Cognitive Science

Program Requirements

Master of Cognitive Science (5.0 credits)

Requirements - Research Project option (5.0 credits)

1. 0.5 credit in:
   - CGSC 5100 [0.5] Issues in Cognitive Science

2. 0.5 credit in:
   - CGSC 5101 [0.5] Experimental Methods and Statistics
     or CGSC 5103 [0.5] Formal Methods

3. 1.5 credits from:
   - CGSC 5001 [0.5] Cognition and Artificial Cognitive Systems
   - CGSC 5002 [0.5] Experimental Research in Cognition
   - CGSC 5003 [0.5] Cognition and Language
   - CGSC 5004 [0.5] Cognition and Conceptual Issues
   - CGSC 5005 [0.5] Cognition and Neuroscience

4. 1.0 credit in:
   - CGSC 5908 [1.0] Research Project

5. 1.5 credits in cognitive science or other courses selected with approval of the project supervisor and graduate supervisor.

6. Students are required to present their research at the Cognitive Science Student Spring Conference (in either year).

Total Credits 5.0

Requirements - Thesis option (5.0 credits)

1. 0.5 credit in:
   - CGSC 5100 [0.5] Issues in Cognitive Science

2. 0.5 credit from:
   - CGSC 5101 [0.5] Experimental Methods and Statistics
   - or CGSC 5103 [0.5] Formal Methods

3. 1.5 credits in cognitive science or other courses, from at least two different cognitive disciplines, selected with approval of the thesis supervisor and the graduate supervisor.

4. 2.5 credits in:

5. Students are required to present their research at the Cognitive Science Student Spring Conference (in either year).

Total Credits 5.0

Guidelines for Completion of the M.Cog.Sc. Degree

The degree is expected to take no more than six terms to complete. Students will enroll in courses while also conducting research.

Master of Cognitive Science with Specialization in Data Science (5.0 credits)

Requirements - Thesis Option (5.0 credits)

1. 0.5 credit in:
   - DATA 5000 [0.5] Data Science Seminar

2. 0.5 credit in:
   - CGSC 5100 [0.5] Issues in Cognitive Science

3. 0.5 credit in:
   - CGSC 5101 [0.5] Experimental Methods and Statistics

4. 1.0 credit in CGSC or other approved courses, from two different cognitive disciplines, selected in consultation with the graduate supervisor.

5. 2.5 credits in:
   - CGSC 5908 [2.5] M. Cog. Thesis (The thesis must be approved as fulfilling the data science requirement and be supervised by a faculty member working in a data science related field.)

6. Preparation of research for presentation at the Carleton Cognitive Science Spring Conference.

Total Credits 5.0

Ph.D. Cognitive Science (10.0 credits)

Requirements:

1. 0.5 credit in:
   - CGSC 5100 [0.5] Issues in Cognitive Science

2. 0.5 credit in:
   - CGSC 6801 [0.5] Proseminar in Cognitive Science

3. 0.5 credit in:
   - CGSC 6002 [0.5] Methodology Rotation I

4. 0.5 credit in:
   - CGSC 6003 [0.5] Methodology Rotation II

5. 6.5 credits in:
   - CGSC 6909 [6.5] Ph.D. Thesis

Total Credits 10.0

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The prospectus must be sufficiently detailed to allow the examining committee to judge the likelihood of a successful thesis ensuing from it. Preparation of the prospectus must describe the proposed research and include members from at least two different approaches to cognition to allow the student to use work from these approaches in his or her own research.

Assignments will be as specified by each rotation supervisor. Each rotation will be graded separately by the rotation supervisor. Passed with Distinction (PWD)/Satisfactory(S)/Unsatisfactory(U). In the event of a grade of U the student may repeat a rotation only once.

Prospectus, Prospectus Defence, Thesis and Defence
When a student is ready to begin work on a thesis, the Graduate Supervisor approves a thesis committee which includes the thesis supervisor or co-supervisors, plus at least two additional members. The committee should include members from at least two different approaches to cognition. The Director of the Institute of Cognitive Science is an ex officio member of the committee. Preparation of the thesis has two stages. First the student prepares a prospectus, which is examined at a prospectus defence on the subject matter of the thesis. Then the student prepares the thesis, which is defended at a public oral examination.

Prospectus
The prospectus must describe the proposed research and review the relevant literature in the field of the research. The prospectus must be sufficiently detailed to allow the examining committee to judge the likelihood of a successful thesis ensuing from it. Preparation of the prospectus will follow the practices common in the Thesis Supervisor’s area of research. The committee may add further requirements.

Prospectus Defence
The prospectus is examined orally by a board consisting of the members of the thesis committee. The committee may add further examiners. The examination is a comprehensive examination of the thesis subject matter, to ensure that the student has a sound understanding of the context of his or her proposed research, and of appropriate methods, ethical considerations, and so on. The examining board will also consider the research that the student is proposing, which must be of sufficiently high quality and described in sufficient detail to allow the committee to judge whether, if completed successfully, it would be likely that the student would be awarded the degree. Should a student’s prospectus be unacceptable, or the student fails the prospectus defence, the student may resubmit the prospectus and be reexamined once.

Thesis
The completed thesis is examined orally by an examining board consisting at minimum of the thesis committee, an examiner at arm’s length to the project from within Carleton University (the internal examiner) and an examiner from another university who is at arm’s length to the student and the committee and who is a recognized expert in the area of the thesis (the external examiner). All university regulations apply.

Residence Requirement
All Ph.D. candidates must be registered full-time in a minimum of six terms to satisfy the residence requirement.

Language Requirement
A second language is required when relevant to the student’s program of research. Whether a second language is required and the level of proficiency expected is determined at the time of admission, based on the student's description of his or her proposed area of thesis research.

Milestones (to be completed by the end of the specified year)
**First year:** Completion of CGSC 6801* and CGSC 5100, and elective coursework. Spring Conference presentation.
**Second year:** Completion of remaining program coursework and the methodology rotations (CGSC 6002) and (CGSC 6003). Begin work on Prospectus. Spring Conference presentation.
**Third year:** Prospectus defence. Continue to work on thesis CGSC 6909 Ph.D. Thesis. Spring Conference Presentation.
**4th Year:** Thesis completion (CGSC 6909 Ph.D. Thesis) and defence.
*Please note CGSC 6801 is offered in alternate years. Course to be completed in second year if it is not offered in the first year of program.

Regulations
See the General Regulations section of this Calendar.
Admission

The requirement for admission into the M.Cog.Sc. program is an Honours degree with an average of at least A-.

Applicants whose first language is not English, or who have not completed a previous degree at an English-language university, must demonstrate fluency in English as outlined in the General Regulations.

To be admitted, a candidate must submit a description of his or her research interests in the area of Cognitive Science.

Admission

• Master's degree (or the equivalent) from one of the participating disciplines. An average of at least A- in courses in cognition is normally required.
• Applicants with a master's degree in one of the participating disciplines are normally admitted to a 10.0-credit program.
• Students eligible for admission to the 10.0-credit program but with deficiencies may be required to take additional courses or may be directed to apply for the M. Cog.Sc.
• An overall score of 70 on the Canadian Academic English Language (CAEL) Assessment
• A TOEFL score of 230 CBT (computer-based test) or 580; or 86 IBT overall with a minimum score in each component of writing (22), speaking (22), reading (20) and listening (20).
• An overall IELTS score of 6.5, with a minimum of 6.0 in each band score; or
• An acceptable certification that the language of instruction in your most recently completed undergraduate or graduate degree was English.
• To be admitted, a candidate must submit a description of his or her proposed area of thesis research and a member of the core faculty must indicate in writing that he or she is willing to supervise the student.