



## DEPARTMENT OF STATISTICS

**Statistics 101**

**Spring 2012**

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**Instructor:** Andreas Buja (both Sections 001 and 002)  
**Office:** JMHH 471  
**Contact:** The main points of contact with the instructor are in person after class and during the highly recommended office hours. The instructor does not tend to email on a regular basis. Your primary source for questions and answers will be the webCafe discussion board (see below). For emergencies, send e-mail to the TAs who will forward your inquiries. If you still need to contact the instructor by email, look up the address at <http://stat.wharton.upenn.edu/~buja/>

**Classes meet:** Section 001, Mon/Wed 1:30-3:00, in F85 JMHH  
Section 002, Mon/Wed 3:00-4:30, in F85 JMHH

**Instructor's Office hours:** Mon 12:15-1:15 and 4:30-5:30, in 471 JMHH

### TEACHING ASSISTANTS:

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<b>Office:</b>	434	433	JMHH
<b>Office Hrs:</b>	Tue 6-7pm in 440	Thu 3-4 in 440	JMHH
	Wed 12:30-1:30 in 245	Thu 5-6 in 440	JMHH

### COURSE WEBSITE:

Statistics 101 is using webCafe. You can gain access by going to

<http://webcafe.wharton.upenn.edu>

and following the link to "STAT" and then to your section. All materials for this course will be distributed and managed via this website, and you will be able to monitor your grade entries throughout the semester.

An important feature of webCafe is the **discussion board** where everybody can place questions and comments. We will be using it extensively for answering your questions about homeworks, exams and scheduling. You are urged to go there first to see whether

your question has already been asked and answered, and, if not, to place your question so it can be answered once for everybody.

**Note for non-Wharton students:** If you do not have a Wharton computing account, you will need to establish one to access the website. The account also provides access to the computing labs in Wharton and to the intranet. To get an account, on or after the first day of classes, go to

<http://accounts.wharton.upenn.edu>

After you have obtained your account, allow up to 12 hours for activation.

Wharton students and students who have recently taken a Wharton course have existing accounts.

### **COURSE OVERVIEW:**

This course develops ideas for helping to make decisions based on data. Some of the following material will be covered: data displays and summary statistics for quantitative and qualitative variables; correlation and simple regression for pairs of variables; probability as a measure of uncertainty and as limiting relative frequency; the law of large numbers; the normal distribution and the central limit theorem; statistical inference based on standard errors, confidence intervals and statistical hypothesis tests.

The course does not dwell on the details of computation—its main focus is on understanding a few deep concepts and interpreting data and statistical results.

### **COURSE MATERIALS:**

- Textbook: “Statistics for Business: Decision Making and Analysis” by Robert A. Stine and Dean P. Foster. You are not required to purchase the book, but you should have access to a copy for regular reading assignments. You may, for example, team up with friends to share a copy. To keep cost down you may purchase a used copy of an earlier version of the book. We will work around any discrepancies between versions.
- Computer software: We will be using the freeware statistical language R. It can be downloaded at no cost from  
<http://lib.stat.cmu.edu/R/CRAN/>  
Select one of “Download R for Linux/MacOS X/Windows”.  
The general web page for R can be found by searching “R” online.  
The parts of the language that are needed for the class will be explained in detail.

If the textbook is not sufficient, you may consult other books, such as “The Practice of Business Statistics” by Moore, McCabe, Duckworth and Sclove, or “Statistics” by Freedman, Pisani and Purves. However, none of these books is required.

## HOMEWORK:

- There will be 8-10 homework assignments.
  - Homeworks will be assigned on webCafe and will usually be due a week later.
  - Homeworks should be written by editing a copy of the MS Word file that contains the problem statements. Each solution should be inserted after the respective problem statement following "YOUR SOLUTION:". Handwriting is not accepted.
  - Back up your work frequently on a data stick, so you can print and e-mail it from a Wharton computer if yours breaks down.
  - Hand in your homework solutions *always in both of the following ways:*
    - *Hand in a stapled paper copy of your solutions in the Statistics Department (JMHH, 4<sup>th</sup> floor, turn right exiting from the elevator) in the box marked STAT 101 (not in class and not to the TAs),*  
*AND*
    - *E-mail your MS Word file to [stat101.at.wharton@gmail.com](mailto:stat101.at.wharton@gmail.com) with the subject line indicating the homework and the year: "Subject: HW3 2012".*
- For re-grades and missing claims, there must be an electronic e-mail copy with date.
- Late homeworks will incur a deduction of 2 points per day. Late homeworks must be handed to the TAs directly, not placed in the submission box. Sending to gmail is not sufficient; the gmail account is only an insurance against misplacement on our part and will be consulted when needed only.
  - If you have a valid reason for late homework submission (e.g., computer broken, health problem), explain your situation to the instructor in class and he will validate your paper copy with a note to the TAs so they grade your work without point deduction.
  - Your solutions must show on the cover page your
    - name (as it appears on webCafe), and
    - section.
  - Homework is designed to teach, and you are encouraged to seek help from the instructors and the TAs if you have questions. You may also work with and help each other, in person and on webCafe.
  - ***You must, however, submit your own solutions, with your own write-up and in your own words. Verbatim copying and working off someone else's file is a violation of the honor code. Printed homework solutions and homework files must not be exchanged!***
  - Graded homeworks will be returned in the same boxes in the Statistics Department.
  - Homeworks are graded with variable maximal scores to reflect the variable amount of work and understanding necessary to complete them.
  - Because more practice is needed in problem solving than we are able to grade, only a ***random selection*** of problems in each homework will be graded.
  - However, the homeworks will be ***checked for completeness*** and proportionate deductions will be made for incompleteness.
  - ***Scores for homeworks are finalized one week after the graded copies are handed back. Thereafter there will be no changes and no re-grading.*** Do not delay checking your graded homeworks to the end of the semester.
  - ***Missing*** homeworks receive a score of zero.

## EXAMINATIONS:

- There will be **one** midterm exam on Thu, March 15, 2012, 6:00-8:00pm.
- The final exam will be on Fri, May 4, 2012, 6:00-8:00pm.

Room assignments will be announced on webCafe closer to the exam dates.

During examinations strict rules will be in effect with regard to *honor code*.

There is a possibility of contesting the results of exams as follows:

- Send email to [stat101.at.wharton@gmail.com](mailto:stat101.at.wharton@gmail.com) with subject line “Midterm/Final Exam Inquiry 2012”, giving your name if not evident from your email address, the version of the exam, the questions you are contesting, and the reasoning as concisely as possible.
- **However**, it is recommended that you check your reasoning with the TAs before sending your inquiry because if your reasoning reveals a misunderstanding of concepts taught in class, you will incur a deduction from your exam score.

## GRADING AND GRADING POLICY:

- Your course grade will be calculated as 28% homework, 30% midterm exam, and 42% final exam. (What this means will be discussed during the semester.) Participation in class and on webCafe as well as office hour attendance will also figure somewhat into the final grade.
- **All** homeworks will be included in the computation of the final grade. There is **no** “drop the lowest” policy. Missing homeworks will be counted as a zero score.

It is important to complete all homework assignments as a single missing homework can cause serious deterioration of the grade.