Stat 5301 (Autumn 2012)
Intermediate Data Analysis I

Lecturer
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Office hours: Tuesday and Friday 9:00-10:00am or by appointment
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Grader
Angus McKay
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Office hours: Tuesday and Thursday 11:00am-12:00pm
Office: TBA.

Lectures
Tu, We, Th and Fr 8:00am - 8:55am in Ramseyer Hall 0100.
Lecture notes can be downloaded from Carmen.

Aims
This is the first course in a two-semester non-calculus sequence in data analysis covering descriptive statistics, design of experiments, probability, statistical inference, one-sample t, goodness of fit, two sample problem, and one-way ANOVA.

STAT 5301 is a GE Data Analysis course.

GOALS: Students develop skills in drawing conclusions and critically evaluating results based on data.

EXPECTED LEARNING OUTCOMES: Students understand basic concepts of statistics and probability, comprehend methods needed to analyze and critically evaluate statistical arguments, and recognize the importance of statistical ideas.

Prequisites: MATH 1075 (104) or equivalent, or Math Placement Level of R, or permission of instructor. Not open to students with credit for STAT 5301 (STAT 528 and STAT 529).

Website
The class schedule, important announcements, lecture notes, homework problems and solutions, and other information about the course will be posted on Carmen (http://www.carmen.osu.edu).

Required text
Introduction to the Practice of Statistics, Seventh Edition,
We will only cover Chapters 1-9 of this book. Students who prefer not to by the full textbook may purchase an e-book version of the first nine chapters through the publisher.

The publisher also offers a custom version of the text on online that includes Chapters 1–9. You can find more information about at http://ebooks.bfwpub.com/ips7e.php (Custom version number: 1113336)


This is currently the textbook used in STAT 5302, the second course in the Intermediate Data Analysis sequence.

Please read the book as the course progresses, as I may not cover everything in class.

**Evaluation**

The goal of statistics is not calculation, but gaining understanding from numbers. Thus course should be regarded as a research methods course and not a mathematics course! This means that the correct numerical answer will only receive partial credit. The remainder of the credit will be available for choosing the best method of solution and explaining why the method is appropriate. You will also need to interpret your answers in the light of the practical problem.

- Homework 20% (Lowest two scores will be dropped)
- Midterm exams 40% (each 20%)
- Final exam 40%

Final grades in the course may be curved if necessary.

**Homework** will be due at the beginning of class on the day it is due. No late homework will be accepted. The single lowest grade homework will be dropped from the final grade calculations. You are encouraged to work together on the homework, but do not copy any part of a homework. Each student must produce his/her own homework to be handed in. Feel free to ask me for help after you have made an attempt at the questions. The grader for the course does not have the time to provide detailed explanations on each question that he/she grades. To make up for this, I will endeavor to make homework solutions detailed enough to allow you to understand how the question could be approached. Homework solutions will be available on the class web site.

**Homework preparation rules:** Put your name, the homework assignment number, and the start time of your section on the top right-hand corner of every page. All homework must be submitted on 8.5”x11” paper. Staple the pages together. We are not responsible for lost pages. Submit the problems in order, making sure that the computer output and discussion is placed together (do not put the computer output at the end of homework). Raw computer output is not acceptable. Make it clear what parts of the output are relevant and show how they answer the questions posed in the homework. The grader is not expected to look for your answers; instead, it is your job to present your homework problems in a way that is easy for the grader to understand and assess your work.

**Exams:** There will be two midterm exams and one final exam:
Midterm 1  Friday, Sep 21 during regular class time (tentative)
Midterm 2  Friday, Oct 19 during regular class time (tentative)
Final       Tuesday, Dec 11 8:00am-9:45am

Both exams are closed book/closed notes. Calculators are allowed – personal digital assistants and cellphones are not. The final will cover all the material for the course, but will emphasize the more recent material. There will be no make-up exams.

Computing

This class requires you to use the statistical software package called MINITAB. This software is available at many Student Computer Centers (see http://ocio.osu.edu/elearning/labs-and-classrooms/labs for more information). It is also available for purchase (about $100) or limited-time rental (about $30 for 6 months or about $50 for 12 months) from On The Hub: http://www.onthehub.com/minitab/.

Adds

All ADDS or SECTION CHANGES are done through Buckeye link. You may attend the class you hope to enroll in the first week, but you may not take a seat from an enrolled student. Please see Patty Shoults in 405 Cockins Hall for assistance in resolving enrollment issues. The instructor will NOT under any circumstances sign paperwork regarding course admission.

Special accommodations

Any student who feels they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss your specific needs. You should also contact the Office of Disability Services at 292-3307 or in 150 Pomerene Hall to coordinate reasonable accommodations for students with documented disabilities.

Academic misconduct

Cheating, plagiarism and other forms of academic dishonesty will not be tolerated. Any violation will be prosecuted to the fullest extent as set out in University Rule 3335-31-02.

Disclaimer

This syllabus should be taken as a fairly reliable guide for the course content. However, you cannot claim any rights from it and in particular I reserve the right to change due dates or the methods of assessment. Official announcements will ALWAYS be those made in class.