STT 442: Probability and Statistics  
Fall, 2015

**Time:** Monday-Wednesday-Friday: 9.10 am – 10.00 am

**Place:** WH A330

**Instructor:** Subhra Sankar Dhar

**Office:** C433 Wells Hall

**Telephone:** 353-6369

**E-Mail:** ssdhar@stt.msu.edu

**Website:**
https://www.stt.msu.edu/Academics/ClassPages/Classpage.aspx?term_code=FS15&crse_code=442&lecture=0&sctn_code=001

**Office Hours:** Monday-Wednesday: 11.30 am to 12.30 pm or by appointment.

**Textbook:** Mathematical Statistics and Data Analysis, 3rd edition, by John Rice

**Prerequisite:** STT441 and (MTH309 or MTH314 or MTH 415).

**Quizzes:** There will be six 20-minute quizzes during the semester. Quiz questions will be based on homework problems and the examples given in class. **There will be no make up quizzes. The lowest quiz score will be dropped.**

**Course Description:** This course teaches students basic statistics principles and techniques. The specific topics of the course include point estimation, interval estimation, hypothesis testing, likelihood methods, non-parametric methods, linear models and Time series: ARMA (Auto Regressive Moving Average) and ARIMA (Auto Regressive Integrated Moving Average) models, data analysis and forecasting.

The course will cover Chapters 1-6 briefly, Chapters 8-10, Chapter 11.1-11.3 and Chapter 14, and the lecture notes given in the classes. We may use R (a statistical package) that will help us to perform different statistical techniques. R can be downloaded at http://www.r-project.org.

**Important Dates:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>September 2, 2015</td>
<td>Classes Begin</td>
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<tr>
<td>September 7, 2015</td>
<td>University Closed</td>
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<tr>
<td>September 28, 2015</td>
<td>End of Tuition Refund Period</td>
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<tr>
<td>October 21, 2015</td>
<td>Middle of Semester</td>
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<tr>
<td>November 26 - 27, 2015</td>
<td>University Closed</td>
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Final exam on Thursday, December 17, 7.45 am – 9.45 am

Midterm exam will be taken in the class on Friday, October 30, 2015. (No make-up exam will be given for any reason.)

Dates of the quizzes: September 16, September 30, October 14, November 11, November 23, December 2.

The homework will be assigned on every Friday and will be due in class on the next Friday. No late homework will be accepted.

The division of marks: Quizzes: 25%, Midterm: 20%, Homework: 15%, Final exam: 40%.

Grading scheme: 4.0(>=90%), 3.5(80%-89%), 3.0(70%-79%), 2.5(60%-69%), 2(50%-59%), 1.5(40%-49%), 1(30%-39%), 0(<=29%).

Note: The instructor reserves the right to modify the above if necessary.