

## MSc Atmospheric & Oceanic Sciences (Thesis)

### Course Selection Guidelines 2024-2025

The MSc degree in Atmospheric & Oceanic Sciences requires a minimum of 45 credits, up to a maximum of 51 credits. The majority of students will register for 21 to 24 credits (seven to eight 3-credit courses<sup>1</sup>) of coursework in their first year, and 24 credits of [thesis courses](#)<sup>2</sup> in their second year.

Students with a strong background in atmospheric or oceanic sciences (*see page 4*) will register for fewer credits of coursework, but must still complete a minimum of 45 credits. Additional information is provided on page 4 of this document.

The [typical timeline and typical registration schedule](#) for our MSc program are shown in the table on page 2 of this document.

#### Formal program requirements – all MSc students

Formal program requirements are listed in the McGill University eCalendar, at

[https://www.mcgill.ca/study/faculties/science/graduate/gps\\_sci\\_atmospheric\\_oceanic\\_sciences](https://www.mcgill.ca/study/faculties/science/graduate/gps_sci_atmospheric_oceanic_sciences)

This eCalendar page lists the approved Complementary Courses which satisfy the coursework requirements of the MSc program.

***Students are responsible for understanding and complying with the program requirements listed on the eCalendar page for their program.***

***If you have questions concerning these program requirements, please consult the Student Affairs Coordinator at [graduateinfo.aos@mcgill.ca](mailto:graduateinfo.aos@mcgill.ca), and/or your supervisor (if you already have one), and/or the Graduate Program Director (GPD), Dr. Thomas Preston ([thomas.preston@mcgill.ca](mailto:thomas.preston@mcgill.ca))***

Please note that although ATOC 557 and ATOC 558 are not yet listed as approved complementary courses in the eCalendar, they are acceptable substitutes for a complementary course (when offered in a specific year).

#### Reading courses<sup>3</sup>

In the MSc 1 year, students may replace one 3-credit course from the list of approved complementary courses by a 3-credit reading course supervised by an AOS faculty member (ATOC 670, ATOC 671 or ATOC 672) if they wish to do so.

#### Student Seminar Series

Although registration is not required, students registered in M.Sc. programs are expected to regularly attend one of the student seminar series ([ATOC 751D1/D2](#) or [ATOC 752D1/D2](#)) and the Departmental seminar series during the entire period of their enrolment in the program.

## Typical timeline and typical registration schedule – MSc students:

<p><b>MSc 1 Fall (Sep–Dec)</b></p>	<p>Four 3-credit ATOC courses (500- or 600-level)</p>	<p><b><i>ATOC courses offered in Fall 2024</i></b></p> <p>ATOC 512 Atmospheric and Oceanic Dynamics            ATOC 519 Advances in Chemistry of Atmosphere            ATOC 531 Dynamics of Current Climates            ATOC 540 Synoptic Meteorology 1            ATOC 568 Ocean Physics            ATOC 670, 671, 672 <a href="#">Reading Courses</a></p> <p>Other 500-level courses may sometimes be offered in addition to, or in place of, some of those listed above.</p>
<p><b>MSc 1 Winter (Jan–Apr)</b></p>	<p>Three to four 3-credit ATOC courses (500- or 600-level)</p>	<p><b><i>ATOC courses offered in Winter 2025</i></b></p> <p>ATOC 513 Waves and Stability            ATOC 521 Cloud Physics            ATOC 541 Synoptic Meteorology 2            ATOC 548 Mesoscale Meteorology            ATOC 557 Research Methods: Atmospheric and Oceanic Sciences            ATOC 558 Numerical Methods and Laboratory            ATOC 670, 671, 672 <a href="#">Reading Courses</a></p> <p>Other 500-level courses may sometimes be offered in addition to, or in place of, some of those listed above.</p>
<p><b>MSc 1 Summer (May–Aug)</b></p>	<p>No courses; full-time work on thesis</p>	
<p><b>MSc 2 Fall (Sep–Dec)</b></p>	<p>ATOC 691 (<a href="#">thesis course<sup>2</sup></a>; 3 credits)            ATOC 692 (<a href="#">thesis course<sup>2</sup></a>; 6 credits)            ATOC 694 (<a href="#">thesis course<sup>2</sup></a>; 3 credits)</p>	
<p><b>MSc 2 Winter (Jan–Apr)</b></p>	<p>ATOC 699 (<a href="#">thesis course<sup>2</sup></a>; 12 credits)</p>	
<p><b>MSc 2 Summer (May–Aug)</b></p>	<p>If program is not completed in Winter of the MSc 2 year:            No courses; full-time work on thesis</p>	<p>Students typically complete degree requirements in the Summer semester of the MSc 2 year, or in the Fall semester of the MSc 3 year.</p>
<p><b>MSc 3 Fall (Sep–Dec)</b></p>	<p>If program is not completed in Winter or Summer of the MSc 2 year:            No courses; full-time work on thesis</p>	<p>Students typically complete degree requirements in the Summer semester of the MSc 2 year, or in the Fall semester of the MSc 3 year.</p>

## Approval of the Graduate Program Director

Students wishing to register for:

- a reduced course load;
- graduate courses (500 level and higher) other than the approved complementary courses;
- a [reading course](#)<sup>3</sup>

**must obtain the approval of the Graduate Program Director, Dr. Thomas Preston.** Students can contact Dr. Preston at [thomas.preston@mcgill.ca](mailto:thomas.preston@mcgill.ca).

## Consultation with supervisor

We highly recommend that students consult their supervisor before finalizing their course selection.

Students who do not yet have a supervisor may register for Fall 2023 following the guidelines on page 1 of this document, and may delay course registration for Winter 2024 until early January 2024, by which time they may have secured a supervisor.

(All MSc students are expected to have a supervisor by the end of January 2024; however, course registration for the Winter semester closes in mid-January.)

Students who do not yet have a supervisor, **and who follow the guidelines on pages 1–2 of this document**, need not consult the Graduate Program Director unless they wish to do so.

## Academic Standing

Graduate students must obtain grades of B- or better in courses used to fulfil program requirements.

If a grade of B- or better cannot be attained, **the resulting grade will be F (Fail)**, as shown in the grade scale used for graduate studies at McGill:

Grading and Grade Point Averages (GPA)		
Grades	Grade Points	Numerical Scale of Grades
A	4.0	85–100%
A-	3.7	80–84%
B+	3.3	75–79%
B	3.0	70–74%
B-	2.7	65–69%
F (Fail)	0	0–64%

## Students with a strong background in Atmospheric or Oceanic Science, or a Diploma in Meteorology

For students with a strong background in atmospheric or oceanic science, or a Diploma in Meteorology, the course load may be reduced in consultation with the Graduate Program Director and the supervisor. Such students may register for additional [thesis courses](#) ATOC 693 (6 credits) and/or ATOC 695 (6 credits) if needed to complete the 45 credits required for the program.

**Approval of the Graduate Program Director is required in all such cases.**

## McGill University Course Schedule

To access the McGill University Course Schedule:

1. Go to [https://horizon.mcgill.ca/pban1/bwckschd.p\\_disp\\_dyn\\_sched](https://horizon.mcgill.ca/pban1/bwckschd.p_disp_dyn_sched) or search online for “McGill Dynamic Schedule”.
2. Select the desired term.  
Please note that ATOC courses are offered in the Fall and Winter terms only. Courses offered by other departments may be scheduled in Fall, Winter, or Summer.
3. Select the desired subject.  
For example, all courses offered by our department are listed under subject code “ATOC”.
4. Leave default settings in all other fields.
5. Click on the “Get Course Sections” button.

Notation used for days of the week: “T” is used to indicate Tuesday; “R” is used to indicate Thursday.

## Credit system at McGill University

Most courses in our program are assigned a weight of 3 credits. At McGill a 3-credit course normally indicates three hours of lectures per week for one term (13 weeks). However, there are normally no lectures associated with [thesis courses \(e.g. ATOC 691\)](#).

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### <sup>1</sup> Required number of coursework credits:

Although the formal program requirement is seven 3-credit courses, a normal load is considered to be eight 3-credit courses.

### <sup>2</sup> Thesis courses:

Thesis courses are designed to grant academic credit for work done on the Master’s thesis. There are normally no reading assignments or written assignments (other than work on the thesis) associated with thesis courses. There are normally no lectures or examinations associated with thesis courses.

A “Pass” grade is automatically issued for all thesis courses once the thesis and the program have been successfully completed.

### <sup>3</sup> Reading courses:

A reading course is a specially designed course not normally offered as part of the curriculum, arranged between a student and a faculty member. After obtaining approval from the GPD, the Student Affairs Coordinator and GPD need to be informed about the chosen topic and supervisor at the beginning of the pertaining term.

The course is run as a tutorial and counts as a regular course. It may count as credits towards the student’s concentration. Normally the student receives a letter grade (A, A-, B, etc.) for the course.