

**INSTITUTE OF COGNITIVE SCIENCE
CARLETON UNIVERSITY**

**CGSC 6002/6003: METHODOLOGY ROTATION
INFORMATION**

Purpose:

Students are required to complete two Methodology Rotations as part of their Ph.D. requirements. This idea was borrowed from the 'rotations' through different specializations that medical students encounter as part of their training. In Cognitive Science, the rotations are a recognition that a discipline consists of methods as well as results, and that knowledge of the results of research frequently gives little insight into the methods used to obtain these results. Spending time in a laboratory or other research venue in *two* participating disciplines should give students sufficient background to be able to interpret results from the areas of their rotations or possibly to use those methods in their own research. Accordingly, the methodology rotations should involve activities that are distinct from those the student will learn about through interacting with his/her Thesis Supervisor.

What does a rotation look like?

The nature of one rotation may be quite different from another based on the discipline, the student's needs, and the projects that a particular Rotation Supervisor may have going on at a particular time. For example, completing a rotation with a focus on Philosophy might include reading articles examining philosophical methods as they apply to Cognitive Science and a more in-depth application of those methods to a topic of mutual interest to both the student and the Rotation Supervisor (e.g., the nature of causal explanation in the Cognitive Sciences). However, a methodology rotation with a focus on Psychology may involve helping to develop, conduct, and analyze an empirical study with human participants (e.g., a study looking at the role of working memory load on the accuracy and speed of two-digit mental multiplication).

The role of the supervisor also varies across rotations. In some cases, students may meet with their supervisor every two weeks to discuss readings. In others, students may attend regular lab meetings and meet with the rotation supervisor less frequently. In all cases, the rotation supervisor is offering guidance and the opportunity for students to learn about a method in which she/he is an expert.

What the rotations have in common is that they provide a 'hands-on' approach to learning about the methods used in the Cognitive Sciences. Further, they all require that the rotation culminate in a final product. The nature of the final product will depend on the activities in the rotation and should be agreed upon (see below) before the rotation commences.

One way to gauge what would be sufficient for a Methodology Rotation is to view it in light of a 0.5 credit course; the amount of "work" should be comparable to what a student would expect to do in a standard 1-term course.

How do I register for the Methodology Rotation?

After consulting with the Rotation supervisor, the student completes the Methodology Rotation Agreement and attaches a brief description of the activities that will be included in the rotation. The Rotation supervisor then completes the "Basis for Evaluation" and returns the form to the student or sends it to the Thesis Supervisor for his/her approval. After the Thesis Supervisor's approval has been obtained, the form should be submitted to the Graduate Administrator, who will obtain the approval of the Graduate Supervisor in Cognitive Science.

The Methodology Agreement Form registration requires an override request. Once the Graduate Supervisor has approved the Agreement, the student will obtain their override and will be able to register. Students should obtain approval for the Methodology Rotation well before registration begins. They are advised not to start working on a Methodology Rotation before obtaining approval because not all projects or activities will fulfill the requirements of the Rotation.

How is the Methodology Rotation evaluated?

The grading scale used for the Methodology Rotation is SAT (Satisfactory, UNSAT (Unsatisfactory, or PWD (Pass With Distinction). At the end of the registration term, the supervisor will be asked to submit a grade, along with a brief justification. It may be useful for the supervisor to refer back to the "Basis of Evaluation" from the Methodology Rotation Agreement to determine whether the student has satisfied the requirements.

What form does the final product take?

Again, there will be variability across rotations. Both the student and the rotation supervisor will agree upon the exact nature of the final product in advance (see form on next page). Some examples of final products include written papers (e.g., literature reviews), conference submission (poster or paper), manuscript submission, or a lab report.

A Methodology Rotation is one term in duration. A copy of your final product (or in the case of a conference presentation, the information about submission to the conference) is due to the Rotation Supervisor and the Graduate Administrator (electronically) on the last day of the examination period in that term.

What kinds of places are suitable for rotations?

Although most students complete most of their rotations with professors at Carleton University, they are encouraged to consider other venues. In the past, students have completed rotations with professors at the University of Ottawa, at government research offices within Ottawa, and at other universities (e.g., University of Western Ontario, University of Alberta). For example, one student went to Louisiana for a term so that she could work in a Primate Cognition lab with a lead researcher in the field. Another student attended the annual Connectionist Modeling course at Oxford University in the UK. It is also possible to do a Methodology Rotation in a company. Students should consult with their Thesis Supervisors and the Graduate Supervisor if they are not sure whether an experience is suitable for a Methodology Rotation.

Students can apply for travel funds associated with a methodology rotation from the Institute, however, only one trip can be supported in a given year and the amount is the same as would be allowed for a conference. If a conference presentation arises from the activities associated with a methodology rotation, students can apply for travel funding to attend the conference but again, only one trip per year can be supported.

Questions?

Questions regarding the Methodology Rotation requirement should be addressed to the Graduate Supervisor of the Institute of Cognitive Science, Dr. John Logan at john.logan@carleton.ca

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AGREEMENT BETWEEN STUDENT AND METHODOLOGY SUPERVISOR

Please submit a signed copy of this form to the Graduate Administrator. After approval by the Graduate Supervisor, a copy will be emailed to the student, the Methodology Rotation supervisor and the thesis supervisor.

Student's Name: _____
Last First

Student Number: _____ Date of Application: _____

Carleton Email Address: _____

CGSC 6002 CGSC 6003
Area of Rotation (please check): Psychology Neuroscience Philosophy Linguistics Computer Science

Start date: _____ Estimated Completion Date: _____

Registration information: The Application Form must have signatures from the Project Supervisor and Thesis Supervisor.

Permission to register in this course will be granted after two copies of the form have been submitted to the Graduate Administrator (2202A) and approved by the Graduate Supervisor.

Students will then register for this course only in the term that they will finish the rotation. A copy of the paper, poster, or notice of acceptance of the same (if applicable) is due to both your project supervisor and Graduate Administrator (PDF – electronically) on the last day of the examination period.

PROPOSED TITLE OR TOPIC: _____

On a separate sheet, provide a **DETAILED DESCRIPTION** of the work to be done, including (as applicable) experimental design, basic bibliographic materials to be searched, etc.

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| BASIS OF EVALUATION | |
| _____ | |
| _____ | |
| _____ | |
| APPROVED BY: | |
| Name of Methodology Rotation Supervisor: _____ | Date: _____ |
| Email of MR Supervisor _____ | Organization Name: _____ |
| Thesis Supervisor: _____ | Date: _____ |
| ICS Office Use Only | |
| Cognitive Science Graduate Supervisor: _____ | Date: _____ |