

DS 1000B Final Exam Self-Assessment & Study Plan

Winter 2026

Final Exam: Sunday, April 19, 2026

10:00 AM - 1:00 PM

The goal is to help you gather an accurate assessment of your strengths and weaknesses across the course material, and to use that information to create a focused study plan for the final exam.

Unit 1 Exploring Data Chapters 1 – 6

Chapter 1 Picturing Distributions with Graphs

I can ...	Not yet	Developing	Proficient
Distinguish categorical variables from quantitative variables	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read and interpret a histogram	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read and interpret a bar chart or pie chart for categorical data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpret the features of a time series-plot: trends, seasonality and outliers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 2 Describing Distributions with Numbers

I can ...	Not yet	Developing	Proficient
Calculate and interpret the mean, median and quartiles of a dataset	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calculate and interpret the IQR and standard deviation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State and apply the properties of standard deviation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify outliers from a modified boxplot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read and construct a boxplot or a modified boxplot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choose appropriate summary measures for a distribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 3 The Normal Distribution

I can ...	Not yet	Developing	Proficient
Describe the properties of a Normal curve and the role of μ and σ	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State and apply the empirical rule to answer probability questions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calculate and interpret a z-score	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use a standard Normal table to compute probabilities and percentiles for a Normal distribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use a standard Normal table to compute percentiles for a Normal distribution	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 4 Scatterplots and Correlation

I can ...	Not yet	Developing	Proficient
Interpret and draw a scatterplot	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Explain what the correlation coefficient r measures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply the properties of correlation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 5 Regression

I can ...	Not yet	Developing	Proficient
Identify and interpret the slope and y -intercept of a regression line	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use the regression equation to predict a response value	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interpret the coefficient of determination in context	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calculate and interpret a residual	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Check when a predicting using a regression line is appropriate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Define influence and leverage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Define and recognize the ecological fallacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 6 Contingency Tables

I can ...	Not yet	Developing	Proficient
Interpret the entries of a two-way table in context	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calculate and interpret conditional distributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calculate and interpret marginal distributions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Determine whether two categorical variables are independent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Define risk, proportion, odds, probability and percentage in the context of a two-way table	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calculate and interpret measures of association between two categorical variables (relative risk and odds ratio)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify potential confounding variables and explain their role in an observed association	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Unit 2 Data Collection Chapters 8 – 9

Chapter 8 Sampling

I can ...	Not yet	Developing	Proficient
Distinguish a population from a sample, and a parameter from a statistic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify issues with non random sampling methods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify each of the following designs:			
Simple random sampling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stratified sampling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Systematic sampling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cluster sampling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multistage sampling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify practical challenges that surveys can encounter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 9 Designing Experiments

I can ...	Not yet	Developing	Proficient
Distinguish between observational studies and experiments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify the explanatory and response variables in a study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify factors, levels, treatments, and subjects in an experiment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State and explain the principles of experimental design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Unit 3 Probability Chapters 12 – 13

Chapter 12 Introduction to Probability

I can ...	Not yet	Developing	Proficient
List a sample space and assign probabilities to events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Determine whether two events are disjoint (mutually exclusive)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply the addition and complement rules	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distinguish between discrete and continuous random variables and give examples of each	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use a Venn diagram to represent events and calculate probabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Convert between the probability and odds of an event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 13 Conditional Probability

I can ...	Not yet	Developing	Proficient
Calculate conditional probabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply the Multiplication Rule	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify when events are independent and apply the definition of independence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construct and use a tree diagram to find probabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use a two-way table to calculate conditional probabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply Bayes' theorem to reverse a conditional probability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use the Law of Total Probability to find the overall probability of an event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 15 Sampling Distributions

I can ...	Not yet	Developing	Proficient
State the mean and standard error of the sampling distribution of the sample mean	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State and apply the Central Limit Theorem to describe the shape of \bar{X}	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify the distribution of \bar{X} for a normal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chapter 16 Confidence Intervals: The Basics

I can ...	Not yet	Developing	Proficient
Explain what a confidence interval estimates and how to interpret it in context	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construct a confidence interval for μ when σ is known	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Explain how sample size and confidence level each affect interval width	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Determine the sample size needed for a desired margin of error	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Determine the critical value corresponding to a confidence level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Construct the confidence interval of a transformation of a parameter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

My Study Plan

Step 1 Identify Your Priorities

For each topic that needs work, write a specific action you will take (e.g., redo the examples from class, try the examples from Ashley's slides, ask about it during office hours/Piazza).

Topic	How I will address it

Step 2 Block Out Your Study Sessions

The exam is **Sunday, April 19**.

Write a date in each column header, then use the rows to plan three study blocks per day. Aim for focused 45–60 minute sessions with breaks.

	Day 1 Date: _____	Day 2 Date: _____	Day 3 Date: _____	Day 4 Date: _____	Day 5 Date: _____
Block 1					
Block 2					
Block 3					
Block 4					
Block 5					

Step 3 Gather Your Resources

Tick the resources you plan to use:

- | | |
|--|---|
| <input type="checkbox"/> Lecture slides from this term | <input type="checkbox"/> Practice final |
| <input type="checkbox"/> Ashley's lecture slides (W2025) | <input type="checkbox"/> Midterm exams and practice materials |
| <input type="checkbox"/> Textbook problems | <input type="checkbox"/> Assignments |
| <input type="checkbox"/> Cumulative practice problem set | <input type="checkbox"/> Office hours (see final information sheet for times) |
| <input type="checkbox"/> Study group with classmates | <input type="checkbox"/> Piazza |
| <input type="checkbox"/> Other: _____ | |

Good luck, you got this!