MATH 210, Section 201 (Jan-Apr 2015)

Introduction to Mathematical Computing

Lectures: 2:00-3:00PM Monday, Wednesday, Friday in LSK 460
Labs: 2:00-3:00PM Tuesday in LSK 121
Instructor: Carmen Bruni
Office: MATH 201
Email: cbruni@math.ubc.ca
Office Hours : Monday and Wednesdays 3:00-4:00pm in MATH 201 and online on Piazza

Text There is no official text for this course. Lecture notes will be available on Sage Math Cloud (SMC) as well as extra notes on using the software. Various code that we use in class will be posted on SMC as well. There are several resources online that can help you with the programming topics in this course.
Webpage: http://www.math.ubc.ca/∼imoyles/courses/math210

Course Outline: This course is an introduction to the concept of mathematical computation. We will consider many mathematical techniques and applications that you may have explored in other courses but we will investigate them from a computational framework. To reach this goal, we will utilize the software packages Maple and Matlab. We will also introduce students to typeset mathematical communication through the use of LaTeX. Some of the concepts we will be exploring in these computational frameworks include:

1. Introduction to Programming
2. Recursive Methods
3. Number Theory
4. Linear Algebra
5. Probability

Grading Scheme:
50% Final Exam + 20% 2-hour Written Midterm + 10% Lab Midterm + 20% Assignments.

IMPORTANT: This is a 3-credit course with a maximum grade of 100. The instructor reserves the right to revise or round off grades if circumstances warrant. In order to make course grade standards consistent across sections this raw final grade will be scaled.

Midterms & Final Exam: There will be a final cumulative exam that will be held in April. Students are advised not to make travel plans during the exam time.
There will be two midterms. The written portion will involve questions of applied knowledge of a topic. The computational component will be in the lab and involve submitting code for computational solutions to problems. The midterm dates are as follows:

1. Computational: **Tuesday, February 10, 2015 from 2:00-3:00pm in LSK 121**
2. Written: **Wednesday February 25th from 5:00-7:00pm in CHEM D200**

Calculators, books, and notes are not allowed in any exams
If a student misses a midterm, that student shall provide a formal documented excuse such as a doctor's note within 72 hours or a mark of zero(0) will be entered for that midterm. If you are to miss a midterm due to religious observance, two weeks written notice is required by the student. See the UBC full policy on this for more information. There will be **NO** make-up midterms. Any tests missed with legitimate reasons will have their final exam re-weighted.

Assignments and Quizzes: There will be bi-weekly homework assignments which have both a written and computational component. Homework will be assigned Friday and due the Friday two weeks after by the posted time. Late assignments will not be accepted. This term, all homework will be done using the Sage Math Cloud (SMC). There, assignments will be posted and you will do the assignments on the cloud. Please also save local copies of your work in case of an emergency. Once you finish an assignment, leave it in your SMC account and it will get automatically collected at the beginning of Friday classes. Please sign up to SMC and send me an email with your account information (the email address you used to log in to SMC). Assignments must be done online on Sage Math Cloud and a hard copy must be printed and handed in.

Labs: Officially this course has a lab time every Tuesday from 2:00-3:00PM in LSK 121. The only date that will be mandatory to attend is when we have the computational exam (see above). Otherwise, this will be an office hour every week and a great place to come and use the software to solve your assignments.

Extra help: Drop-in Tutorials: There is a drop-in tutorial centre located on the third floor of LSK.
The AMS offers tutoring services http://tutoring.ams.ubc.ca/.

Cheating: It is the student's obligation to inform himself or herself of the applicable standards for academic honesty. Students must be aware that standards at the University of British Columbia may be different from those in secondary schools or at other institutions. If a student is in any doubt as to the standard of academic honesty in a particular course or assignment, then the student must consult with the instructor as soon as possible, and in no case should a student submit an assignment if the student is not clear on the relevant standard of academic honesty.

Please note the instructor reserves the right to modify this syllabus