

Student Survey

Name: _____ (All names will be kept confidential in project reports, etc.)

Date: _____ **Current Class/Semester:** _____

Please list all **probability and/or statistics** courses that you have taken (other than this course) or write none if you have not had any previous courses of this type. If you have had some other exposure to probability and/or statistics please indicate that below.

<u>Course Number & Name</u>	<u>When & Where Taken</u>	<u>Grade</u>
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Other Exposure to Probability and/or Statistics:

Please rate your knowledge of the given topic with **1 indicating low knowledge** and **5 indicating high knowledge**. It is important that you answer as honestly as possible. Some of these topics you may have not have been exposed to very much or at all.

1. My understanding of randomness.

1 2 3 4 5

2. My understanding of how to list a sample space.

1 2 3 4 5

3. My understanding of how to compute a sample mean versus how to compute the distribution (population) mean.

1 2 3 4 5

4. My understanding of how to compute a sample variance versus how to compute the distribution (population) variance.

1 2 3 4 5

5. My understanding of why the factor $n-1$, where n is the sample size, appears in the denominator of the sample variance formula.

1 2 3 4 5

6. My understanding of basic set notation.

1 2 3 4 5

7. My understanding of how to create, read, and use Venn diagrams.

1 2 3 4 5

8. My understanding of empirical probability distributions versus probability distributions.

1 2 3 4 5

9. My understanding of how to calculate the probability of an event.

1 2 3 4 5

10. My understanding of combinations and permutations.

1 2 3 4 5

11. My understanding of how to use counting techniques in probability problems.

1 2 3 4 5

12. My understanding of hypergeometric probability problems.

1 2 3 4 5

13. My understanding of conditional probability.

1 2 3 4 5

14. My understanding of the independence of events.

1 2 3 4 5

15. My understanding of the Multiplicative Law of Probability.

1 2 3 4 5

16. My understanding of the Additive Law of Probability.

1 2 3 4 5

17. My understanding of the Law of Total Probability.

1 2 3 4 5

18. My understanding of Bayes' Theorem.

1 2 3 4 5

19. My understanding of the definition of a Discrete Random Variable.

1 2 3 4 5

20. My understanding of how to find the expected value of a discrete random variable.

1 2 3 4 5

21. My understanding of how to find probabilities associated with discrete random variables.

1 2 3 4 5

22. My understanding of how to find probabilities associated with continuous random variables.

1 2 3 4 5

23. My understanding of the Binomial Probability Distribution.

1 2 3 4 5

24. My understanding of the Geometric Probability Distribution.

1 2 3 4 5

25. My understanding of the Poisson Probability Distribution.

1 2 3 4 5

26. My understanding of Bernoulli Trials and their associated distributions.

1 2 3 4 5

27. My understanding of the Poisson Process and its associated distributions.

1 2 3 4 5

28. My understanding of the definition of a probability distribution of a continuous random variable.

1 2 3 4 5

29. My understanding of the Normal Probability Distribution.

1 2 3 4 5

30. My understanding of the Exponential Probability Distribution.

1 2 3 4 5

31. My understanding of the Chi-Square Probability Distribution.

1 2 3 4 5

32. My understanding of the difference between cumulative probability functions and probability mass/density functions.

1 2 3 4 5

33. My understanding of Mixed Distributions.

1 2 3 4 5

34. My understanding of Mathematical Expectation and its properties.

1 2 3 4 5

35. My understanding of Multivariable Probability Distributions.

1 2 3 4 5

36. My understanding of Moment Generating Functions and their properties.

1 2 3 4 5

37. My understanding of independent random variables.

1 2 3 4 5

38. My overall understanding of random variables.
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| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
39. My understanding of the Central Limit Theorem.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
40. My understanding of Point Estimation.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
41. My understanding of Confidence Intervals for Means.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
42. My understanding of Confidence Intervals for Proportions.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
43. My understanding of calculating 1-Sample Confidence Intervals.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
44. My understanding of calculating 2-Sample Confidence Intervals.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
45. My understanding of interpreting 1-Sample Confidence Intervals.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
46. My understanding of interpreting 2-Sample Confidence Intervals.
- | | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
47. My understanding of determining which type of confidence interval is needed.
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| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
48. My understanding of how to determine the sample size for a given confidence level and a given margin of error.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
49. My understanding of 1-Sample Hypothesis Testing for Means.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
50. My understanding of 1-Sample Hypothesis Testing for Proportions.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
51. My understanding of 2-Sample Hypothesis Testing for Means.
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|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
52. My understanding of 2-Sample Hypothesis Testing for Proportions.
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| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
53. My understanding of Paired Difference Hypothesis Testing.
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| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

54. My understanding of Rejection Regions.
1 2 3 4 5
55. My understanding of Test Statistics.
1 2 3 4 5
56. My understanding of Type I error.
1 2 3 4 5
57. My understanding of alpha.
1 2 3 4 5
58. My understanding of Statistical Significance (p-values).
1 2 3 4 5
59. My understanding of Correlation.
1 2 3 4 5
60. My understanding of Regression.
1 2 3 4 5
61. My understanding of non-parametric or distribution-free methods.
1 2 3 4 5
62. My understanding of Multiple Regression.
1 2 3 4 5
63. My understanding of correlation versus causation.
1 2 3 4 5
64. My overall understanding of probability.
1 2 3 4 5
65. My overall understanding of statistics.
1 2 3 4 5