Mathematical Statistics  
Spring 2010  
Tentative Course Syllabus

Instructor: Dr. Jayawardhana     Phone: 235-4414  
Office: 207 Yates Hall     e-mail: ananda@pittstate.edu  
Office Hours: See the timetable below  
Class web page: http://www.pittstate.edu/~ananda/MATHSTAT/MathStat.html  
Text: Probability and Statistical Inference (Eighth Edition) by Hogg and Tanis, Prentice Hall

Prerequisites: Math 253 (Calculus III) and Math 543 (Probability and Statistics)

Coverage:

Chapter 3  3.5 The Gamma and the Chi-Square distributions  
3.6 The normal distribution  
5.5 Random functions associated with normal distribution

Chapter 4  Bivariate Distributions  
4.1 Distributions of two random variables  
4.2 The correlation coefficient  
4.3 Conditional distributions  
4.4 The bivariate normal distribution

Chapter 5  Distributions of Functions of random Variables  
5.2 Transformations of random variables

From other books  
The $T$, $F$, Truncated and mixed distributions, and other distributions

Test 1 (Closed book)

Chapter 6  Estimation  
6.1 Point estimation  
6.2 Confidence interval for means  
6.3 Confidence interval for difference of two means  
6.4 Confidence interval for variances  
6.5 Confidence interval for proportions  
6.6 Sample size

Chapter 7  Tests of Statistical Hypotheses 7.1-7.7

Test 2 (Open book and notes)
Chapter 8  Nonparametric methods
Chapter 9  Bayesian Methods
   Test 3 (Closed book)

Chapter 10  Theory
   Test 4 (Closed book)

The instructor will provide additional material wherever necessary.

Final exam will be comprehensive. (75% closed book. 25% open TEXT book. Notes are not allowed)

Evaluation:
   Hour Tests = 400 points
   Homework  = 150 points
   Paper     =  25 points
   Final     = 200 points

Grading Scale:
   90% - 100%  = A
   80% - 89%   = B
   70% - 79%   = C
   60% - 69%   = D
   <60%        = F

Instructor keeps the right to lower the scale if necessary.

Regular attendance is expected, but it is not counted in your grade. There will be four one-hour exams and a comprehensive final. Exam dates will always be announced at least two class sessions ahead of time. The last in-class exam may be given during the last week of classes. Daily homework assignments will be made. Homework will be collected once a week and all the problems will be graded. At the end, homework will be scaled to 200 points. No tests will be made up except for absences due to official university activities or health problems with a Dr.’s excuse. If you have a special need addressed by the American with Disabilities Act, please notify me immediately so that appropriate accommodations can be provided. Please avoid using electronic devices during class. For some exams, calculators will be allowed.
## Instructor’s Time-table

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<tr>
<td>9:30-10.45 TH</td>
<td>Office</td>
<td>Math 643/743 YH 216</td>
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<td>9.00-10.00 MWF</td>
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<td>11.00-12.00 TH</td>
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<td>1.5 hours in the evening</td>
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* Note that from 2.00 p.m. to 5.00 p.m. there are other commitments such as independent studies, committee meetings, departmental meetings, departmental colloquia etc. You are encouraged to use the office hours allocated before 2.00 p.m. If my office hours conflict with your other classes please let me know.

## Other Issues

Please take clear notes.
Please let me know if I am going faster than your pace.
Please participate in class activities.
Please ask questions in class, after the class or in my office.
Please answer my questions and participate in class.
Please make friends in class and share notes, study together etc.
Please use my office hours anytime you need help. I care about you and your success.