

Statistics 221 Schedule for Winter Semester 2009 Lectures: TTh

Schedule subject to change—please check Blackboard daily

Monday, January 5	Tuesday, January 6 <u>Lesson 1:</u> Read Introduction to text and watch Introduction <i>StatTutor</i> video. Both are found at the top of the chapter listings on <i>eBook</i> . <u>Lesson 2:</u> pages 53-55, 189-192 Ch.2 Organizing a statistical problem Ch.8 Introduction—No StatTutor Video Ch.8 Observation versus experiment	Wednesday, January 7	Thursday, January 8 <u>Lesson 3:</u> pages 192-206 Ch.8 Sampling Ch.8 How to sample badly Ch.8 Simple random samples Ch.8 Other sampling designs Ch.8 Cautions about sample surveys Ch.8 Inference about the population	Friday, January 9 <i>No homework assignment due</i>
Monday, January 12	Tuesday, January 13 <u>Lesson 4:</u> pages 213-220 Ch.9 Introduction Ch.9 Experiments Ch.9 How to experiment badly Ch.9 Randomized comparative experiments <u>Lesson 5:</u> pages 220-227 Ch.9 The logic of randomized comparative experiments Ch.9 Cautions about experiments Ch.9 Matched pairs and block designs	Wednesday, January 14	Thursday, January 15 <u>Lesson 6:</u> pages 1-24 Ch.1 Introduction Ch.1 Individuals and variables Ch.1 Categorical variables: pie charts & bar graphs Ch.1 Quantitative variables: histograms Ch.1 Interpreting histograms Ch.1 Quantitative variables: stemplots	Friday, January 16 Homework #1 due by 11:00 pm Add/drop deadline
Monday, January 19 Martin Luther King Day: No classes	Tuesday, January 20 <u>Lesson 7:</u> pages 37-45 Ch.2 Introduction Ch.2 Measuring center: the mean Ch.2 Measuring center: the median Ch.2 Comparing mean and median Ch.2 Measuring spread: the quartiles Ch.2 The five-number summary & boxplots <u>Lesson 8:</u> pages 45-53 Ch.2 Spotting suspected outliers Ch.2 Measuring spread: st. dev Ch.2 Choose measures—center & spread Ch.2 Using technology	Wednesday, January 21 Deadline for course surveys, StatsPortal and iClicker registration	Thursday, January 22 <u>Lesson 9:</u> pages 64-76 Ch.3 Introduction Ch.3 Density curves Ch.3 Describing density curves Ch.3 Normal distributions Ch.3 The 68-95-99.7% rule Ch.3 The standard normal distribution	Friday, January 23 Homework #2 due by 11:00 pm
Monday, January 26	Tuesday, January 27 <u>Lesson 10:</u> pages 76-84 Ch.3 Find Normal proportions Ch.3 Using standard Normal table Ch.3 Find value given proportion End of material on Exam 1 <u>Lesson 11:</u> pages 90-98 Ch.4 Explanatory and response variables Ch.4 Displaying relationships: scatterplots Ch.4 Interpreting scatterplots Ch.4 Adding categorical variable to scatterplot	Wednesday, January 28	Thursday, January 29 <u>Lesson 12:</u> pages 99-105 Ch.4 Measure linear association: correlation Ch.4 Facts about correlation First HW extra-credit writing assignment due	Friday, January 30 Homework #3 due by 11:00 pm

Introduction StatTutor lesson is found at the top of the chapter list on *eBook*. CrunchIt! website: <http://bcs.whfreeman.com/crunchit/bps4e/>

Monday, February 2 Exam 1 covers Lesson 1-10 (Chapters 1-3, 8- 9) 1 st day EXAM 1*	Tuesday, February 3 <u>Lesson 13:</u> pages 45-120 Ch.5 Introduction Ch.5 Regression lines Ch.5 Least-squares regression line <u>Lesson 14:</u> pages 129-137 Ch.5 Facts about least-squares regression Ch.5 Residuals 2 nd day EXAM 1*	Wednesday, February 4 3 rd day EXAM 1*	Thursday, February 5 <u>Lesson 15:</u> pages 129-137 Ch.5 Influential observation Ch.5 Cautions about correlation & regression Ch.5 Association does not imply causation 4 th day EXAM 1* - \$5 late fee	Friday, February 6 Homework #4 due by 11:00 pm LAST day to take Exam 1. Must start before 5 pm & pay \$8 fee
Monday, February 9 Last day to withdraw	Tuesday, February 10 <u>Lesson 16:</u> pages 149-160 Ch.6 Introduction Ch.6 Marginal distributions Ch.6 Relationships between categorical variables Ch.6 Simpson's paradox <u>Lesson 18:</u> pages 246-254, 262-263 Ch.10 Introducing probability Ch.10 The idea of probability Ch.10 Probability models Ch.10 Probability rules	Wednesday, February 11	Thursday, Feb. 12 <u>Lesson 19:</u> pages 271-278 Ch.11 Introduction Ch.11 Parameters and statistics Ch.11 Statistical estimation and LLN Ch.11 Sampling dist	Friday, February 13 Homework #5 due by 11:00 pm
Monday, February 16 President's Day: No classes	Tuesday, February 17 Monday instruction	Wednesday, February 18	Thursday, Feb. 19 <u>Lesson 20:</u> pages 278-286 Ch.11 Sampling distribution of \bar{x} Ch.11 Central Limit Theorem (StatTutor lesson has 2 parts) <u>Lesson 21:</u> pages 286-294, 343-344 Ch.11 Statistical Process Control Ch.11 \bar{x} -charts Ch.11 Thinking about process control End of material on exam 2	Friday, February 20 Homework #6 due by 11:00 pm
Monday, February 23 Exam 2 covers Lessons 1-21 (Chapters 1 – 11) 1 st day to take Exam 2*	Tuesday, February 24 <u>Review for Exam 2</u> 2 nd day Exam 2*	Wednesday, February 25 3 rd day Exam 2*	Thursday, Feb. 26 <u>Lesson 22:</u> pages 344-349 Ch.14 Introduction Ch.14 Estimating with confidence Ch.14 Confidence intervals for μ (Watch part I in StatTutor) 4 th day EXAM 2* —\$5 late fee	Friday, February 27 Homework #7 due by 11:00 pm LAST day to take Exam 2. Must start before 5 pm \$8 late fee

***Exam 1** covers chapters 1 through 3, 8 and 9. Check Blackboard for study guide, practice exam, glossary, etc.

***Exam 2** covers chapters 1 through 11. Check Blackboard for study guide, practice exam, glossary, etc.

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Monday, March 2	Tuesday, March 3 <u>Lesson 23</u> : pages 249-356 Ch.14 Confidence intervals for μ (Watch part II StatTutor) Ch.14 How confidence intervals behave Ch.14 Choosing the sample size <u>Lesson 24</u> : pages 362-367 Ch.15 Introduction Ch.15 The reasoning of tests of significance Ch.15 Stating hypotheses	Wednesday, March 4	Thursday, March 5 <u>Lesson 25</u> : pages 367-372 Ch.15 Test statistics Ch.15 P -values Ch.15 Statistical significance	Friday, March 6 Homework #8 due by 11:00 pm
Monday, March 9 Last day to withdraw	Tuesday, March 10 <u>Lesson 26</u> : pages 372-376 Ch.15 Tests for a population mean (StatTutor lesson has 3 parts) <u>Lesson 27</u> : pages 379-399, 412-417 Ch.15 Tests from confidence intervals Ch.16 Where did the data come from? Ch.16 Cautions about the z procedures Ch.16 Cautions about confidence intervals Ch.16 Cautions about significance tests Also watch StatTutor lessons: Statistical vs. practical significance Beware multiple analyses	Wednesday, March 11	Thursday, March 12 <u>Lesson 28</u> : pages 399-404 Ch.16 Type I and type II errors (StatTutor lesson has 2 parts) Second HW extra-credit writing assignment due	Friday, March 13 Homework #9 due by 11:00 pm
Monday, March 16	Tuesday, March 17 <u>Lesson 30</u> : pages 620-646 Ch.18 Conditions for inference Ch.18 The t distributions Ch.18 The one-sample t confidence interval Ch.18 The one-sample t test <u>Lesson 31</u> : pages 444-451 Ch.18 Matched pairs t procedures Ch.18 Robustness of t procedures	Wednesday, March 18	Thursday, March 19 <u>Lesson 32</u> : pages 460-476, 480-481 Ch.19 Two-sample problems Ch.19 Comparing two population means Ch.19 Two-sample t procedures Ch.19 Examples of the two-sample t procedures Ch.19 Using technology Ch.19 Robustness again Ch.19 Details of the t approx. Ch.19 Avoid pooled two-sample t procedures WRITTEN Homework #10A due by 10:00 pm in 258 TMCB	Friday, March 20 Homework #10 due by 11:00 pm End of material on exam 3
Monday, March 23 Exam 3 covers Lessons 1-32, 39 (Chapters 1 – 11, 14 – 19 and 25) 1 st day to take Exam 3*	Tuesday, March 24 <u>Lesson 39</u> : pages 620-646 Ch.25 Introduction Ch.25 Comparing several means Ch.25 The analysis of variance F test Ch.25 Using technology Ch.25 The idea of analysis of variance Ch.25 Conditions for ANOVA Review for exam 3: Ch.22 Inference abt var: part III review 2 nd day Exam 3*	Wednesday, March 25 3 rd day Exam 3**	Thursday, March 26 <u>Lesson 33</u> : pages 491-496 Ch.20 The sample proportion \hat{p} Ch.20 The sampling dist of \hat{p} Also watch StatTutor lesson called Conditions for inference 4 th day Exam 3*--pay \$5 late fee	Friday, March 27 Homework #11 due by 11:00 pm LAST day to take Exam 3*. Must start before 5 pm & pay \$8 late fee

**Exam 3 covers chapters 1 through 11, 14 through 19 and 25. Check Blackboard for study guide, practice exam, glossary, etc.

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Monday, March 30	Tuesday, March 31 <u>Lesson 34</u> : pages 496-507 Ch.20 Large sample confidence intervals for a proportion Ch.20 Accurate confidence intervals for a proportion Ch.20 Choosing the sample size Ch.20 Significance tests for a proportion <u>Lesson 35</u> : pages 512-524 Ch.21 Two-sample problems: proportions Ch.21 The sampling dist of a difference b/w proportions Ch.21 Large-sample CIs for comparing proportions Ch.21 Accurate CIs for comparing proportions Ch.21 Significance tests for comparing proportions	Wednesday, April 1 Discontinuance deadline	Thursday, April 2 <u>Lesson 37</u> : pages 547-554 Ch.23 Two-way tables Ch.23 The problem of multiple comparisons Ch.23 Expected counts in two-way tables Ch.23 The chi-square test Ch.23 Using technology Ch.23 Cell counts required for the chi-square test Ch.23 The chi-square distributions	Friday, April 3 Homework #12 due by 11:00 pm
Monday, April 6	Tuesday, April 7 <u>Lesson 38</u> : pages 554-568 Ch.23 Uses of the chi-square test Ch.23 The chi-square test and the z test <u>Lesson 40</u> : pages 581-595 Ch.24 Introduction Ch.24 Conditions for regression inference Ch.24 Check conditions for inference Ch.24 Estimating parameters Ch.24 Using technology Ch.24 Testing hypothesis of no linear relationship Ch.24 Testing lack of correlation Ch.24 CI for the regression slope Do course evaluation	Wednesday, April 8 Do course evaluation	Thursday April 9 <u>Lesson 41</u> : pages 581-595 Ch.24 Inference about prediction (StatTutor lesson has 2 parts) Ch.24 Checking the conditions for inference Do course evaluation	Friday, April 10 Homework #13 due by 11:00 pm Do course evaluation
Monday, April 13 Do course evaluation	Tuesday, April 14 <u>Lesson 42</u> : pages 596-604 Procedure review StatTutor lesson found at end of chapter listing on <i>eBook</i> . <u>Review for final</u> Last Day of Classes Do course evaluation	Wednesday, April 15 Reading Day	Thursday, April 16 Reading Day	Friday, April 17 Take Final in Testing Center (140 JSB) any time Saturday, April 18: Take final in Testing Center (140 JSB) any time
Monday, April 20 Take Final in Testing Center (140 JSB) any time	Tuesday, April 21 Take Final in Testing Center (140 JSB) any time	Wednesday, April 22 Take Final in Testing Center (140 JSB) any time	Thursday, April 23 Graduation	Friday, April 24 Graduation

Final exam covers chapters 1 through 11 and 14 through 25. Check Blackboard for study guide, practice exam, glossary, etc.

Procedure review StatTutor lesson is found at the bottom of the chapter listings on *eBook*

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