

General Information:

Exam Title:	Statistics	Policies and Procedures:	www.uexceltest.com/regguide
Admin Code:	MAT210	Exam Prerequisites:	Basic Algebra
Exam Format:	Multiple-Choice	Additional Exam	
Exam Length:	2 Hours, 72 Questions	Requirements/	
Exam Credit Hrs:	3 Semester Hrs - Lower Level	Recommendations:	None
Exam Texts:	www.uexceltest.com/bookstore		
Additional Materials:	Content Guide, Practice Exam		

Exam Description: The UExcel examination in Statistics is based on material typically taught in an introductory, one-semester undergraduate course in Statistics. It measures knowledge and understanding of the fundamental concepts of descriptive and inferential statistics and is designed to correspond to a service course applicable to many majors. A basic knowledge of algebra is assumed. Questions about the meaning and application of basic statistical ideas are included.

Exam Outcomes:

After you have successfully worked your way through the recommended study materials, you should be able to:

- explore, organize, and describe data
- perform standard statistical calculations
- analyze and interpret several types of data
- use graphical and numerical summaries
- apply standard statistical inference procedures
- draw valid conclusions from your analysis of data

Exam Content Areas:

1. Overview of Statistics (5%)
2. Summarizing, Organizing, and Describing Data (20%)
3. Regression and Correlation (10%)
4. Basic Probability Theory (10%)
5. Probability Distributions (10%)
6. Sampling (10%)
7. Statistical Estimation (15%)
8. Hypothesis Testing (20%)

Recommended Resources:

Sullivan, M. (2010). *Statistics: Informed decisions using data* (3rd ed.). Upper Saddle River, NJ: Pearson.

OR

Moore, D., McCabe, G., & Craig, B. (2012). *Introduction to the practice of statistics*. (7th ed.) New York: W.H. Freeman. ISBN: 1-4292-4032-6

AND

Excelsior College (2009). *Course guide for Statistics*. Albany, NY: Excelsior College.

NOTE: We recommend that during your study, you perform all calculations using a basic, 8-function calculator, so that you will be well prepared to do similar calculations using the online calculator at the Pearson testing center.

UExcel Practice Exam for Statistics
(visit www.uexceltest.com/resources)

Sample Questions

1. A stem-and-leaf display of a set of data is shown below:

```
2 | 3 4 5
3 | 0 1 1 2
4 | 1 2 5 5 7 8 9
5 | 1 1 2 3 5
6 | 2 3 5
7 | 0 2
Leaf Unit=1.0
```

What is the median of the data set?

- a. 45
b. 45.5
c. 47
d. 49
2. A set of scores has a mean of 70 and a standard deviation of 4. Which score has a standardized score of -2.5 ?
- a. 55
b. 60
c. 65
d. 80
3. If the number k were added to each value in a set of data, which measure would remain unchanged?
- a. mean
b. median
c. mode
d. range
4. Given the regression equation $y = -3 + 0.5x$, which is true?
- a. The value of y increases 1 unit for every 2 units of increase in x .
b. The value of y increases 2 units for every 1 unit of increase in x .
c. The value of y is 3 units less than x .
d. The correlation between x and y is negative.
5. How many different radio station call letter combinations could there be if the first letter must be a W or a K and the whole station name must have three letters?
- a. 54
b. 676
c. 1352
d. 17,576
6. Assume that the grades of individuals taking a proficiency examination are distributed normally with an average score of 75 and a standard deviation of 5. The minimum passing grade on the examination is 70. What is the approximate proportion of individuals who fail the examination?
- a. .16
b. .34
c. .68
d. .84
7. Which is an accurate statement with regard to a simple random sample?
- a. The population is divided into stratified groups.
b. The sample consists of every n th subject.
c. The sample uses only subjects that have been screened for common traits.
d. Samples of the same size have the same probability of being selected.
8. A college's past experience is that 46% of students accepted for admission will actually enroll at the college. It is assumed that the students act independently and that the 46% probability of acceptance still holds. If 5490 students are accepted, what is a 99% confidence interval for the number who will enroll?
- a. (2430, 2620)
b. (2453, 2597)
c. (2465, 2585)
d. (0.443, 0.477)
9. A researcher developed a method to treat stomach ulcers. The researcher found that 47% of patients in the treatment group (sample size = 82) were cured, and that 38% of patients in the control group (sample size = 78) were cured. Let P^1 = the proportion cured in the population represented by the control group. Let P^2 = the proportion cured in the population of those taking treatment. The z test for $H_0: p^1 = p^2$ is closest to which value?
- a. 0.7
b. 1.15
c. 1.6
d. 2.53
10. A researcher wishes to know if there is a relationship between gender and a person's preference of color in an automobile. Male and female customers at a car dealership are shown a particular model of car in each of four colors and are asked to state their preference. Which would be the most appropriate test to determine whether men and women have different preferences?
- a. chi-square test for goodness of fit
b. chi-square test for independence of effects
c. two-sample t test for comparing means
d. z test for comparing means