

Mathematics 3870 [TR 2:00 to 3:20; LANG 310]
Inventing statistics

Purpose of the course. This is a “capstone experience” course. We will explain what this during the first class period. The course is NOT a statistics course; you will NOT learn statistics from it. Far from it: you are expected to know statistics already and be able to present topics from it and explain it to other people. Attendance and class participation will be required and it will be part of your grade.

Textbook. None.

Grades and exams. Your final grade is determined by attendance and class participation (-20 to 10%), homework and projects (40 % total; the projects will be a major part of this percentage), two tests given during the semester (15% each) and the final (20%). Attendance will be measured by “discussion sheets” and is based on negative scoring; you will start off with 10% and for each class you missed, you will lose 2%. The letter grade will be given strictly according to the recommended university standards: D = at least 60%, C = at least 70%, B = at least 80%, and A = at least 90%. This is a trial capstone experience course, so everything will be carefully monitored and STATISTICS will be kept, so I do not have any flexibility. There are two projects required; one during the semester and one at the end of the semester.

The two tests are scheduled tentatively on February 21 (Thursday) and April 2 (Tuesday). The final is on May 9, 1:30 to 3:30, in the usual class room

Your tests (but not the final) will be returned to you, usually the first class day following the test. You should be in class to pick up your test. No responsibility will be taken for tests which are not picked up within two weeks.

Homework. Homework will be assigned, usually once a week, due on Wednesday. See the individual schedules. Homeworks will NOT be like the usual mathematics homework. Essays will be required. I reserve the right to demand typed essays if your handwriting cannot be read.

Attendance. You are expected to attend all scheduled classes. There will be a “discussion sheet” each class day. Electronic means of taking rolls may also be used;

Prerequisites and code of conduct. The prerequisite course is a statistics course, MATH 3680 or its equivalent. No exceptions. I will drop you administratively if you do not have

the prerequisites. I expect you to behave in accordance with the student code of conduct. There will be **zero** tolerance of violations of this code, especially cheating on test or faking attendance.

Other matters. All university policies will apply to this course. See the appended message concerning accommodation for certified disability.

Important note about schedules, review sheets, and other handouts.

Schedules are given out every week. The schedules are intended to give you useful information. Handouts, such as review sheets, will also be given out. Information on schedules or handouts might be changed and errors will be corrected; these amendments will be announced during class. You are responsible for keeping track of these amendments, as well as making sure you get all the schedules and other handouts.

Fine print. There are **no** verbal agreements in this course. If you think that I promise you something, be sure to get it from me in writing! This handout is intended as an general guide to the policies pertaining to the administration of this course. This handout does not replace or supersede any official university document.

Instructor. Joseph Kung. GAB 471C. Office hours: Tuesday. 10 to 10:50, 12:30 to 1:30. Thursday. 12:30 to 1:30, 3:30 to 4:30. Other times by appointment.

e-mail: kung@unt.edu [Expect some delay and possible computer breakdown when using e-mail.] phone 940-565-4084.

First schedule. Week 1. January 15/17.

Topics. A. What this course is designed to do? The “capstone experience” at UNT.

B. Francis Galton, the father of biometrics.

C. “Statistics ion the table.”

Homework:

Homework due Thursday, January 24.

Essay questions will be graded as in any course in the humanities. I expect correct grammatical sentences, correct spelling, good sentence struture, correct argument, and so on.

1. (20 points) Go to www.galton.org. Galton wrote several books about his life and his travels. Browse through any of these books and write a 250-word essay on an interesting or amusing incident in his life,. This incident must be different from the ones I discussed in class. Say what this incident reveal to you about Galton’s character.

2. (20 points) Write a 200-word essay on how you would have tested the “efficacy of prayer” using modern statistical methods (for example, hypothesis testing, p -values), you have learned, say, from MATH 3680. The data is the table in Galton’s article “Statistical inquiries into the efficacy of prayer”, p. 91.

3. (10 points) A 50-word essay. From Galton’s travel books, if you were to go on a Victorian expedition from England, what is the one personal item you would bring, assuming you already have the money, food, and means of transport? Explain why.