STAT 3331
Sections 10973, 10974, 10975
Statistical Analysis for Business Applications I
Fall 2017

Instructor: Dr. Staci Smith

Class Time: TTh 11:30-12:50, 100D CEMO (Sect. 10973)
            TTh 2:30-3:50, 150 MH (Sect. 10974)
            TTh 4:00-5:20, 150 MH (Sect. 10975)

Instructor's Office: 275C MH

Office Hours: I am usually in my office from 10:20-11:25 am, 1:00-2:25 pm, and
             5:30-6:00 pm on class days (TTh).

Office Phone: (713) 743-4717

E-mail address: sasmith@uh.edu

Website: www.bauer.uh.edu/ssmith (access directly or thru Blackboard Learn)

Dept. Fax: (713) 743-4940

Required Text: The UH Customized Version of Essentials of Modern Business Statistics
Grading Scale:

- 90 and up: A
- 85-89.9999: A-
- 82-84.9999: B+
- 78-81.9999: B
- 75-77.9999: B-
- 72-74.9999: C+
- 68-71.9999: C
- 65-67.9999: C-
- 50-57.9999: D-
- 49.9999 and below: F

Grade Makeup:

- Homework: 16%
- Exam 1: 28%
- Exam 2: 28%
- Exam 3: 28%

Homework:

- Homework directions and examples of what the assignments may look like can be found in the back of the class packet.
- Assignment due dates will be announced in class and then posted on the website.
- Assigned homework is downloadable from Blackboard. Once you complete your homework, you will upload it to Blackboard.
- Absolutely no late homework will be accepted!
- Your graded homework and solution can usually be accessed within 48 hours of the day/time the homework was due.
- Your lowest homework score will be dropped at the end of the semester.

Exams:

- Exam information can be found in the back of the class packet.
- All exams are computerized and will be administered at the Center for Academic Support and Assessment (CASA) Testing Center (either the 221 Garrison Gym or 242 Classroom & Business Building location).
- Exam dates are established by CASA and can be found in the Class Schedule that follows. Students are responsible for scheduling their exams with CASA. Failure to schedule an exam or take an exam at its scheduled time will result in an exam grade of zero.
- No makeup exams will be given unless there is a documented, extenuating circumstance and I am notified before the scheduled exam time. If a conflict is known in advance, arrangements must be made with me to take the exam early. Makeup exams will be considerably more difficult than the actual exams.
- All exams are closed-book, multiple choice and noncomprehensive.
Daily Problems:
- You will be given a daily problem downloadable from Blackboard after every class (with the exception of exam review days).
- You will be given unlimited attempts (until the due date/time) to correctly answer the daily problem.
- You will have until 7:00 pm CST on the following day to upload the correctly answered daily problem file to Blackboard.
- You are responsible for viewing the file you upload to make sure it is correct, readable, and submitted under the correct daily problem. If it isn’t, you will be allowed three chances to upload your completed daily problem file before the due date/time. Only the latest submission will be considered.
- Usually within 48 hours of the day/time the daily problem was due, the daily problem will be checked for accuracy, and if ok, will post as 1 point on Blackboard.
- Any daily problem grading discrepancies must be brought to my attention within 5 business days from the day/time the daily problem was due.
- For every accurately completed daily problem you submit on time, you add 1 point to your raw exam score. Since there are …
  * 8 class days before Exam 1, you can earn up to an 8 point curve on Exam 1.
  * 8 class days before Exam 2, you can earn up to an 8 point curve on Exam 2.
  * 9 class days before Exam 3, you can earn up to a 9 point curve on Exam 3.
- Absolutely no late daily problems will be accepted!

Items you will need:
- UH Customized Anderson, Sweeney, Williams statistics textbook pack (available for purchase at the UH Bookstore and on-line by going to [www.cengagebrain.com/course/1990158](http://www.cengagebrain.com/course/1990158))
- the class packet (available for purchase at the UH Bookstore)
- a CourseWare account (which allows exam access). To sign up, please visit CASA’s website, [www.casa.uh.edu](http://www.casa.uh.edu).
- a Bauer lab account (which gives on-campus access to Excel). To sign up, please go to MH 272 (the Bauer “Gateway” Lab).
- a TI-30XA calculator (or other approved non-programmable, non-graphing, no probability distribution calculator). The TI-30XA will be the calculator exclusively used in class.
Miscellaneous:
- All laptop computers, cell phones, and other electronic devices are to be turned off before class begins. Absolutely no recording devices are permitted without the express written consent of Dr. Staci Smith.
- You do not need to bring your textbook to class, but you do need to bring your class packet and calculator.
- Unless otherwise specified, all answers to the problems in the class packet, homework, and exams, were derived by carrying all decimal places in the intermediate steps and then rounding to four decimal places when the answer was reached.
- If you are unable to attend class, you must get notes from a classmate.
- You are responsible for checking the class website and Blackboard regularly for up-to-date class information.
- To receive academic accommodations, students with disabilities must register with the Center for Students with Disabilities (CSD) (telephone 713-743-5400), and present me with their approved accommodation documentation in a timely manner.
- Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. Also, there is no appointment necessary for the “Let’s Talk” program, which is a drop-in consultation service at convenient locations and hours around campus. http://www.uh.edu/caps/outreach/lets_talk.html.
- Any act of academic dishonesty on an exam, homework, or daily problem (including Excel output) will result in an F for the class and possible expulsion from the university. Please consult the UH Student Handbook, Articles 1-8 (www.uh.edu/academic-honesty-undergraduate).
- After the last drop deadline, UH academic regulations prohibit me from dropping students from the class unless it is for a rare, urgent, substantiated (i.e. well documented), nonacademic reason.
- Unless you are/plan to be a Supply Chain Management (SCM) major, you must earn a “D-“ or higher to pass STAT 3331. If you are/plan to be an SCM major, you must earn a “C” or higher.
- Barring an error on my part (mathematical, typographical, etc.), once I have assigned you your final grade, IT IS NOT SUBJECT TO DEBATE! I do not give extra assignments or allow exam re-takes, and I will not round your final average up (since all elements that make up your final average will have already been curved). This policy will be strictly adhered to in order to be consistent with the STAT 3331 grading scale and grade makeup clearly outlined in this class packet (and to be legally fair to all STAT 3331 students). If your final average is a 49.9999, I am sorry but you will receive an F for the class.
STAT 3331 Help

Remember that this course will be challenging and require a lot of your time and effort. You need to devote one hour every day reading and working problems in your statistics textbook to supplement your class lecture material. Do not fall behind in this course! If you are having trouble with a particular concept, both the Bauer Tutoring Services and the Learning Support Services offer walk-in Stat tutoring sessions.

Bauer Tutoring Lab: MH 146
Hours of operation: M-Th, 9am-7pm  
F, 9am-3pm

No tutoring is available: on exam days, or after the last day of class

Online Stat Help: www.uh.edu/blackboard/  (log in, click STAT3331)

Tutoring: LEARNING SUPPORT SERVICES (LAUNCH) offers
FREE tutoring for STAT 3331 students.  
(They also offer workshops in test taking, reducing test anxiety, etc.)

Phone: 713-743-5411

Location: N109 Cougar Village 1

Website: www.uh.edu/ussc/launch/index.php
# Class Schedule

<table>
<thead>
<tr>
<th>Class</th>
<th>Topics to be Discussed</th>
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<tbody>
<tr>
<td>8/22-8/24</td>
<td>Descriptive Statistics (Chap 3:Sect 1-3, 5)</td>
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<td>- Measures of Location</td>
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<td>- Measures of Variability</td>
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<td></td>
<td>- Distribution Shape</td>
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<td>- Measures of Association</td>
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<td>HOMEWORK 1 (Chapter 3). Due date TBA.</td>
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<tr>
<td>8/29-9/7</td>
<td>Probability (Chap 4:Sect 1[reading only], 2-4, 5[exercises only])</td>
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<td>- Properties of Probabilities</td>
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<td>- General Law of Addition</td>
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<td>- Mutually Exclusive Events</td>
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<td>- Conditional Prob.</td>
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<td>- General Law of Multiplication</td>
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<td>- Independent Events</td>
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<td>HOMEWORK 2 (Chapter 4). Due date TBA.</td>
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<tr>
<td>9/12-9/14</td>
<td>Discrete Random Variables (Chap 5:Sect 1[reading only], 2-4)</td>
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<td>- E.V. and Var. of a R.V.</td>
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<td>- Binomial Dist.</td>
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<td>HOMEWORK 3 (Chapter 5). Due date TBA.</td>
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<tr>
<td>9/21</td>
<td>In-Class Review for EXAM 1</td>
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<tr>
<td>9/22-9/23</td>
<td>TAKE EXAM 1 AT CASA.</td>
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<tr>
<td>9/19, 9/26</td>
<td>Continuous Random Variables (Chap 6:Sect 2)</td>
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<td>- Normal Dist.</td>
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<tr>
<td>9/28</td>
<td>Sampling Distributions (Chap 7:Sect 3-4[reading only], 5-6)</td>
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<td>- Samp. Dist. of ( \bar{x} )</td>
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<tr>
<td></td>
<td>- Samp. Dist. of ( \bar{p} )</td>
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<td>HOMEWORK 4 (Chapters 6-7). Due date TBA.</td>
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</tbody>
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Class Schedule (continued)

10/3-10/17 Single Sample Inference (Chap 8:Sect 1-2, 4; Chap 9:Sect 1[reading only], 3-5)
   -C.I. for $\mu$, $\sigma$ known
   -C.I. for $\mu$, $\sigma$ unknown
   -C.I. for $p$
   -Hyp. testing for $\mu$, $\sigma$ known
   -Hyp. testing for $\mu$, $\sigma$ unknown
   -Hyp. testing for $p$

HOMEWORK 5 (Chapters 8-9). Due date TBA.

10/19 In-Class Review for EXAM 2
10/20-10/21 TAKE EXAM 2 AT CASA.

NOTE: The last day to drop this course is 10/31.

10/24-11/7 Two Sample Inference (Chap 10:Sect 2-3; Chap 11:Sect 1)
   -C.I. for $\mu_1 - \mu_2$, $\sigma_1$ & $\sigma_2$ unknown, indep. samples
   -C.I. for $\mu_1 - \mu_2$, $\sigma_1$ & $\sigma_2$ unknown, dep. samples
   -C.I. for $p_1 - p_2$
   -Hyp. testing for $\mu_1 - \mu_2$, $\sigma_1$ & $\sigma_2$ unknown, indep. samples
   -Hyp. testing for $\mu_1 - \mu_2$, $\sigma_1$ & $\sigma_2$ unknown, dep. samples
   -Hyp. testing for $p_1 - p_2$

HOMEWORK 6 (Chapters 10-11). Due date TBA.

11/9-11/21 Simple Linear Regression (Chap 12:Sect 1[reading only], 2-3, 4[reading only], 5-7)
   -Regression equation
   -ANOVA table
   -$s_e^2$, $r^2$, $r$
   -C.I. and Hyp. testing for $\beta_1$
   -C.I. for mean value of $y$
   -P.I. for indiv. value of $y$

11/23 Thanksgiving

HOMEWORK 7 (Chapter 12). Due date TBA.

11/28 In-Class Review for EXAM 3
12/2-12/3 TAKE EXAM 3 AT CASA.
# Recommended Textbook Problems

[The problems listed below have been randomly chosen from (1) exercises in the required sections of our textbook and (2) exercises at the end of each required chapter. It is highly recommended that you work additional problems from the two sources mentioned above! [FYI: IF YOU WORK, ON AVERAGE, 4 TEXTBOOK PROBLEMS EVERY DAY, YOU WILL COMPLETE ALL THE TEXTBOOK PROBLEMS...not just the recommended ones below.]

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Problems</th>
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<tbody>
<tr>
<td>3</td>
<td>By Hand: 1, 5 (only Q₁, Q₅), 9(a-b, d), 25, 29, 34, 37(a-b), 40, 55, 58, 62(a-d), 70(d)</td>
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<tr>
<td></td>
<td>Using Excel: 7, 32, 45(a-d), 67(a-b)</td>
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<td>4</td>
<td>By Hand: 19(a-c), 20(a-c), 25, 27, 29, 32(c-e), 34(b-d), 38(a-d), 42(a), 43(a-b), 54(a-d), 57</td>
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<tr>
<td>5</td>
<td>By Hand: 7, 11(d-e), 14, 17, 18(a-d), 22, 30, 32(a-c), 54(a-c), 58(a-c)</td>
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<td>Using Excel: 27, 29, 35</td>
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<tr>
<td>6</td>
<td>By Hand: 18, 19, 21, 35(a-b), 36, 38(a)</td>
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<td>Using Excel: 17, 24, 34, 41</td>
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<tr>
<td>7</td>
<td>By Hand: 20, 22(a), 31, 33, 34(a-c), 39, 41, 42, 48, 50</td>
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<tr>
<td>8</td>
<td>By Hand: 3, 10, 13, 15, 35, 41, 53</td>
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<td>Using Excel: 6, 9, 17, 37, 47(a-b)</td>
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<tr>
<td>9</td>
<td>By Hand: 15, 17, 18, 27, 34, 37, 42, 48, 52, 58</td>
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<td></td>
<td>Using Excel: 29, 44, 47</td>
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<tr>
<td>10</td>
<td>By Hand: 9, 17, 19, 25, 43</td>
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<tr>
<td></td>
<td>Using Excel: 13, 16, 24(a-b), 26, 41, 42</td>
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<tr>
<td>11</td>
<td>By Hand: 1, 3, 5, 7</td>
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<td></td>
<td>Using Excel: 32(a-b)</td>
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<tr>
<td>12</td>
<td>By Hand: 1(d-e), 9(c-e), 15, 18, 21, 22, 23, 26, 29, 30, 32, 38, 40</td>
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<tr>
<td></td>
<td>Using Excel: 8(c-e), 28, 58(a-c)</td>
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</tbody>
</table>