

MATH 1MP3

Introduction to mathematical and scientific programming

Winter 2018

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:* Matt Valeriotte (matt@math.mcmaster.ca (<mailto:matt@math.mcmaster.ca>))
- *Instructor website:* <https://ms.mcmaster.ca/~matt/> (<https://ms.mcmaster.ca/%7Ematt/>)
- *Office hours:* 9:30am to 11:00am on Mondays, 10:30am to noon on Tuesdays and by appointment
- *Teaching assistants:* Yicheng Chen, Angelina Pesevski, and Peter Tait
- When emailing for assistance, please send your messages to Yicheng Chen (cheny312@mcmaster.ca (<mailto:cheny312@mcmaster.ca>))
- *Please allow at least one full business day for responses.* Please note also that **Yicheng 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.

Lectures

- M, W 8:30-9:20, F 10:30-11:20 (all in LRW/B1007)
- 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

- Mo 11:30-12:20 BSB 244 (section 10103, TA: Peter); Th 10:30-11:20 BSB 244 (section 10102, TA: Peter); Fr 12:30-13:20 BSB 249 (section 15510, TA: Peter); Fr 2:30-3:20 BSB 244 (section 11346, TA: Angelina), Fr 3:30-4:20 BSB 244 (section 11386, TA: Angelina)
- Labs start **Thursday January 11**. 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 (<http://www.turingscraft.com/index.php>). Other assignments, approximately bi-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 15 in-class assignments, on Wednesdays and Fridays. The lowest 3 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 on the course website: <https://ms.mcmaster.ca/~matt/1mp3.html> (<https://ms.mcmaster.ca/%7Ematt/1mp3.html>). Note that the avenue site for this course will only be used for submitting homework assignments.
- The **optional** (but recommended) course textbook is Gries et al. *Practical Programming 2d ed.*, available from the bookstore, the publisher (The Pragmatic Bookshelf (<https://pragprog.com/book/gwpy2/practical-programming>)), or amazon.ca (<http://www.amazon.ca/Practical-Programming-Introduction-Pragmatic-Programmers/dp/1937785459>).
- 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 3 in-class marks will be dropped
- Final project (20%)
- Midterm test (20%)
 - in class, March 2 (tentative)
- Final exam (30%)
 - Will be scheduled by the Registrar

CodeLab information

Registration

1. Go to <http://www.turingscraft.com/go.html> (<http://www.turingscraft.com/go.html>) .
2. Click "Register for CodeLab"
3. Enter your valid @mcmaster.ca email address, **not your personal email address**.
4. Follow the link provided in the email verification that you receive.
5. Fill in the registration form and submit it.
6. Log in using the email address and password you provided.
7. Click on the "Add a Course" button.
8. choose "I am a student in a course ..." and click Next>
9. enter the Section Access Code: **MCMA-26065-JJRK-35** and click Next> and confirm.
10. Click on the green hamburger pulldown menu located at the upper right corner of the page and click on Account.
11. Fill in the ID field with your macid (letters+numbers, e.g. smithj1) and update.

NOTE: Steps 10 and 11 don't seem to be working for some students. As long as you have used your McMaster email address to register for codelab, then don't worry if steps 10 and 11 are not completed.

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> (<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
5. Click on the `Load` button next to this course to load it.

Getting full access

1. Log in to CodeLab (if you haven't already)
2. Click the green `Load` button next to this course
3. Click "Gain Full Access" button located near the top of the page.
4. Follow the payment directions (options include paypal/credit card, or money order, and payment keys). The cost is \$25USD.

Policies

The instructor reserves the right to change the weight of any portion of this marking scheme. For students in good academic standing, other weights might be considered. In either case, the final mark will be computed using this weighting and the new weighting(s). The highest score for a particular student will be her/his final mark. At the end of the course the grades may be adjusted but this can only increase your grade and will be done uniformly. We will use the grade equivalence chart published in the Undergraduate Calendar to convert between percentages and letter grades.

In case of difficulty/problems:

Contact Dr. Valeriotte as soon as possible. Failing that, contact the Associate Dean's Office in BSB 129.

Policy regarding missed work:

If you are absent from the university for a minor medical reason, lasting fewer than 3 days, you may report your absence, once per term, without documentation, using the McMaster Student Absence Form. Absences for a longer duration or for other reasons must be reported to your Faculty/Program office, with documentation, and relief from term work may not necessarily be granted. When using the MSAF, report your absence to matt@math.mcmaster.ca (<mailto:matt@math.mcmaster.ca>). You must then contact Dr. Valeriotte immediately (within 2 working days) by email to learn what relief may be granted for the work you have missed, and relevant details such as revised deadlines, or time and location of a make-up exam. Please note that the MSAF may not be used for term work worth 25% or more, nor can it be used for the final examination. Further details can be found here: <https://www.mcmaster.ca/msaf/index.html> (<https://www.mcmaster.ca/msaf/index.html>) and here: http://academiccalendars.romcmaster.ca/content.php?catoid=13&navoid=2208#Requests_for_Relief_for_Missed_Academic_Term_Work (http://academiccalendars.romcmaster.ca/content.php?catoid=13&navoid=2208#Requests_for_Relief_for_Missed_Academic_Term_Work)

Please note!

Once a final examination is written, the final grade cannot be adjusted to take into account any special situation. For more detail, and to download the "Petition For Missed Term Work Form," visit the "Procedures & Forms" web page located at the address <http://www.science.mcmaster.ca/associatedean/current-students/procedures-forms.html> (<http://www.science.mcmaster.ca/associatedean/current-students/procedures-forms.html>).

Academic Integrity:

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity. Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behaviour can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university. It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at <http://www.mcmaster.ca/academicintegrity> (<http://www.mcmaster.ca/academicintegrity>). The following illustrates only three forms of academic dishonesty: Plagiarism, e.g. the submission of work that is not one's own or for which other credit has been obtained, improper collaboration in group work, copying or using unauthorized aids in tests and examinations.

Important Message:

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.

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca (<mailto:sas@mcmaster.ca>). For further information, consult McMaster University's Policy for Academic Accommodation of Students with Disabilities (<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicAccommodation-StudentsWithDisabilities.pdf>).

Acknowledgement

This course was designed by Dr. Ben Bolker (<https://ms.mcmaster.ca/%7Ebolker/>), a professor in the Department of Mathematics & Statistics and in the Biology Department at McMaster. Almost all of the material that will be used in this instance of the course was developed and tested by Dr. Bolker. His assistance is gratefully acknowledged.

