PROBABILITY AND STATISTICS SYLLABUS

FIRST MARKING PERIOD

UNIT 1   INTRODUCTION TO STATISTICS (Test Ch 1)

Section	Title	2023 NJSLS for Mathematics
1.1	An Overview of Statistics	S-IC.A.1, S-IC.A.2, S-IC.B.3
1.2	Data Classification	S-IC.A.1, S-IC.A.2, S-IC.B.3
1.3	Data Collection and Experimental Design	S-IC.A.1, S-IC.A.2, S-IC.B.3

UNIT 2   DESCRIPTIVE STATISTICS USING GRAPHS (Test Ch 2.1-2.2)

Section	Title	2023 NJSLS for Mathematics
2.1	Frequency Distributions and Their Graphs	S-ID.A.1
2.2	More Graphs and Displays	S-ID.A.1, S-ID.B.6c

UNIT 3   DESCRIPTIVE STATISTICS USING NUMBERS (Test Ch 2.3-2.5)

Section	Title	2023 NJSLS for Mathematics
2.3	Measure of Central Tendency	S-ID.A.2, S-ID.A,3
2.4	Measures of Variation	S-ID.A.2, S-ID.A.3, S-ID.A.4
2.5	Measures of Position	S-ID.A.2, S-ID.A.3, S-ID.A.4

SECOND MARKING PERIOD

UNIT 4   CORRELATION AND REGRESSION (Test Ch 9.1-9.2)

Section	Title	2023 NJSLS for Mathematics
9.1	Correlation	S-ID.B.6a, S-ID.B.6c, S-ID.C.7, S-ID.C.8, S-ID.C.9
9.2	Linear Regression	S-ID.B.6a, S-ID.B.6c, S-ID.C.7, S-ID.C.8, S-ID.C.9

UNIT 5   PROBABILITY (Test Ch 3)

Section	Title	2023 NJSLS for Mathematics
3.1	Basic Concepts of Probability and Counting	S-CP.A.1
3.2	Conditional Probability and the Multiplication Rule	S-CP.A.1, S-CP.A.2, S-CP.A.3, S-CP.A.4, S-CP.A.5, S-CP.B.6
3.3	The Addition Rule	S-CP.A.1, S-CP.B.7
3.4	Additional Topics in Probability and Counting	S-CP.B.8, S-CP.B.9

UNIT 6   DISCRETE PROBABILITY DISTRIBUTIONS (Test Ch 4.1-4.2)

Section	Title	2023 NJSLS for Mathematics
4.1	Probability Distributions	S-MD.A.2, S-MD.A.3, S- MD.A.4, S-MD.B.5, S- MD.B.5a
4.2	Binomial Distributions	S-MD.A.3, S-MD.A.4

THIRD MARKING PERIOD

UNIT 7   NORMAL PROBABILITY DISTRIBUTIONS (Test Ch 5.1-5.2)

Section	Title	2023 NJSLS for Mathematics
5.1	Introduction to Normal Distributions and the Standard Normal	S-ID.A.4, S-IC.A.2
5.2	Normal Distributions: Finding Probabilities	S-ID.A.4, S-IC.A.2

UNIT 8   APPLICATIONS OF NORMAL PROBABILITY DISTRIBUTIONS (Test Ch 5.3-5.4)

Section	Title	2023 NJSLS for Mathematics
5.3	Normal Distributions: Finding Values	S-ID.A.4, S-IC.A.2
5.4	Sampling Distributions and the Central Limit Theorem	S-ID.A.4

UNIT 9   CONFIDENCE INTERVALS (Test Ch 6)

Section	Title	2023 NJSLS for Mathematics
6.1	Confidence Intervals for the Mean (σ Known)	S-IC.A.1, S-IC.B.4
6.2	Confidence Intervals for the Mean (σ Unknown)	S-IC.A.1, S-IC.B.4
6.3	Confidence Intervals for Population Proportions	S-IC.A.1, S-IC.B.4
6.4	Confidence Intervals for Variance and Standard Deviation	S-IC.A.1, S-IC.B.4

FOURTH MARKING PERIOD

UNIT 10   HYPOTHESIS TESTING WITH ONE SAMPLE (Test Ch 7)

Section	Title	2023 NJSLS for Mathematics
7.1	Introduction to Hypothesis Testing	S-IC.A.1, S-MD.B.7
7.2	Hypothesis Testing for the Mean (σ Known)	S-IC.A.1, S-ID.A.4, S-MD.B.7
7.3	Hypothesis Testing for the Mean (σ Unknown)	S-IC.A.1, S-ID.A.4, S-MD.B.7
7.4	Hypothesis Testing For Proportions	S-IC.A.1, S-ID.A.4, S-MD.B.7
7.5	Hypothesis Testing for Variance and Standard Deviation	S-IC.A.1, S-MD.B.7

FINAL EXAM (CCC Departmental Exam)
FINAL PROJECT (Written Report)

Resources

Textbook: Elementary Statistics 6th Edition, **Larson and Farber**

Additional Resources: Pearson Web-based videos and supplements
Assessment Information

Probability & Statistics		
Category	Percentage	Types of Assignments
Major	50%	• Summative Assessments • Large Project-based assessments
Minor	30%	• Formative Assessments (Quiz, Warm/up, Closure, etc…) • Smaller Project-based assessments
Class Participation	10%	
Homework	10%	