots of Analytic Philosophy	
PHIL 3301 [0.5]	Issues in the Philosophy of Science	
PHIL 3306 [0.5]	Symbolic Logic	
PHIL 3501 [0.5]	Philosophy of Cognitive Science	
PHIL 3502 [0.5]	Mind and Action	
PHIL 3504 [0.5]	Pragmatics	
PHIL 3506 [0.5]	Semantics	
PHIL 3530 [0.5]	Philosophy of Language	

CGSC 3004 [0.5]	Philosophy and Cognitive Science	
<b>11. 2.0 credits in:</b>		<b>2.0</b>
PSYC 1001 [0.5]	Introduction to Psychology I	
PSYC 1002 [0.5]	Introduction to Psychology II	
PSYC 2001 [0.5]	Introduction to Research Methods in Psychology	
PSYC 2700 [0.5]	Introduction to Cognitive Psychology	
<b>12. 0.5 credit in:</b>		<b>0.5</b>
NEUR 2200 [0.5]	Biological Foundations of Behaviour	
<b>13. 1.5 credits from:</b>		<b>1.5</b>
<b>a. Thesis Stream</b>		
CGSC 3908 [0.5]	Honours Seminar in Cognitive Science	
CGSC 4908 [1.0]	Honours Thesis	
<b>OR</b>		
<b>b. Coursework Stream</b>		
i. 1.5 credit at the 3000 level or higher in CGSC, COMP, LING, NEUR, PHIL, or PSYC		
<b>14. 4.5 credits in the specialization:</b>		<b>4.5</b>
a. 1.5 credits in:		
PSYC 2002 [0.5]	Introduction to Statistics in Psychology	
PSYC 3000 [1.0]	Design and Analysis in Psychological Research	
b. 0.5 credit in NEUR at the 2000 level or higher		
c. 1.5 credits from:		
NEUR 2801 [0.5]	Neuroscience and Creativity	
NEUR 3200 [1.0]	Principles of Neuroscience	
NEUR 3202 [0.5]	Sensory Processes	
NEUR 3303 [0.5]	The Neuroscience of Consciousness	
PSYC 3307 [0.5]	Human Neuropsychology II	
PSYC 3506 [0.5]	Cognitive Development	
PSYC 3508 [0.5]	Child Language	
PSYC 3702 [0.5]	Perception	
PSYC 3709 [0.5]	Language Processing and the Brain	
d. 1.0 credit in NEUR at the 3000 level or above		
<b>B. Credits Not Included in the Major CGPA (4.5 credits)</b>		
<b>15. 4.5 credits in free electives.</b>		<b>4.5</b>
<b>Total Credits</b>		<b>20.0</b>

**Note:** Normally, students may not offer more than one credit of independent study (eg. CGSC 4801 Independent Study and CGSC 4802 Independent Study) in their total program, including independent study credits taken through other departments.

### Cognitive Science with Specialization in Cognition and Psychology Bachelor of Cognitive Science Honours (20.0 credits)

<b>A. Credits Included in the Major CGPA (15.5 credits)</b>		
<b>1. 1.0 credit from:</b>		<b>1.0</b>
FYSM 1607 [1.0]	Cognitive Science: Thinking and Knowing	
FYSM 1400 [1.0]	Cognition: A Scientific Exploration of the Mind	

CGSC 1001 [0.5]	Mysteries of the Mind	
PHIL 1301 [0.5]	Mind, World, and Knowledge	
<b>2. 1.0 credit in:</b>		<b>1.0</b>
CGSC 2001 [0.5]	Introduction to Cognitive Science	
CGSC 2002 [0.5]	Theories and Methods in Cognitive Science	
<b>3. 1.0 credit in:</b>		<b>1.0</b>
CGSC at the 3000 level or above		
<b>4. 0.5 credit in:</b>		<b>0.5</b>
COMP 1005 [0.5]	Introduction to Computer Science I	
<b>5. 0.5 credit from:</b>		<b>0.5</b>
CGSC 4001 [0.5]	Artificial Intelligence for Cognitive Scientists	
COMP 4106 [0.5]	Artificial Intelligence	
<b>6. 0.5 credit in:</b>		<b>0.5</b>
LING 1001 [0.5]	Introduction to Linguistics I	
<b>7. 1.0 credit in:</b>		<b>1.0</b>
LING 2005 [0.5]	Linguistic Analysis I	
LING 2007 [0.5]	Phonetics	
<b>8. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2501 [0.5]	Introduction to Philosophy of Mind	
PHIL 3502 [0.5]	Mind and Action	
<b>9. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2001 [0.5]	Introduction to Logic	
PHIL 2520 [0.5]	Introduction to Philosophical Logic	
<b>10. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2301 [0.5]	Introduction to the Philosophy of Science	
PHIL 2504 [0.5]	Language and Communication	
PHIL 3104 [0.5]	The Roots of Analytic Philosophy	
PHIL 3301 [0.5]	Issues in the Philosophy of Science	
PHIL 3306 [0.5]	Symbolic Logic	
PHIL 3501 [0.5]	Philosophy of Cognitive Science	
PHIL 3502 [0.5]	Mind and Action	
PHIL 3504 [0.5]	Pragmatics	
PHIL 3506 [0.5]	Semantics	
PHIL 3530 [0.5]	Philosophy of Language	
CGSC 3004 [0.5]	Philosophy and Cognitive Science	
<b>11. 2.0 credits in:</b>		<b>2.0</b>
PSYC 1001 [0.5]	Introduction to Psychology I	
PSYC 1002 [0.5]	Introduction to Psychology II	
PSYC 2001 [0.5]	Introduction to Research Methods in Psychology	
PSYC 2700 [0.5]	Introduction to Cognitive Psychology	
<b>12. 0.5 credit from:</b>		<b>0.5</b>
PSYC 2307 [0.5]	Human Neuropsychology I	
NEUR 2200 [0.5]	Biological Foundations of Behaviour	
<b>13. 1.5 credits from:</b>		<b>1.5</b>
<b>a. Thesis Stream:</b>		
CGSC 3908 [0.5]	Honours Seminar in Cognitive Science	
CGSC 4908 [1.0]	Honours Thesis	
<b>OR</b>		
<b>b. Coursework Stream:</b>		
i. 1.5 credit at the 3000 level or above in CGSC, COMP, LING, NEUR, PHIL, or PSYC		

<b>14. 4.5 credits in the specialization:</b>		<b>4.5</b>
<b>a. 1.5 credits in:</b>		
PSYC 2002 [0.5]	Introduction to Statistics in Psychology	
PSYC 3000 [1.0]	Design and Analysis in Psychological Research	
<b>b. 0.5 credit in PSYC at the 2000-level or above</b>		
<b>c. 2.0 credits from:</b>		
PSYC 3700 [1.0]	Cognition (Honours Seminar)	
PSYC 3307 [0.5]	Human Neuropsychology II	
PSYC 3506 [0.5]	Cognitive Development	
PSYC 3508 [0.5]	Child Language	
PSYC 3702 [0.5]	Perception	
PSYC 3709 [0.5]	Language Processing and the Brain	
NEUR 3202 [0.5]	Sensory Processes	
NEUR 3303 [0.5]	The Neuroscience of Consciousness	
<b>d. 0.5 credit in PSYC at the 4000-level or above</b>		
<b>B. Credits Not Included in the Major CGPA (4.5 credits)</b>		
<b>15. 4.5 credits in free electives.</b>		<b>4.5</b>
<b>Total Credits</b>		<b>20.0</b>

**Note:** Normally, students may not offer more than one credit of independent study (eg. CGSC 4801 Independent Study and CGSC 4802 Independent Study) in their total program, including independent study credits taken through other departments.

### Cognitive Science with Specialization in Cognition and Computation Bachelor of Cognitive Science Honours (20.0 credits)

<b>A. Credits Included in the Major CGPA (15.5 credits)</b>		
<b>1. 1.0 credit from:</b>		<b>1.0</b>
FYSM 1607 [1.0]	Cognitive Science: Thinking and Knowing	
FYSM 1400 [1.0]	Cognition: A Scientific Exploration of the Mind	
CGSC 1001 [0.5]	Mysteries of the Mind	
PHIL 1301 [0.5]	Mind, World, and Knowledge	
<b>2. 1.0 credit in:</b>		<b>1.0</b>
CGSC 2001 [0.5]	Introduction to Cognitive Science	
CGSC 2002 [0.5]	Theories and Methods in Cognitive Science	
<b>3. 1.0 credit in:</b>		<b>1.0</b>
CGSC at the 3000 level or above		
<b>4. 0.5 credit in:</b>		<b>0.5</b>
COMP 1005 [0.5]	Introduction to Computer Science I	
<b>5. 0.5 credit from:</b>		<b>0.5</b>
COMP 4106 [0.5]	Artificial Intelligence	
CGSC 4001 [0.5]	Artificial Intelligence for Cognitive Scientists	
<b>6. 0.5 credit in:</b>		<b>0.5</b>
LING 1001 [0.5]	Introduction to Linguistics I	
<b>7. 1.0 credit in:</b>		<b>1.0</b>
LING 2005 [0.5]	Linguistic Analysis I	
LING 2007 [0.5]	Phonetics	
<b>8. 0.5 credit from:</b>		<b>0.5</b>

PHIL 2501 [0.5]	Introduction to Philosophy of Mind	
PHIL 3502 [0.5]	Mind and Action	
<b>9. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2001 [0.5]	Introduction to Logic	
PHIL 2520 [0.5]	Introduction to Philosophical Logic	
<b>10. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2301 [0.5]	Introduction to the Philosophy of Science	
PHIL 2504 [0.5]	Language and Communication	
PHIL 3104 [0.5]	The Roots of Analytic Philosophy	
PHIL 3301 [0.5]	Issues in the Philosophy of Science	
PHIL 3306 [0.5]	Symbolic Logic	
PHIL 3501 [0.5]	Philosophy of Cognitive Science	
PHIL 3502 [0.5]	Mind and Action	
PHIL 3504 [0.5]	Pragmatics	
PHIL 3506 [0.5]	Semantics	
PHIL 3530 [0.5]	Philosophy of Language	
CGSC 3004 [0.5]	Philosophy and Cognitive Science	
<b>11. 2.0 credits in:</b>		<b>2.0</b>
PSYC 1001 [0.5]	Introduction to Psychology I	
PSYC 1002 [0.5]	Introduction to Psychology II	
PSYC 2001 [0.5]	Introduction to Research Methods in Psychology	
PSYC 2700 [0.5]	Introduction to Cognitive Psychology	
0.5 credit from:		0.5
NEUR 2200 [0.5]	Biological Foundations of Behaviour	
PSYC 2307 [0.5]	Human Neuropsychology I	
<b>13 1.5 credits from:</b>		<b>1.5</b>
<b>a. Thesis Stream</b>		
CGSC 3908 [0.5]	Honours Seminar in Cognitive Science	
CGSC 4908 [1.0]	Honours Thesis	
<b>OR</b>		
<b>b. Coursework Stream:</b>		
i. 1.5 credit at the 3000 level or higher in CGSC, COMP, LING, NEUR, PHIL, or PSYC		
<b>14. 4.5 credits in the specialization:</b>		<b>4.5</b>
a. 0.5 credit in:		
COMP 1006 [0.5]	Introduction to Computer Science II	
b. 0.5 credit in COMP at the 1000-level or higher		
c. 2.0 credits in:		
COMP 2402 [0.5]	Abstract Data Types and Algorithms	
COMP 2404 [0.5]	Introduction to Software Engineering	
COMP 3007 [0.5]	Programming Paradigms	
COMP 3008 [0.5]	Human-Computer Interaction	
d. 1.0 credit in COMP at the 2000-level or higher		
e. 0.5 credit in:		
COMP 4107 [0.5]	Biologically-Inspired Computing	
<b>B. Credits not included in the Major CGPA (4.5 credits)</b>		
<b>15. 4.5 credits in free electives.</b>		<b>4.5</b>
<b>Total Credits</b>		<b>20.0</b>

**Note:** Normally, students may not offer more than one credit of independent study (eg. CGSC 4801 Independent Study and CGSC 4802 Independent Study) in their total

program, including independent study credits taken through other departments.

## Cognitive Science Bachelor of Cognitive Science General (15.0 credits)

### A. Credits Included in the Major CGPA (9.0 credits)

<b>1. 1.0 credit from:</b>		<b>1.0</b>
FYSM 1607 [1.0]	Cognitive Science: Thinking and Knowing	
FYSM 1400 [1.0]	Cognition: A Scientific Exploration of the Mind	
CGSC 1001 [0.5]	Mysteries of the Mind	
PHIL 1301 [0.5]	Mind, World, and Knowledge	
<b>2. 1.0 credit in:</b>		<b>1.0</b>
CGSC 2001 [0.5]	Introduction to Cognitive Science	
CGSC 2002 [0.5]	Theories and Methods in Cognitive Science	
<b>3. 1.0 credit in CGSC at the 3000 level or above</b>		<b>1.0</b>
<b>4. 0.5 credit in:</b>		<b>0.5</b>
COMP 1005 [0.5]	Introduction to Computer Science I	
<b>5. 1.5 credits in:</b>		<b>1.5</b>
LING 1001 [0.5]	Introduction to Linguistics I	
LING 2005 [0.5]	Linguistic Analysis I	
LING 2007 [0.5]	Phonetics	
<b>6. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2501 [0.5]	Introduction to Philosophy of Mind	
PHIL 3502 [0.5]	Mind and Action	
<b>7. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2001 [0.5]	Introduction to Logic	
PHIL 2520 [0.5]	Introduction to Philosophical Logic	
<b>8. 0.5 credit from:</b>		<b>0.5</b>
PHIL 2301 [0.5]	Introduction to the Philosophy of Science	
PHIL 2504 [0.5]	Language and Communication	
PHIL 3104 [0.5]	The Roots of Analytic Philosophy	
PHIL 3301 [0.5]	Issues in the Philosophy of Science	
PHIL 3306 [0.5]	Symbolic Logic	
PHIL 3501 [0.5]	Philosophy of Cognitive Science	
PHIL 3502 [0.5]	Mind and Action	
PHIL 3504 [0.5]	Pragmatics	
PHIL 3506 [0.5]	Semantics	
PHIL 3530 [0.5]	Philosophy of Language	
CGSC 3004 [0.5]	Philosophy and Cognitive Science	
<b>9. 2.0 credits in:</b>		<b>2.0</b>
PSYC 1001 [0.5]	Introduction to Psychology I	
PSYC 1002 [0.5]	Introduction to Psychology II	
PSYC 2001 [0.5]	Introduction to Research Methods in Psychology	
PSYC 2700 [0.5]	Introduction to Cognitive Psychology	
<b>10. 0.5 credit from:</b>		<b>0.5</b>
NEUR 2200 [0.5]	Biological Foundations of Behaviour	
PSYC 2307 [0.5]	Human Neuropsychology I	
<b>B. Credits Not Included in the Major CGPA (6.0 credits)</b>		
<b>11. 6.0 credits in free electives</b>		<b>6.0</b>
<b>Total Credits</b>		<b>15.0</b>



**Institute of Cognitive Science**  
**Faculty of Arts and Social Sciences**

**CGSC 1001 [0.5 credit]**

**Mysteries of the Mind**

Challenges faced in understanding the mind, and some of the approaches cognitive science has brought to bear on them. Topics may include the nature of knowledge, how we learn, the extent to which human thinking is rational, biases in thinking, and evolutionary influences on cognition.

Lectures three hours per week.

**CGSC 2001 [0.5 credit]**

**Introduction to Cognitive Science**

An integrated background of the discipline of Cognitive Science, with an historical overview (1940's onward) and examination of the extent to which the discipline has assimilated the collective knowledge of contributing disciplines (e.g., psychology, philosophy, linguistics, artificial intelligence and neuroscience).

Prerequisite(s): second-year standing or permission of the Institute.

Lectures three hours a week.

**CGSC 2002 [0.5 credit]**

**Theories and Methods in Cognitive Science**

Selected topics in cognitive science covered from the perspectives of psychology, computer science, linguistics, philosophy, and other related disciplines. Students may be required to complete independent research projects.

Prerequisite(s): CGSC 2001, second year standing, and two of PSYC 1001, LING 1001, COMP 1005, PHIL 1301 or PHIL 2501, or permission of the Institute. Restricted to students enrolled in B.Cog.Sc. General or Honours.

Seminars and tutorials six hours per week.

**CGSC 3004 [0.5 credit]**

**Philosophy and Cognitive Science**

Cognitive science from a philosophical perspective. Topics may include: philosophical methods for studying the mind, prospects for naturalizing consciousness and intentionality, assessing competing models of the mind.

Prerequisite(s): third-year year standing and 0.5 credit in CGSC 2001, or in PHIL at the 2000-level or above.

Seminar three hours per week.

**CGSC 3201 [0.5 credit]**

**Empirical Issues in Cognitive Science**

Issues in empirical Cognitive Science are examined through a detailed consideration of selected topics.

Prerequisite(s): third-year standing, and 0.5 credit in CGSC 2001 or PSYC 2700.

Seminar three hours per week.

**CGSC 3301 [0.5 credit]**

**Language and Cognitive Science**

Issues related to language and cognitive science are examined through a detailed consideration of selected topics.

Prerequisite(s): third-year standing, and CGSC 2001.

Seminar three hours per week.

**CGSC 3908 [0.5 credit]**

**Honours Seminar in Cognitive Science**

Major theories and empirical approaches within Cognitive Science are examined through a detailed consideration of selected topics. Students are required to complete independent research projects to prepare for their fourth-year honours theses.

Precludes additional credit for CGSC 3001 (no longer offered) and CGSC 3002 (no longer offered).

Prerequisite(s): third year standing, CGSC 2001 and CGSC 2002, and enrolment in B. Cog. Sc. Honours with a CGPA in the major requirements of 8.0.

Seminars and tutorials six hours per week.

**CGSC 3999 [0.0 credit]**

**Co-operative Work Term**

**CGSC 4001 [0.5 credit]**

**Artificial Intelligence for Cognitive Scientists**

An introduction to the contribution of artificial intelligence and computer modeling of cognitive processes to cognitive science.

Prerequisite(s): third-year standing and CGSC 2002 and COMP 1005. Restricted to students enrolled in B.Cog.Sc. Honours.

Seminars and labs six hours per week.

**CGSC 4801 [0.5 credit]**

**Independent Study**

A reading or research course for selected students who wish to investigate a particular topic of interest.

Normally students may not offer more than one credit of independent study in their total program (including independent study credits taken through other departments).

Prerequisite(s): third- or fourth-year standing and permission of the Institute.

**CGSC 4802 [0.5 credit]**

**Independent Study**

A reading or research course for selected students who wish to investigate a particular topic of interest.

Normally students may not offer more than one credit of independent study in their total program (including independent study credits taken through other departments).

Prerequisite(s): third- or fourth-year standing and permission of the Institute.

**CGSC 4900 [0.5 credit]****Special Topics in Cognitive Science**

The topic of this course will vary from year to year. Students may register in more than one section of CGSC 4900 but may register in each section only once. Prerequisite(s): each section will have its own prerequisites and permission of the department if is required.

Seminar three hours per week.

**CGSC 4908 [1.0 credit]****Honours Thesis**

Interdisciplinary thesis. In developing a thesis, students must consult the Undergraduate Supervisor. Only the Undergraduate Supervisor can assign a supervisor or grant approval to register in this course. Faculty regulations governing Honours Research Essays and Honours Theses apply.

Prerequisite(s): fourth year standing, CGSC 3908, and enrolment in B.Cog.Sc. Honours with a major CGPA of 8.0.

**Summer session:** some of the courses listed in this Calendar are offered during the summer. Hours and scheduling for summer session courses will differ significantly from those reported in the fall/winter Calendar. To determine the scheduling and hours for summer session classes, consult the class schedule at [central.carleton.ca](http://central.carleton.ca)

Not all courses listed are offered in a given year. For an up-to-date statement of course offerings for the current session and to determine the term of offering, consult the class schedule at [central.carleton.ca](http://central.carleton.ca)