

**STATISTICS FOR COMPUTER SCIENTISTS (STA248)**  
**SYLLABUS**  
**WINTER 2014**

Instructor: Dr. Radu Lazar  
Office: 6026 Sidney Smith Hall  
Office hours: R 12:10 p.m.-1:10 p.m., and also by appointment  
Email: r.lazar@utoronto.ca  
TA's:

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TAs' office hours: TBA  
If you need help with the class you can see me or any of the TA's during their office hours.

**Lecture: Where and When**

T 10:00 a.m. – 12:00 p.m., SS2117  
R 11:00 a.m. – 12:00 a.m., RW117

**Course description**

This is an introductory course in statistics whose main goal is to promote understanding of statistical reasoning. Statistical software will be used to take into account numerical information in order to make judgments and decisions.

**Textbook**

*Introduction to Probability and Statistics: Principles and Applications for Engineering and the Computing Sciences*, 4<sup>th</sup> edition by Susan Milton and Jesse Arnold. Additional material may supplement the text.

**Course website**

The website for this course is hosted on Blackboard. A university ID and password are required to access Blackboard courses. Students are required to maintain their current university email address as Blackboard uses this address to send course-related email messages.

**Software**

We will be using R, a free statistical package. It can be downloaded from [cran.r-project.org](http://cran.r-project.org). A manual can be found at [www.r-project.org](http://www.r-project.org)

**Calculator**

A basic 5-function calculator is necessary for this course.

### Grading

Your grade will be determined by a weighted average of homework assignments and exams as follows:

Homework Assignments	20%
Midterm Exam	30%
Final Exam	50%

### Examinations

There will be a two-hour midterm exam and a three-hour final exam. The final exam will be cumulative with the emphasis on the material not yet tested.

Exam	Location	Time	Date (subject to change)
Midterm 1	SS2117	3:00p.m. – 5:00p.m.	Tuesday, February 25
Final	TBA	TBA	TBA

### Missed examinations

No make-up exam will be given. If you miss the midterm exam for a legitimately documented reason, such as illness confirmed with a written excuse, your total exam grade will be based on the final exam. If you cannot attend the final for a legitimately verifiable reason you must provide a written excuse to receive an incomplete.

### Examination guidelines

You will be allowed one 8.5x11 reference sheet with formulae and notes but no examples (both sides can be used) for the midterm and two such sheets for the final. Remember to bring your own calculator for all tests (sharing is not permitted). You will not be allowed to use cell phones, smart phones, ipods and ipads during any of the exams. Your student ID will be required for all exams. You will not be allowed to take the exam if you are more than 15 minutes late. You will not be allowed to leave the exam room without submitting your completed exam after the exam has begun.

### Accommodations for Students with special needs

Any student with special needs should bring to my attention as soon as possible, but no later than the second week of class.

### Homework

There will be two graded homework assignments, each worth 10% of the total score for this class. You are not allowed to discuss the graded homework assignments with anyone before they are due. Additional homework problems will be assigned each week as practice problems but they will not be collected/graded.

Homework	Due date (subject to change)
Assignment 1	Thursday, February 13 (at the beginning of lecture)
Assignment 2	Thursday, March 27 (at the beginning of lecture)

### Course support

Please take advantage of the TAs' office hours. There are five TAs for this class and you can get help from all of them. Do not fall behind since it would be difficult to do well in this class otherwise. (Statistical topics build on each other). You should read the textbook (do not skip the solved examples in each chapter), my notes, do the homework assignments, and attend class.

### Academic integrity

The University of Toronto's academic integrity policy is designed to ensure that the principles of academic honesty and integrity are upheld. All university students are expected to abide by it. All acts of academic dishonesty will be handled according to the academic integrity policy. Additional information can be found <http://www.utoronto.ca/academicintegrity/>

Since STA248 is a very large class please be respectful of everyone else in the classroom. Please switch off your cell phones while class is in session.

### Tentative schedule (subject to change)

Week 1	Introduction to R, Chapter 6 - Descriptive Statistics
Week 2	Chapter 7 - Estimation
Week 3	Chapter 7 - Continued
Week 4	Chapter 8 - Inferences on the mean and variance of a distribution, Bootstrap
Week 5	Chapter 8 - Continued
Week 6	Chapter 8 - Continued, Chapter 9 - Inferences on proportions
Week 7	Break
Week 8	Midterm, Chapter 9 - Continued
Week 9	Chapter 10 - Comparing two means and two variances
Week 10	Chapter 11 - Simple Linear Regression
Week 11	Chapter 11 - Continued, Chapter 12 - Multiple Linear Regression
Week 12	Chapter 12 - Continued
Week 13	Chapter 15 Categorical Data

**Note:** It is your responsibility to keep track of the material that will be taught. Any change to the schedule, including the chapters/sections covered will be announced in class and on Blackboard.