Master of Science
IN APPLIED COMPUTING
INFORMATION FOR INDUSTRY PARTNERS

Computer Science
UNIVERSITY OF TORONTO

Internship Financial Details

The level of financial internship support for a student has averaged $45,000 for an eight month period. There are several avenues available to offset part of this cost, particularly using the MITACS Accelerate program, which offers a $15,000 stipend over the eight months, as long as it is matched by at least the same amount by the company; we prefer that the company provide a $30,000 match, which would raise the overall compensation to $45,000. Students are expected to participate in the preparation of a MITACS proposal. This program has proven to be extremely effective in the past, although successful funding cannot be guaranteed.

PROGRAM TIMELINE FOR INDUSTRIAL PARTNERS

Below is an outline of how industrial engagement in the MScAC Program typically takes place.

Year 1 September-December:
- Industry partner discusses potential internship opportunity with Program Director.
- Industry partner publicizes opportunity to students, and views CVs of students.
- On-campus visit/presentation.

Year 1 January-February:
- On-campus visit/presentation.
- Student visits and interviews.
- Industry partner selects students and prepare internship offers.

Year 1 March-April:
- Work with student and faculty supervisor to prepare grant proposal (optional).
- The faculty supervisor sends the proposal to MITACS for review.

Year 1-2 May-December:
- Industry partner works with faculty supervisor and student to facilitate on-site internship with company.
- Routine meetings with program director and faculty and industrial supervisors.

COMPANIES INTERESTED IN PARTICIPATING
IN THIS PROGRAM SHOULD CONTACT US:

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The Professional Masters Program Overview

All graduate degrees within the Department of Computer Science at the University of Toronto are designed to capitalize on the research strengths of its faculty. Unlike our traditional M.Sc. program, which requires a novel research thesis, the Masters of Science in Applied Computing (MScAC) Program instead requires a research-based professional internship. Students in this selective program are of outstanding calibre, and can be Canadian or international[1].

PROGRAM TIMELINE FOR MSCAC STUDENTS

Below is an outline of how the PM program typically takes place.

Year 1 September-December:
- Student develops plan of study and commences coursework.
- Student prepares resume and additional promotional material and commences industrial outreach.
- Student finds a faculty supervisor at the department.

Year 1 January-April:
- Student continues coursework.
- Industrial partners and students explore internship options; internship interviews take place in January-February.
- **Internship offers in late February.**
- Student, in consultation with the industrial partner and faculty supervisor, prepares grant proposals.
- Students have routine meetings with faculty supervisor and industrial supervisor.

Year 1 May-August:
- First half of internship.
- First half of business entrepreneurship course.

Year 2 September-December:
- Second half of internship.
- Student completes second half of business entrepreneurship course.

Note that the internship is the final requirement of the program, so that it is possible for the student to consider full-time employment upon completion of the internship.

Students in the MScAC are expected to complete the same set of course requirements as those in the regular M.Sc., amounting to four one-term courses in various research specialties. As well, MScAC students take two further courses: one on business communication skills and the other on technical business entrepreneurship. In total, five of the six courses are completed in the first eight months of the program, and one course is spread out over the last eight months.

Internships are eight months in duration, typically beginning in May of a student's first year, and are thus completed at the end of December of the student's second year. One course overlaps with the student's internship; this is not an onerous time requirement, and it serves the purpose of allowing the student to return periodically to the University for mentorship, supervision and social activities.

Professional Masters Internships

An MScAC usually involves research aggregation, namely the synthesis of recent research results into an evaluation, study, or demonstrable, industrially relevant prototype. While the scope of an internship may involve coding or systems development that may lead to a contribution to a company's product or service offering, it is not likely to be suitable for product development. Industrial sponsors should instead consider our interns for risk tolerant projects that may fail or change course.

The goal of the internship is that a project will be defined collaboratively among the industrial sponsor, the student, and a faculty supervisor[2]. This discussion should define an eight month project with some clear expectations and outcomes, which should be written up by the student as a short position statement. Since we anticipate that some exploratory research would be involved over the internship, it would qualify for MITACS matching funds, which requires a specific proposal. Armed with a position statement, an internship offer and an academic and industrial supervisor, the student would begin the internship on May 1. In all likelihood, the internship needs to remain flexible even after the proposal is accepted,

particularly if research is involved, so the student is expected to have regular meetings with his or her supervisors.

The flexibility of the internship is determined through consultation with the student and his or her academic and industrial supervisors. The nature of projects could include:

- technology transfer of ideas from a professor to industry
- a student-driven project investigating industrially relevant applied research
- a company-specific project involving applied research
- evaluation of new initiatives for a specific industrial purpose

PROGRAM SUMMARY REPORT

Toward the end of the internship period, the student will write a short internship report that is vetted with both supervisors. Overall, the student must demonstrate that he or she has performed applied research and demonstrated its success or failure. **A report typically includes a description of the student's role as it develops over time, the outcomes achieved and the student's planned next steps.**

Some additional notes:
- It is possible for students to work on proprietary or company confidential projects, but a non-proprietary overview of the work must be available to the University.
- Because the internship is the terminating component of the MScAC program, the company may see this as an opportunity to hire the student seamlessly into a permanent role following the internship.
- An internship is generally expected to be conducted in the vicinity of Metropolitan Toronto. Alternative arrangements are negotiable.

> " We have been very pleased with the UofT MScAC program. Interns from this program are more experienced and well-rounded than our other interns. The process of reviewing candidates and hiring is very good, and the length of the internship is ideal for our needs. "
>
> Kim Davidson
> President & CEO, SIDE EFFECTS SOFTWARE

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[1] All of our MScAC students, whether Canadian or International, are eligible for internships with companies within Canada.

[2] The latter may be the Director of the MScAC program or an academic with the deepest domain knowledge.