

# Stat 528 (Autumn 2006)

## Data Analysis I

### Lecturer

Peter F. Craigmile, Ph.D.

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Office hours in 325 Cockins Hall: Mon, Wed, Fri 12.30-1.20pm, or by appointment.

### Grader

Jessica Kohlschmidt

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Office hours: By appointment only.

### Lectures

Mon, Wed and Fri from 1.30-2.18 pm in Cockins Hall (CH) 312.

There will be no classes on Fri 27 Oct, Fri 10 Nov (Veteran's day), and Fri 24 Nov (Thanksgiving).

Lecture notes can be downloaded from the class web site at

<http://www.stat.ohio-state.edu/~pfc/teaching/528>.

### Aims

Stat 528 is the first in a three course sequence in Data Analysis (Stat 528, 529 and 530). In this non-calculus based course we will study data collection, analysis, and preliminary statistical inferences. More specifically, the course covers summaries of data, design of experiments, probability, confidence intervals, tests of hypothesis, and other statistical inference as time permits. By the end of the course you should be able to design a simple experiment and analyze the data obtained using the statistical methods that we cover in class.

**Prerequisites:** Not open to students with more than 5 credit hours in Statistics. The sequence is intended for students with "limited" formal mathematics background (a solid grounding in high school algebra is beneficial) although, in terms of data analysis and interpretation, the conceptual level of the course is high. While most of the students in the course are graduate students (it is a required course in many programs), it is certainly an appropriate sequence for junior and senior level undergraduates.

### Required text

*Introduction to the Practice of Statistics, Fifth Edition*

by David S. Moore and George P. McCabe, Freeman, 2006.

### Reading

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

## Evaluation

Homework	Midterm exam	Final exam
20%	35%	45%

**Homework** will be due at the **beginning** of class on the day it is due. **No** late homework will be accepted. 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 of 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 and the homework assignment number 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.

**Exams:** There will be one **midterm** and one **final exam**:

Midterm	Thu 2 Nov	To be arranged
Final	Wed 6 Dec	1:30 – 3:18

Both exams are closed book/closed notes. Calculators are allowed – personal digital assistants and cellphones are not. You may bring a single 8.5"x11" page of formula to the midterm, and two pages of formulae to the final. The midterm will cover the material up to and including Mon 30 Oct and the final will cover all the material for the course. There will be **no make-up** exams.

## Computing

This class requires you to use the statistical software package called MINITAB. More details will be given in class and on the class web site.

## Adds

All ADDS or SECTION CHANGES are done through BRUTUS the first week of the quarter (ends Fri 22 Sep). You may attend the class you hope to enroll in the first week, but you may not take a seat from an enrolled student. ADDS or SECTION CHANGES for scheduling conflicts (graduating seniors, work conflicts) will be given priority. Documentation will be required (in the form of a letter, on letterhead, from an advisor/employer), which explains, in detail, the circumstances and what action is being requested. Please go to 405C Cockins Hall for assistance in resolving the conflict. Starting at 7:30 a.m. Tues 26 Sep, in 405C Cockins Hall adds will be processed on a first come first serve basis if there are any openings. 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) 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.**