

Math 283: Introduction to Applied Statistics Summer 2011

Instructor: Dr. Oleg Makhnin

Office: Weir 223

Office Hours:

MTWRF 9-9:50am TR 3-5 pm or by appointment

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Textbook: *Introduction to the Practice of Statistics* (6th edition, Freeman) by Moore and McCabe

Objectives:

1. To learn basic methods of descriptive and inferential statistics.
2. To recognize how statistical methods may provide insight when solving problems in various academic disciplines.
3. To learn to apply a statistical computer package (Minitab) engineering

COURSE POLICY

1. Grading is based on
 - (a) Homework and quizzes
 - (b) Three hourly exams, which will be announced at least one week in advance
 - (c) Labs

Your grade is based on the total points earned (the individual tests and homework are **not** assigned a letter grade).

Distribution of Scores:

Tests: 300 pts. Homework and quizzes: 150 pts. Labs: 150 pts.

2. Homework is assigned every class and is due **by class time**. NO LATE homework is accepted but the lowest 2 homework grades will be excluded. Quizzes are about once a week.
3. Labs are due by 5pm of the due date (typically two days after the Lab meeting). Preferred format is the typed-up submission with all the graphs pasted (this will also save you printing costs). The labs consist of detailed instructions and examples of analyses, followed by more open-ended "Exploration questions".
4. In order to make up any assignment, a valid excuse should be documented. The instructor decides if an excuse is a valid one.

Grading scale(tentative):

A above 90% B 80-90% C 70-80% D 60-70% F below 60%
 Pluses and minuses will be given

Schedule (tentative and subject to change):

Week	M	T	W	R	F
1	-	1.1 Graphs Hw1	1.2 Numbers Hw2	1.3 Normal curve Hw3	1.3 cont'd, 2.1-2.2 Scatterplots Hw4
Lab	-		Lab1: intro		
2	Normal quiz 2.2 Correlation Hw5	2.3 Regression Hw6	2.4 Cautions about regression Hw7	2.5 Two-way tables Hw8	3.1, 3.2 Sampling design Hw9
Lab	Lab2: scatterplots		Lab3: regression		
3	3.3 Towards inference Hw10	4.2 Probability models Hw11	4.3 Random variables Hw12	Practice for Exam 1	Exam 1
Lab	Lab4: sampling		Lab5: proportions		
4	-	4.4 RV means and variances Hw13	5.2 Sample mean Hw14	5.1 Counts and proportions Hw15	6.1 Confidence intervals Hw16
Lab	-		Lab6: CLT		
5	6.2 Hypothesis tests Hw17	6.3 Use and abuse Hw18	7.1 T-tests and CI Hw19	7.2 Two means Hw20	Loose ends Hw21
Lab	Lab7: CI-1		Lab8: Hyptest-1		
6	8.1 Inference for proportion Hw22	8.2 Two proportions Hw23	9.1 Two-way tables Hw24	Review	Exam 2
Lab	Lab9: T-tests		Lab10: inference for proportion		
7	10.1 Regression	10.2 Inference for Regression Hw25	11.1 Multiple regression Hw26	11.1 continued	12.1 ANOVA Hw27
Lab	Lab11: 2-way tables		Lab12: inference for regression		
8	12.2 ANOVA: comparisons Hw28	13.1 Two-way ANOVA Hw29	13.2 Hw30	Review	Exam 3
Lab	Lab13: multiple regression		--		

Advice

Like most math courses, this course is cumulative. For this reason, try not to fall behind. Any difficulties must be resolved quickly. You can get help from your instructor, or go to the Help Room (Weir 220). Regular class attendance, taking notes and participating in class discussions are expected.