Course Syllabus

- **Instructor**: Adrian Dobra (adobra@uw.edu)
- **TA**: David Marcano (dmarcano@uw.edu)
- **Lectures**: please see the recordings under Modules > Recordings. All the lecture material will be recorded.
- **Live sessions with your instructor**: every Tuesday between 12:00-1:00pm.
- **Live sessions with your TA**: every Thursday between 11:30-12:30pm.
- **Communication**: please use the Discussions section to post questions, reply to questions, or to share suggestions or results. The Chat tool is also useful for communicating among you or with David and I. Both of us will check Discussions and Chat every day, and respond to all your inquiries.
- **Homework assignments**: Due at 11:00pm on the following days: April 6, April 13, April 20, April 27, May 11, May 18, May 25.
- **Final project due date**: Monday, June 7 at 11:00pm.

Course policy on the submission of homework assignments

You must submit only code that can be compiled and run without any modifications. Your TA is not expected to grade code submitted in word files, or for which makefiles must be produced. Create a zip file with all the source code including the makefile necessary to compile your code, and submit it. Otherwise, you will not get credit for your submission.

Textbook


Prerequisites

Experience with programming in a high level language. Some background in statistics.

Course objectives

By the end of the course, you will be able to write code in R and C. You will be able to define and implement your own data structures that are tailored to the specifics of the problem you want to solve. You will gain notions and practical experience related to stochastic optimization, randomness and parallel programming.

Grading

The students will need to complete seven homework assignments and a final project. Each homework assignment is worth 10% of your grade. You will have at least one week to complete each assignment. The final project is worth 30% of
your grade.

Schedule of topics

1. Introductions, course logistics, description of the final project.
2. A brief introduction to R.
5. Recursion.
7. Trees.
9. Randomness.
10. Parallel programming with MPI.