**STT 1600**
**DEPARTMENTAL SYLLABUS**

**(Revised 12/2013)**

TEXT: Elementary Statistics Using Excel, Fifth Edition by Mario F. Triola, (Pearson Addison Wesley).
COMPUTER LAB: 9 to 10 Excel labs during the semester.
WRIGHT STATE CORE: STT 1600 is a Core Element 2 (Mathematics) course
COORDINATORS: Lisa Wellinghoff, Dr. Thaddeus Tarpey

| Chapter/Section | | Textbook Problems | Comments |
|---|---|---|---|
| 1.1-1.4<br>Introduction | 1.2<br>1.3<br>1.4 | 1,4,8,9,11,21-24,28,31,34<br>4,5,6,14,20,21,22,24,25,33(a,d)<br>2,6,8,11,12,18,19,20,23,35 | Intro, statistical thinking, types of data, sampling |
| 2.1-2.4<br>Graphs | 2.2<br>2.3<br>2.4 | 3,7,16,19,21,29<br>5-8,9,11<br>6,9,11,21,22 | Section 2.4 give examples of dotplots, scatterplots and time series |
| 3.1-3.4<br>Descriptive Statistics | 3.2<br>3.3<br>3.4 | 3,13,14,24,33(a)<br>1,2,13,14,34,35,42<br>1,8,15,17,22,27,28,29,32 | Skip mid-range,<br>skip formula 3-5 and use only formula 3-4 for std dev., skip coefficient of variation, skip Chebyshev's Theorem |
| 4.1-4.6<br>Probability | 4.2<br>4.3<br>4.4<br>4.5<br>4.6 | 1,3,5,14,17,28,29,37-39,41<br>3,5,7,14,16,17-20,33-38,40<br>6,8,10,13,18,20<br>3,4,5,7,11,12,19,22<br>1,5,16,27,31 | |
| 5.1-5.4<br>Discrete Distributions | 5.2<br>5.3<br>5.4 | 5,7,13,18<br>21-24 (use formula), 31<br>1,2,5 | Introduce random variables and illustrate with binomial Distribution. Omit Poisson. |
| 6.1-6.5<br>Normal Distribution | 6.2<br><br>6.3<br>6.4<br>6.5 | 5,6,9-11,13-<br>16,17,25,31,35,37,39,41,45-47<br>2(a,b),5-10,15,17,27(a),28<br>1,11,15<br>1,5,7,18 | Use Excel to compute normal probabilities |
| 7.1-7.3<br>Confidence Intervals | 7.2<br>7.3 | 5-17odd,20-22,24,26,27,37<br>6,7,12-15,18,20,21 | Interpret C.I.'s,<br>skip determining sample size n |
| 8.1-8.4<br>Hypothesis Testing | 8.2<br><br>8.3<br>8.4 | 5,7,9-11,13,16,17,20,21,<br>23,26,27,33<br>5-7,11,12,17-20,22,23,27,31<br>7,9,11,14-17,19,21,22 | Skip power and part 2 of section 8-4 |
| 9.1, 9.3<br>2-Sample t-Test | 9.3 | 1,8a,10a,15a,16a | Part 1 of section 9.3 only |
| 10.1-10.3<br>Correlation and Regression | 10.2<br><br><br><br>10.3 | 3,16,21,24<br>(Skip hypothesis testing for correlation – just plot data and compute r)<br>1-4,7,8,16,21 | Skip Part 2 of section 10-2 and 10-3.<br>Use the formula at the very bottom of page 544 for correlation r (ignore the other formulas).<br>Use handout to illustrate correlation and regression examples. |
| 12.1-12.2<br>One-Way ANOVA | 12.2 | 5,7,9-14 | Give printout of an ANOVA example<br>and multiple comparisons |
| 11.1,11.3<br>(Optional)<br>Chi-Square Test | 11.3 | 5-7,9,11,12,16,19 | 2x2 tables only (1 df) |

It is also recommended that the students are shown at least one journal article with an emphasis on how to interpret the statistical analysis and in particular, p-values. This can be made into a lab or a group or homework assignment, at the Instructor's discretion.

**WSU Core Learning Outcomes**

- Identify the various elements of a mathematical or statistical model
- Determine the values of specific components of a mathematical/statistical model or relationships among various components
- Apply a mathematical/statistical model to a real-world problem
- Interpret and draw conclusions from graphical, tabular, and other numerical or statistical representations of data
- Summarize and justify analyses of mathematical/statistical models for problems, expressing solutions using an appropriate combination of words, symbols, tables or graphs

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