Instructor: Jacob Turner, Ph.D.
Department: Mathematics and Statistics
Email: turnerja2@sfasu.edu
Phone: 936-468-1692
Office: 342 NM
Office Hours:

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
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<tr>
<td>10-11:30am</td>
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We can also meet by appointment.

Class meeting time and place: MWF 9am-9:50am Room: MTH 213

Course Description: Probability, statistical inference, estimation, regression, asymptotics, nonparametric test

Text and Materials:


Course Description:
- A detailed theoretical review of statistical inference (parameter estimation and hypothesis testing)
- Estimation topics – MLE’s, MoM’s, Unbiased, Sufficiency, Efficiency, Mean Square Error, Interval Estimation
- Hypothesis testing topics – Likelihood ratio tests, Wald tests, Power, UMP tests
- An overview of class statistical inference problems
- Brief introduction into the Bayesian framework of statistical inference

Chapters covered:

5. Properties of Random Samples
6. Principles of data reduction
7. Point estimation
8. Hypothesis testing
9. Interval estimation

Grading Policy: Grades will be determined by the following:

<table>
<thead>
<tr>
<th>Midterm 1</th>
<th>25%</th>
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<td>Midterm 2</td>
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<tr>
<td>Group project</td>
<td>25%</td>
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<td>Final</td>
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**Homework**
I will assign conceptual and analysis problems regularly. They will be made available in D2L. I will not take them up this semester. It is your responsibility to dig into the course material and work with me to iron out any issues along the way. I will provide solutions to problems a week or two after assigning the set.

**Exams**
Exams will be held outside of class. Once the exam date has been determined. I will provide a sign-up sheet with a block of time for your choosing.

**Group project**
Towards the end of a semester, students will work in groups or individually to present a separate topic not covered in class. I will provide the topics and guidelines at a later date. The deliverable will be an oral presentation

**Grading Scale:**

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<th>Letter Grade</th>
<th>% Scale</th>
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<tr>
<td>A</td>
<td>90-100</td>
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<td>B</td>
<td>80-89</td>
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<td>C</td>
<td>70-79</td>
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<td>D</td>
<td>60-69</td>
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<tr>
<td>F</td>
<td>below</td>
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**Attendance**
This is a graduate level class, and I do not expect attendance issues. If you know you are going to have to miss a specific class, please let me know via e-mail or phone prior to the class.

**Academic Integrity (Policy 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.

The penalty for a student found cheating on any part of an assignment, quiz, or exam in this class will range from a grade of zero on the work to a grade of F in the course, and may result in additional, more severe disciplinary measures. A student who allows another to copy his work and the student copying the work are both guilty of cheating. Do your own work. Do not show your completed work to others. Do not allow others to copy your work.

**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.

Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp).
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.

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.

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 http://www.sfasu.edu/policies/student_conduct_code.asp). 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.

Credit Hours for this course: 3

The following is an excerpt from SFA Policy 5.4:

The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:

1. Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time, or;
2. At least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

To this end, all students in courses offered by the Department of Mathematics and Statistics that wish to be successful should plan to spend a minimum of two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes from previous class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.