

MATH 1MP3: Introduction to mathematical and scientific programming: Winter 2017

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Personnel

- When e-mailing either the instructor or the TA about the course, **please include “1MP3” in the subject and your Mac ID in the body of the e-mail.**
- *Instructor:* Ben Bolker (bolker@mcmaster.ca). Office hours TBA, 314 Hamilton Hall; meetings during office hours are preferred but other times may be available by appointment. For more information, see my web page.
- *Teaching assistants:* **TBA** When emailing, *please allow at least one full business day for responses.* Please note also that **the TA may not respond to emails sent less than 24hrs before an exam, assignment, or project is due.** The primary time to get help is during tutorial but, time permitting, the TA may be available for extra help outside of that hour.

Lectures

- M, W 8:30-9:20, F 10:30-11:20 (all in ABB 102)
- Attendance *is required* on Wednesdays and Fridays due to in-class assignments; because some of the in-class marks can be dropped (see below), a very good reason will be needed for excuses.

Labs and assignments

- Tu 1:30-2:20 BSB 249 (section 10110); Th 10:30-11:20 BSB 244 (section 10109); Th 10:30-11:20 BSB 241 (section 17033); Fr 2:30-3:20 BSB 244 (section 16369)
- Labs start **Thursday January 5**. They will be used primarily for help and review, not for presenting new material (any exceptions will be noted).
- Some assignments (in class and take-home) will use CodeLab. Other assignments, approximately weekly, will be submitted in a dropbox on Avenue. You need to register for (and pay for) CodeLab; see instructions below.
 - There will be approximately 20 in-class assignments, on Wednesdays and Fridays. The lowest 4 marks will be dropped.

Course material

- The course will cover a basic introduction to programming and mathematical/scientific computing in Python.
- The primary course material is the lectures, and associated lecture notes, available at <http://bbolker.github.io/math1mp/>
- The **optional** (but recommended) course textbook is Gries et al. *Practical Programming* 2d ed., available from the bookstore, the publisher (The Pragmatic Bookshelf), or amazon.ca.
- It is recommended to print the lecture notes and bring them to class to make additional notes
- You need to bring a laptop or tablet to class; if this is going to be a problem, please contact the instructor as soon as possible to make arrangements. You should install Python and PyCharm on your laptop (and/or desktop) computer, following instructions to be provided in lab.

Evaluation

- Assignments (15% home, 15% in-class)
 - lowest 4 in-class marks will be dropped
- Final project (20%)
- Midterm test (20%)
 - in class, February 12 (tentatively)
- Final exam (30%)
 - Will be scheduled by the Registrar

CodeLab information

Registration

1. Go to <http://www.turingscraft.com/go.html> .
2. Click "Register for CodeLab"
3. choose "I am a student in a course ..." and click CONTINUE
4. enter the Section Access Code: **MCMA-25286-YWFH-31** and click CONTINUE
5. continue filling out the forms being careful to enter a *valid* email address (**please use your @mc-master.ca e-mail address, not Gmail/Yahoo/etc.**) and first and last names (these will appear in the course roster)

After registering you will be able to log in, but you don't have access to the exercises (see below).

Log in

1. Go to <http://www.turingscraft.com/go.html> .
2. Click "Login to CodeLab"
3. the **username** is the email address given during registration
4. the **password** is the password selected during registration

Getting full access

1. Log in to CodeLab (if you haven't already)
2. Click LOBBY
3. Click "Get Full Access"
4. Follow the directions (options include paypal, ecommerce, check for a \$2 handling fee, and payment keys)

Policies

Grading scheme

I reserve the right to change the weightings in the grading scheme. If changes are made, your grade will be calculated using the original weightings and the new weightings, and you will be given the higher of the two grades. At the end of the course the grades may be adjusted but this can only increase your grade and will be done uniformly. I will use the following grade chart to convert between letter grades, grade points and percentages:

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
12	11	10	9	8	7	6	5	4	3	2	1	0
90-100	85-89	80-84	77-79	73-76	70-72	67-69	63-66	60-62	57-59	53-56	50-52	0-49

(from p. 29 of the current Undergraduate calendar)

Dates subject to change

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

Missing tests or work

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work” (see here). Please note these regulations have changed beginning Fall 2015, in particular:

- The time frame within which the MSAF is valid has been reduced from 5 days to 3 days.
- The upper limit for which an MSAF can be submitted has been reduced from ‘less than 30%’ to ‘less than 25%’ of the course weight.

In most cases, missed work or tests will be addressed by reweighting the remaining work or tests. If you must miss a lecture, it is your responsibility to find out what was covered. The best way to do this is to borrow a classmate’s notes, read them over, and then ask your instructor if there is something that you do not understand.

Late work

All assignments are due on Avenue to Learn prior to class, unless otherwise stated. I reserve the right to penalize late work by 10% per day.

Online component

We will be using the learning software Avenue to Learn. Students should be aware that private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may be visible to other students in the course. By taking this course you consent to this disclosure. If you have any questions or concerns about this, please discuss them with the course instructor. Grades will be posted on AtL.

Academic Integrity

The expectations for this class are fairly simple: however, if you have any questions **please ask**. See the McMaster Office of Academic Integrity’s web page for general information.

You are expected to exhibit honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. Academic dishonesty can result in serious consequences, including a notation on the transcript, or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty; for more information please refer to the Academic Integrity Policy at <http://www.mcmaster.ca/academicintegrity>.

Some common academic dishonesty issues:

- *Plagiarism*: For example, the submission of work that is not one's own or for which other credit has been obtained.
- *Improper collaboration*: In this course, you are encouraged to discuss the assigned problems with other students in your class. You may *discuss* the solutions to problem sets, but **you must write up your solutions yourself without copying phrasing from other students' work. If you work with others, you must clearly indicate on your write-up who you worked with.** When work is not explicitly assigned as a group project you must write the solutions in your own words without referring to any other students' work. The copying or even paraphrasing of anyone's solutions will be considered academic dishonesty. For group projects, you will be asked to report your own assessment of how you contributed to the group's work.
- *Copying or using unauthorized aids in examinations*: In this course you are not allowed to talk to or communicate in any way (e.g. pass notes) with anyone but the instructor or the invigilators during an examination. The final will be a take-home exam. I will clearly indicate at the time what resources you may or may not use. You are on your honor to observe any specified time limits and to refrain from communicating with anyone other than the instructor/TA about the contents of the exam.
- While it is not technically an example of academic dishonesty, *continuing to write once the announcement that the allotted time for a test or examination is over* without the express consent of the instructor or one of the invigilators will be penalized.

This outline will be linked from the course home page. However, it is your responsibility to check the course home page and syllabus regularly for further announcements, course handouts, assigned work and its due dates, information about test dates and locations when this information becomes available, downloadable course related material, etc.. Recorded marks for tests and assignments will be posted on Avenue. You should check these once they become available and bring any discrepancies to the attention of the instructor or the TA as soon as possible.