

# Statistics 321: Applied Nonparametric Statistics Spring 2012

## Course Description

Contingency table analysis, rank tests for one, two and many sample problems, rank correlation, introduction to nonparametric regression.

## Course Prerequisites

MTH 220

## Course Time and Meeting Place

STA 321 meets in Math 359 at 11-11:50 on Mondays, Wednesdays and Fridays.

## Instructor

Mrs. Robin Sullivan, Department of Mathematics and Statistics

Office: Math 343                      Telephone: (936) 468-1777                      Email: kengrn@sfasu.edu

Office Hours:

Monday 12:30-3:30      Tuesday 11:30-2      Wednesday 2-4      Thursday 11:30-2

Other times by appointment

## Text and Materials

Title: Practical Nonparametric Statistics (Third Edition)

Author: W.J. Conover

ISBN: 0471160687

You will also need a scientific calculator.

## Course Requirements

You must keep up with the homework and prepare for the in class quizzes. There are two tests and a mandatory final exam. Each test will take up two class periods. The final exam will be on Wednesday May 9<sup>th</sup> from 10:30 am – 12:30 pm.

## Grading Policy

The final grade will be determined by the scale:

90-100: A              80-89: B              70-79: C              60-69: D              0-59: F

Daily Work	Quizzes and Homework	20%
Tests	2 Tests (25% each)	50%
Final Exam	Final Exam	30%

---

Final Course Grade	100%
--------------------	------

It is against privacy acts to email grades of any kind. Please come by my office anytime you would like to check your grade.

## Test/Exam Policy

No quiz, test or exam will be given late. You may take a quiz, test or exam early if you fall into one of the following categories:

1. A medical excuse. Please provide proper documentation according to university rules.
2. A University sponsored event such as an athletic tournament, a play, or a musical performance. Your coach or director must contact us in advance. Athletic practices and rehearsals do not fall into this category.
3. A religious holiday. Please send a short email explaining the situation.
4. Extreme hardship such as a family emergency. Please have the proper university office contact us.

The above are the only allowable excuses for taking the quiz, test or exam before the scheduled time. Please make sure that you fall into one of the above categories before you contact me. If you have a conflict with the final exam, you must contact the Registrar. Only the Registrar can schedule an out-of-sequence final exam. The final exam is mandatory for all students. Bring your university ID card to all exams.

### **Homework**

There is no question that the best way to learn math is by doing math, and homework exercises are an essential part of any math course. If you just go to a math class and watch the teacher work problems, but do not actually try doing any problems on your own, then there is very little chance you will really learn the subject. It is also very unlikely that you will do well on exams without working through homework problems ahead of time. When doing homework, do not just write down answers. Think about the problems posed, your strategies, the meaning of your computations, and the answers you get. The main point is not to come up with specific answers to the specific problems you are working on, but to develop an understanding of what you are doing so that you can apply your reasoning to a wide range of similar situations. It is very unlikely that later on in life you will see exactly the same math problems you are working on now, so learn the material in such a way that you are prepared to use your general knowledge of mathematics in the future, not just how to apply particular formulas for very specific problems.

Homework assignments will be announced in class and posted on blackboard. Your homework must be your own work. In order to be successful in the course, you must keep up with and understand the homework.

Homework is due at the start of class on the due date. No late homework will be accepted.

### **Attendance Policy**

Arrive on time (early) to class because quizzes will mostly be at the beginning of class. Regular attendance is expected and roll will be taken daily. Make sure to check your SFA e-mail and blackboard daily. I use blackboard to provide additional resources to the class. If you ever miss a lecture, make sure to check blackboard for notes and read the corresponding section in the book. It is your responsibility to keep up with the course. Blackboard: <https://mycourses.sfasu.edu>

### **Electronic Devices**

Students are expected to respect the learning environment of their fellow students. Towards this end, use of mobile phones, mp3 players, PDAs, etc., is forbidden during class. Using an electronic device that is not solely a calculator will result in a zero on that day's assignments (announced and unannounced assignments). Dismissal from class for any reason will result in a zero on that day's assignments (announced and unannounced assignments).

### **Withheld Grades Semester Grades Policy (A-54)**

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

### **Acceptable Student Behavior**

Classroom behavior should not interfere with the instructor's ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

Please be respectful of your fellow students and your instructor. Cell phone use and texting are not allowed in class. Remember to turn your cell phone off or place it in quiet mode before entering the classroom. Do not leave your cell phone on vibrate; it needs to be completely silent. If you use your cell phone or any other non-calculator electronic device in any way, you will receive a zero on any assignments announced and unannounced that day. If you are ever asked to leave the class, you will receive a zero on any assignments announced and unannounced that day.

### **The Classroom**

Any questions you ask in class will likely be ones that other students will want answered as well, so get over any hesitation you might have and ask questions as the material is presented. You will not be penalized for doing this, no matter how trivial or simple you think your questions might seem. Remember, the class is being held for you to learn the material, not just to give you a time to copy notes off of a blackboard, so be sure to get help when you need it and stay involved in your class.

### **Academic Integrity (A-9.1)**

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty. Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Any acts of academic dishonesty will be dealt with according to University policy. Penalties for academic dishonesty may result in a failing grade for the assignment, failing the course, or even dismissal from the university.

Please read the complete Academic Integrity Policy at [http://www.sfasu.edu/policies/academic\\_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

### **Add/Drop Policy**

The Add/Drop Policy can be found at [http://www.sfasu.edu/policies/add\\_drop.asp](http://www.sfasu.edu/policies/add_drop.asp)

### **Students with Disabilities**

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to <http://www.sfasu.edu/disabilityservices/>

### **Tips for a Successful Semester**

- Stay organized! Make sure that you have a binder to hold all notes, quizzes, worksheets and tests. It is important to have all class materials in one location for studying. A planner can help you keep all of your classes organized.
- Keep up! You cannot afford to fall behind.
- Come by office hours when you get stuck and you have already tried to work through the problem.

Non-parametric Measures of Correlation. Correlation coefficient is used as a measure of relationship between two variables. It is possible to calculate the correlation coefficient for non-parametric statistics. Origin provides two non-parametric methods to measure the correlations between variables. Select Statistics: Nonparametric Tests: Paired Sample Wilcoxon Signed Rank Tests to open the dialog; Select Column A as 1st Range Data and column B as 2nd range Data; Click the OK button to generate the results.