**MATH 3860 Probability and Statistics**

Instructor: V.S. Prasad, Olney 428Q:

Office Hours: Tues, Thurs: 12:45-1:45, Thurs: 5:00-6:00, and by appt

This is a calculus-based introduction to probability and statistics. Our textbook is by Larsen and Marx *An Introduction to Mathematical Statistics and its Applications,* 6th edition. We expect to cover Chapter 1-4, 5.1-5.3, (as time permits 6.1-6.2, and parts of 7.1-7.5). All homework problems (listed below) are from the book. *Homework is compulsory!* Late homework will only be accepted if you have made arrangements in advance. Below is a list of problems that will be assigned – I reserve the right to add or subtract questions on the list. You must attend class to know what has been covered and what is required for our homework.

Homework counts for 20% of the final grade. In addition, there will be **two** 2-hour class tests given on Tuesday evenings (tentative dates, after the 5th week and the 10th week, probably 6:30- 8:30) each of which count for 20% of your grade. The final exam will count for the remaining 40% of your grade. Note if you do poorly on one of the class tests, I will count it for 10% (instead of 20%) and your final will then be worth 50% of your grade.

PROBLEMS LIST (*Larsen and Marx)*

1. 2.2.3, 2.2.6, 2.2.10, 2.2.15, 2.2.16, 2.2.32, 2.2.38
2. 2.3.3, 2.3.6, 2.3.18, 2.4.5, 2.4.22, 2.4.26, 2.4.30, 2.4.42, 2.4.47
3. 2.5.2, 2.5.9, 2.5.14, 2.5.25, 2.5.26, 2.6.6, 2.6.22, 2.6.27, 2.6.29, 2.6.57, 2.6.63.
4. 2.7.6, 2.7.15, 2.7.16, 3.2.14, 3.2.22, 3.3.4, 3.3.7, 3.3.11, 3.3.13, 3.3.14, 3.4.3, 3.4.5, 3.4.13, 3.4.14
5. 3.5.8, 3.5.12, 3.5.22. 3.5.31, 3.6.1, 3.6.2, 3.6.5, 3.7.7, 3.7.11, 3.7.20
6. 3.9.5, 3.9.8, 3.9.20, 3.9.24
7. 3.11.5, 3.11.12, 3.11.15, 3.11.17

4.2.4, 4.2.7, 4.2.9,

1. 4.2.14, 4.2.23, 4.2.29,

4.3.2, 4.3.4, 4.3.5, 4.3.10, 4.3.14.

1. 4.3.15, 4.3.18, 4.3.29, 4.3.34, 4.4.2,
2. 4.5.3, 4.5.4, 4.6.3, 4.6.8
3. 5.2.1, 5.2.16, 5.3.6, 5.3.14, 5.3.15, 5.3.23,
4. 6.2.1, 6.2.8, 7.3.2, 7.3.4
5. 7.3.8, 7.4.1, 7.4.4, 7.4.12, 7.5.2, 7.5.7