![Wharton University of Pennsylvania logo]

DEPARTMENT OF STATISTICS

Statistics 101   **Summer 2015**

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Instructor: **Kory Johnson**
Office: JMHH 450
Contact:

- The main points of contact with the instructor are after class and during the highly recommended office hours (see below).
- Your primary source for asking questions and finding answers will be the Canvas Discussions board (see below).
- Canvas has an e-mail feature which you reach by clicking "Inbox". Therefore, never use regular e-mail; always send messages from Canvas Inbox.

Classes meet: Mon/Tues/Weds/Thurs/Fri   9:00 – 10:45,   in 105 SH-DH
Lectures from Tuesday, May 26 to Friday, June 26
Review Sessions on Monday, June 29 and Tuesday, June 30 (tentative)
Final Exam on Wednesday, July 1

Instructor's Office hours: Monday and Wednesday: 1:00-2:00;
Tuesday and Thursday: 12:00-1:00;
JMHH 452 (Conference Room in Statistics Department)
Evening before an exam: 5:30-6:30
Room TBA

COURSE WEBSITE:

Statistics 101 uses the online system "**Canvas**". Searching "Wharton Canvas" in Google will get you to the login page. 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 summer session.

An important part of Canvas is the "**Discussions**" feature where everybody can place questions and comments. I will be using Canvas Discussions extensively for answering your questions about homeworks, exams and scheduling. If you have questions, you **must** 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. I also encourage you to answer other students' questions if you know the answer. If you give a wrong answer, it will not be held against you; someone else will place the correct answer

and you can delete your own post. Contributing to Canvas Discussions will be equivalent to class participation in its impact on your grade.

The Canvas Discussions settings will allow you to add, edit and delete your own posts, create discussion topics, and also attach files to your posts. Please, read the initial post by the instructor regarding purpose and etiquette.

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 https://app.wharton.upenn.edu/accounts/. 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 making decisions based on data. Some of the following material will be covered: data displays and summary statistics for quantitative and qualitative data; analysis of frequency tables of qualitative data; correlation and simple regression for quantitative data; probability; the law of large numbers for means and empirical histograms; the normal distribution and the central limit theorem; statistical inference based on standard errors, confidence intervals and statistical hypothesis tests, and if time permits, multiple comparisons.

The course does not dwell on the details of computation—its main focus is on understanding a few deep concepts and interpreting data and the results of statistical analysis. The data analysis will be a pervasive feature throughout the course. Data sets for in-class demonstrations and for homeworks will be posted on Canvas (Files > DataSets).

Given the compact nature of the summer schedule, this course will move at a fast pace. Be prepared to put several hours of studying into the course beyond class time. Every week of class is 2.5 weeks of a regular semester.

COURSE MATERIALS:

- Software: JMP from SAS; purchase online at http://upenn.onthehub.com/, note that there is a student discount. This software is available on Wharton computers, so if you are willing to do all your homework computations on them, you do not need to purchase the software. If you decide to go this route, it might be helpful to check out the Wharton Virtual Lab feature which allows you to use the Wharton computing environment remotely from your laptop:

  http://supportcenteronline.com/link/portal/632/655/Article/5657/5a-Virtual-Lab-for-Laptops

- Free Software: R; the main software used by statisticians. If you do more with statistics, you will (most likely) use this software.

- Lecture slides will be posted on an ongoing basis under Canvas/Files/Notes. Note that not all lectures will be slides.

- Textbook: "Statistics for Business: Decision Making and Analysis, Second Edition" 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.

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. There is also a growing number of online offerings on YouTube.

GRADING AND GRADING POLICY:

- Your course grade will be calculated as 20% homework, 50% quizzes/midterms, and 30% final exam. Significant improvement in grades throughout the course will also be noted and taken into consideration.

- Participation in class, on the Canvas Discussion board, or office hour attendance will also figure into the final grade as follows: students who contribute exceptionally in any of these domains will experience a rise of their grade by one step (e.g., from B- to B).

- **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.
If more than one homework is missing or shows insufficient effort, a failing grade will be the result irrespective of the performance on the exams.
- Grades will be apportioned such that they have the appropriate meaning
A: Thorough understanding of all concepts and extensions
B: Understand all basic concepts; though limited complex concepts or extensions
C: Understand only basic concepts
D: Understand only the simplest concepts
F: Lack of effort/interest.

HOMEWORK: 5% general homework; 15% supplemental

- There will be approximately 6 regular homework assignments posted to canvas. Their purpose is to instruct, not to grade. Homeworks are graded on completion/effort and are only given "pass/fail" grades. Homework will be due the day of the corresponding quiz/midterm (dates TBA).

- For each question missed on a quiz/midterm, students are required to complete supplemental questions on the same material. If no questions are missed, then the supplemental homework is considered completed with full credit.

- Solutions will be posted **prior to homework being due**. As such, all homeworks must be hand written. Again, the goal of homework is for you to understand the problems, get immediate feedback, and learn the material!
- Late homeworks will not be accepted without extreme cause.
- Homework is designed to teach, and you are encouraged to seek help from the instructor. You may also work with and help each other, in person and, above all, on Canvas Discussions.
- *You must, however, submit your own solutions, with your own write-up and in your own words.*
- *Missing* homeworks receive a score of zero.

Examinations: 50% Quizzes/Midterms; 30% Final

- There will be 6 quizzes/midterms taking place at the beginning of class, the lowest will be dropped and no makeups will be given. At least one question will be from the corresponding homework, with different numbers of course :)

- Quiz Schedule (Tentative): 6/1, 6/5, 6/11, 6/17, 6/23, 6/29. Material from the day before the quiz will not be covered on the quiz (except on Monday...because nothing was covered Sunday).

- The final exam will take place **Wednesday, July 1** during class (room TBA)

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 Canvas e-mail ("Inbox") to the instructor the questions you are contesting, and the reasoning as concisely as possible.

- **However**, it is recommended that you check your reasoning extensively before sending your official inquiry because if your reasoning reveals a misunderstanding of concepts taught in class, you will incur a **deduction from your exam score**.

CLASSROOM EXPECTATIONS

- Class starts and ends on time.

- There will be a 5 min break about halfway through each lecture.

- Late entry or reentry is a disruption that must be explained to the instructor during the break or after class.

- All phones, laptops and other electronic devices must be turned off. The instructor may allow temporary laptop use for specific software demonstrations.

The general principles of conduct in this class are:

Fairness, Respect and Consideration.

EMERGENCIES AND DIFFICULTIES

Please, do make an effort to communicate with the instructor if you find yourself in serious difficulty, such as family emergencies, health problems, too many deadlines at the same time, demands from jobs you are holding to finance your studies, etc. It is possible to obtain extensions of deadlines, but your issues should rise to the level of serious difficulty, not just inconvenience.