

# STATISTICS WAIVER EXAM STUDY GUIDE

---

***Students can only take the waiver exam once. An official letter from the Program Management office will be sent to students letting me know if they have passed or failed the exam.***

Listed below is a preparatory syllabus to help you study for the Statistical Waiver exam. The waiver exam is graded on a pass/fail level and the passing grade is 70.

Students should purchase this book for additional study help. ***The text to use is Sincich, Terry. Business Statistics by Example ISBN 0-02-41-441-8 (baseball field on hard cover) and Business Statistics by Example-Solutions Manual ISBN 0-02-312719-8***

The exam is comprised of short answer questions, where you pick the correct answer from the choices given. Longer exam questions the work must be shown. There are no essay type questions. All the questions are quantitative in nature and some require a written interpretation of your answer.

The topics covered in the short answer questions will cover all the material with no particular emphasis. Expect ten short answer questions each worth 5 points. There will be five longer questions each worth 10 points. Listed below are the topics for the longer questions:

1. A Z-score problem related to the probability of a variable's occurrence or the probability of a sample mean's occurrence (Central Limit Theorem).
2. Confidence interval for a mean or for a proportion
3. Hypothesis test for the mean or the difference between means or for a proportion..all large sample. Or a hypothesis test for the mean...small sample.
4. A regression analysis problem where you analyze the raw data. Simple OLS.
5. A regression analysis problem where you analyze the simple OLS output form a software package.

Students are allowed to use a calculator. Please bring with you pencils and erasers for the exam. You are allowed to bring the formulas. The Z and t-table will be attached to your waiver exam. **ALL FORMULAS ARE KEPT AND HAND IN WITH THE COMPLETED EXAM.**

Topic	Required Reading
Intro to Stat	In <a href="#">Chp 1</a> , <a href="#">2</a> , <a href="#">3</a> . Skim <a href="#">Chp1</a> . <a href="#">Chp 2</a> - pages 27-33, 50-57. <a href="#">Chp. 3</a> - pages 80-106.
Probability: Basic Concept	<a href="#">Chp 4</a> , P.150-173
Modeling: Discrete Distribution	<a href="#">Chp 5</a> , Skim P.202-211
Continuous Probability Distribution	<a href="#">Chp 6</a> , P.255-270
Sampling and Sampling Distribution	<a href="#">Chp 7</a> P.307-329
Estimation of Pop Paras: Intervals	<a href="#">Chp 8</a> , P.341-367
Confidence Hypothesis Testing	<a href="#">Chp 10</a> , P.469-496
Hypothesis Testing Applications	<a href="#">Chp 11</a> , P.510-532, P550-555
Simple Linear Regression and Correlation	<a href="#">Chp 12</a> , P.580-634, P.642-646
Chapter	Problem Required
2	2.23, 2.24
3	3.9, 3.21, 3.22, 3.27
4	4.9, 4.11, 4.29, 4.30
5	None
6	6.1, 6.5, 6.9, 6.11
7	7.1, 7.2, 7.9, 7.11, 7.13
8	8.1, 8.3, 8.9, 8.18, 8.19, 8.25, 8.27, 8.29, 8.31
10	10.2, 10.3, 10.14, 10.21, 10.23, 10.25, 10.43, 10.49, 10.51 (a-f, only)
11	11.7, 11.11, 11.13, 11.19, 11.35, 11.39, 11.55
12	12.1, 12.9, 12.12, 12.15, 12.16, 12.24, 12.25, 12.35, 12.36, 12.39, 12.43, 12.53, 12.59, 12.61, 12.77, 12.79