During the 2008-09 academic year the Faculty is planning to establish a number of BSc/Masters tracks, starting with the BSc/MSc(Thesis) (and similarly BA/MA(Thesis), BSc/MA(Thesis) and BA/MSc(Thesis) tracks for the four Science units offering BA and/or MA degrees, namely Computer Science (BA), Geography (BA and MA), Mathematics & Statistics (BA and MA) and Psychology (BA and MA)).

The aim of the BSc/MSc track is to define a path where strong McGill undergraduates can receive early admission (with conditions) for a MSc program, tailor their undergraduate program for good preparation for graduate studies and be ready to start their MSc during the summer following their BSc graduation. Although departmental requirements vary from discipline to discipline, it is expected that BSc/MSc students will have completed enough advanced courses during their BSc studies so that they will need to complete at most four 3- or 4-credit graduate courses during their MSc studies.

1 Overall functioning of the BSc/MSc Track

- Starting in their winter term of U2, McGill BSc undergrads could apply for entrance into the BSc/MSc track. Applications will go directly to departments and after acceptance at the departmental level, the applications will be considered by GPS for formal approval. Departmental entrance requirements may vary, but the minimum required CGPA at the end of U2 must be at least 3.3 (the departmental minimum may be set higher). Departments may also have additional requirements such as: (1) certain U2 courses completed, (2) evidence of excellent undergraduate research, (3) registration in an Honours program or (4) sponsorship by the intended MSc thesis supervisor.

- Acceptance offers may be given as early as the end of the U2 year and will be conditional upon successful completion of the BSc degree with conditions on the minimal final CGPA required and possibly also a condition on which courses must be completed as part of the BSc program. For example, there may be a condition that the BSc program includes a specified number of courses at the 500-level or above. These additional conditions will be determined by the department and sent to the GPS when an offer is recommended by the department.

- To facilitate allowing BSc/MSc students to take graduate level courses during U3 of their BSc studies, SOUSA will implement a fast-track method for approving up to 8 credits of 600 and 700-level courses for students accepted into the BSc/MSc track.

- During the U3 year, all BSc/MSc students will be tracked by their department and GPS
will maintain a list of all BSc/MSc students. The department will support different ac-
tivities for these students, which may include: special advising to ensure they select the
correct U3 courses, help in getting matched with research groups, advice on applying for
NSERC/FQRNT/external scholarships, inclusion in departmental seminar series and so on.
The Faculty of Science may also provide some services to these students through OURS. For
example, a special seminar on Science writing might be organized.

• At the end of U3, students in the BSc/MSc program will be given the choice of starting their
MSc studies either in May or in September. If a student chooses a starting time different
than on their application, the standard processes of deferral or change of term can be used.

In some cases it may be advantageous for the student to hold an NSERC USRA summer
fellowship, so they would not register as a MSc student until September. In either case, it is
recommended that students be involved in research at McGill during the summer.

• Once in the MSc program, the expected course load for BSc/MSc students will be at most
four 3- or 4-credit graduate courses. Normally most of these courses will be completed in the
first term.

• BSc/MSc students will start their research in the summer following their BSc, continue with
their research while completing the course requirements, and then focus fully on their thesis.
Since the students are effectively completing the normal M.Sc. program, the same rules for
terms of residence required apply to these students (i.e. at least three terms of residence).

• During the MSc year students would be given advice on applying for Ph.D. programs.

2 Requirements for Departments to participate in the BSc/MSc track

• Accept and process applications for BSc/MSc students with the intent of accepting at least
some qualified applicants.

• Provide followup and activities for the accepted students during their U3 undergraduate year.

• Ensure that the MSc program is flexible enough that BSc/MSc students will be required to
take no more than four 3 or 4-credit graduate courses during the MSc part of their studies.
This may involve modifying the MSc program and/or adding new special research courses
which could be taken instead of lecture courses. All such program modifications must go
through the normal approval process, starting with the Faculty of Science Academic Com-
mittee.

3 Frequently asked questions

Below you will find some answers to questions that have arisen during the process of designing the
BSc/MSc track. Further questions may directed to Laurie Hendren, hendren@cs.mcgill.ca.
Are we proposing a new degree?

No, the proposal is a framework that uses the existing BSc and MSc degree requirements. Some departments may need to revisit their MSc degree requirements to enable some further flexibility in the number of course credits required.

The current proposal is to call this the BSc/MSc Track, which would imply that it is a track composed of the BSc degree followed by the MSc degree.

What is the motivation for creating the BSc/MSc Track?

In the Faculty of Science we have some very strong undergraduate students who are often involved with research and/or graduate-level courses at the undergraduate level. We already have informal processes in place within departments to encourage students to continue on to a MSc. This proposal is to formalize this process, which could have the following benefits:

- By identifying students who may be interested in graduate studies during their U2 year we may encourage students to think about the possibility of MSc studies at McGill and help them to prepare well for those studies. This can include advising about the correct higher-level courses to include in their U3 year, including such students in undergraduate research opportunities, helping students apply for appropriate fellowships, and integrating them into our research teams or departmental research seminar series.

- Students can benefit by being officially recognized with acceptance (with conditions) into the BSc/MSc Track as early as the end of U2.

- Departments and profs can benefit by keeping some of our really good undergrads for the duration of their MSc studies. This would help keep the quality of our MSc graduate population high. In some cases this would allows profs to continue on a line of research that had been started as an undergraduate research project.

- The number of MSc applicants in some areas has been dropping. By having a visible BSc/MSc Track we can gain some visibility for all the Faculty of Science departments. GPS is also willing to help increase visibility.

- By identifying strong students in U2 departments can ensure that these students are informed, and apply for, fellowships.

Is the intent to create two classes of MSc students?

No, the students in the BSc/MSc track would complete the same MSc thesis program (normally 45 credits) as any other MSc thesis student. However, by preparing well in the BSc part of their studies, it may be possible for the BSc/MSc students to complete their MSc studies a bit earlier than compared with students coming in without a similar background. For example, BSc/MSc students may have already completed some graduate-level courses during their BSc studies or they may have already become familiar with an area of research through their experiences in undergraduate research.
Is there a formal time-to-completion requirement for the MSc part of the BSc/MSc track?

No, the BSc/MSc students would have the same formal time-to-completion requirements as all other MSc students. They must complete a minimum of three terms of residence and ideally take a maximum of two years to complete their degree. However, since the BSc/MSc students would be able to start their MSc in the summer immediately following their BSc studies, and because they may have a head start on courses and/or research, some students may be able to complete their MSc as early as the end of their second summer. This summer-to-summer time-to-completion is not a requirement, nor a promise to the student that they can finish in that time.

GPS confirmed that starting a MSc in the summer term is possible.

When could students apply to the BSc/MSc track?

Ideally students could apply as early as the winter term of U2 and have an admissions decision before the date to register for U3 classes. Students could apply later, during U3. Of course, students always have the option of following the normal MSc application process, should they miss any deadlines for the BSc/MSc track.

When could students start their MSc?

Students graduating in Spring could start their MSc in the summer term or the fall term. Students graduating in Fall could start in the winter term.

How many graduate courses should be required of MSc students?

The BSc/MSc proposal has raised an important general question about our MSc programs - how many graduate courses should be required?

There is a large variance between the existing course requirements of the different departments (minimum of 6 credits, maximum of 27). Some departments, such as Chemistry, have varying requirements, depending on the background of the student.

GPS has provided the following guidelines for a thesis MSc:

- a graduate program must have 45 credits;
- at least 24 credits must be assigned to the thesis/research;
- at most 21 credits should be associated to courses.

Please note that some of our existing MSc thesis programs require more than 45 credits. We have been advised that any program revision must ensure that exactly 45 credits are required.

GPS also confirmed that the Chemistry model, with varying number of course/thesis credits is completely acceptable. That is, depending on the background of the student, the division between course and thesis credits may vary.

Departments may wish to think about how they might implement a varying system in their unit, which could apply to all MSc students, but would be particularly useful for the BSc/MSc track.
Here is one possible scenario - they may be other better ones. Let us say that a department feels that a student must have mastered 21 credits of graduate course requirements, because this is what required for a complete background and proper preparation. One could decide that it doesn’t matter if the student mastered this material as part of their BSc degree or MSc degree. Thus, a student who had completed $x$ (perhaps with a maximum on $x$) credits of graduate-level courses in their BSc degree could be allowed to substitute a extra thesis/research courses worth $x$ credits in their MSc degree. For example, a student who had completed 9 graduate course credits during their undergraduate degree could be asked to complete 12 graduate course credits and 33 thesis/research credits, whereas a student who had completed no graduate courses before starting their MSc would complete 21 course credits and 24 thesis/research credits. The actual requirements of what is expected for the final thesis does not vary, it is simply a matter of ensuring that all students complete a total of 45 credits with at least 24 of those credits as thesis credits.

Another idea, taken from one of the department proposals, is that students who replace some courses with an extra research course could be asked to do something in that extra research course which would encourage them to progress rapidly on their research. For example, they could be asked to prepare a thesis proposal document, or give a research presentation in a departmental graduate student seminar series. Any new courses and program changes must go through the normal approval process. After approval by the department, the appropriate course proposal and program revision forms should go to the Faculty of Science Academic Committee.

What about financial support for these students?

Clearly the BSc/MSc track students should get at least the same level of support as ordinary MSc students during their MSc studies. It is not expected that the BSc/MSc students would get any special financial support during their BSc studies, although they may naturally be the kind of student to participate in USRA or SURA awards.

It is likely that many of these students will be strong and by identifying them by the end of U2 we will be able to ensure that they apply for all appropriate federal, provincial and international fellowships.

In addition, it is hoped that some central McGill funds can be used to help partially support these students. Having a well thought out and general Faculty of Science program will help.

Who would make the acceptance decisions?

There would be a minimal threshold for CGPA of 3.3. Each department will run its own admissions, with its own selection criteria, which may be more than the minimum and can also be guided by other departmental constraints such as availability of funding and advisors.

After the department has made a decision it will go to GPS. If the application meets the minimum criteria there should be no problem at that level. The official decision would come from GPS and would give acceptance with conditions into the MSc program.

GPS would maintain a list of students accepted into the BSc/MSc track so that they could all be contacted about any events or research opportunities that may become available.
What about other B*/M* combinations?

Computer Science, Psychology, Geography and Mathematics & Statistics have BA and/or MA programs, similar to their BSc and MSc programs. The same mechanism as outlined for the BSc/MSc may be applied to BA/MA, BSc/MA and BA/MSc combinations for those departments in cases where the undergraduate degree appropriately prepares students for the graduate degree.

What could the departments do for the BSc/MSc students during their U3 year?

Departments have already suggested a wide variety of activities. Here are some of them:

- participate in departmental field trips
- participate in local multi-university seminar series
- be given the opportunity to tour departmental research facilities
- one-to-one advising with a departmental advisor
- ensure that existing departmental guidance on research methods and ethics are made available to these students, as well as advice on applying for scholarships
- attend weekly seminar groups of a departmental research group