

# LIBERAL ARTS MATH SYLLABUS

## Marking Period 1

### Unit 1A – Problem Solving (Test Chapter 1)

Section	Title	2023 NJSLS for Mathematics
1.1	Inductive and Deductive Reasoning	5-OA.B.3 6-RP.A.3
1.3	Problem Solving Strategies	7-SP.C.8b 8-G.A.4 G-CO.A.5 G-MG.A.1

### Unit 1B – Set Theory (Test Chapter 2)

Section	Title	2023 NJSLS for Mathematics
2.1	Basic Properties of Sets	S-CP.A.1
2.2	Complements, Subsets, and Venn Diagrams	S-CP.A.1
2.3	Set Operations	S-CP.A.1, S-CP.A.2
2.4	Applications of Sets	S-CP.A.1, S-CP.A.2

### Unit 1C – Number Theory and the Real Number System (Test Chapter 5)

Section	Title	2023 NJSLS for Mathematics
5.1 (Blitzer)	Number Theory: Prime and Composite Numbers	4-OA.B.4 6-NS.B.4
5.5 (Blitzer)	Real Numbers and Their Properties	3-OA.B.5 8-NS.A.1
5.6 (Blitzer)	Exponents and Scientific Notation	8-EE.A.1, 8-EE.A.4

## Marking Period 2

### Unit 2A – Equations and Inequalities (Test 6.1-6.4 (Blitzer))

Section	Title	2023 NJSLs for Mathematics
6.1	Algebraic Expressions and Formulas	6-EE.A.2c
6.2	Linear Equations in One Variable and Proportions	7-RP.2c 7-EE.B.3
6.3	Applications of Linear Equations	7-EE.B.3 7-EE.4a
6.4	Linear Inequalities in One Variable	7-EE.4b 8-EE.C.7b A-CED.A.3 A-REI.B.3

### Unit 2B – Graphs , Functions, and Linear Systems (Test 7.1-7.3 (Blitzer))

Section	Title	2023 NJSLs for Mathematics
7.1	Graphing and Functions	A-REI.D.10 F-IF.A.1, F-IF.A.2, F-IF.B.4
7.2	Linear Functions and Their Graphs	F-IF.B.4, F-IF.B.6
7.3	Systems of Linear Equations in Two Variables	A-REI.C.6 , A-REI.C.5

### Unit 2C – Personal Finance (Test 8.1 (Blitzer), 9.3)

Section	Title	2023 NJSLs for Mathematics
8.1	Percents, Sales Tax, and Discounts	7-RP.A.3
9.3	Percents	7-RP.A.3

## Marking Period 3

### Unit 3A – Measurement (Test 9.1 (Blitzer))

Section	Title	2023 NJSLS for Mathematics
9.1	Measuring Length; The Metric System	5-M.A.1 M-MD.A.1 N-Q.A.3

### Unit 3B – Geometry (Test 10.1-10.2 (Blitzer))

Section	Title	2023 NJSLS for Mathematics
10.1	Points, Lines, Planes, and Angles	8-G.5 G-CO.1, G-CO..9, G-CO.11
10.2	Triangles	G-CO.10 G-SRT.6, G-SRT.8

### Unit 3C – Geometry (Test 10.3-10.5 (Blitzer))

Section	Title	2023 NJSLS for Mathematics
10.3	Polygons, Perimeter, and Tessellations	7-G.A.1, 7-G.A.2, 7-G.B.5
10.4	Area and Circumference	7-G.B.6, 7-G.B.4
10.5	Volume and Surface Area	7-G.B.6

## Marking Period 4

### **Unit 4A – Counting Methods and Probability Theory (Test Chapter 12)**

<b>Section</b>	<b>Title</b>	<b>2023 NJSLs for Mathematics</b>
12.1	The Fundamental Counting Principle	7-SP.C.8b
12.3	Probability and Odds	7-SP.C.5, 7-SP.C.6
12.4	Addition and Complement Rules	S-CP.A.1, S-CP.B.7
12.5	Conditional Probability	S-CP.A.2, S-CP.A.3, S-CP.A.4, S-CP.A.5, S-CP.B.6, S-CP.B.8

### **Unit 4B – Statistics (Test Chapter 12.1 (Blitzer), 13.1, 13.2)**

<b>Section</b>	<b>Title</b>	<b>2023 NJSLs for Mathematics</b>
12.1 (Blitzer)	Sampling, Frequency, Distributions, and Graphs	S-IC.A.1, S-IC.B.3 S-ID.A.1, S-ID.B.5
13.1	Measures of Central Tendency	S-ID.A.2
13.2	Measures of Dispersion	S-ID.A.2, S-ID.A.3

### **Unit 4C – Positional Measures and Normal Distribution (Test 13.3-13.4)**

<b>Section</b>	<b>Title</b>	<b>2023 NJSLs for Mathematics</b>
13.3	Measures of Relative Position	S-ID.A.1, S-ID.A.4
13.4	The Normal Distribution	S-ID.A.1, S-ID.A.4 S-IC.A.1

### **Unit 4D – Linear Regression and Correlation (Test Chapter 13.5)**

<b>Section</b>	<b>Title</b>	<b>2023 NJSLs for Mathematics</b>
13.5	Linear Regression and Correlation	S-ID.B.6a, S-ID.B.6c, S-ID.C.7, S-ID.C.8

## Course Expectations and Skills

- Students are required to take notes and maintain those notes in a neat and organized notebook.
- Students are required to participate in both small and large group discussions and activities, as directed.

## Resources

Text Book: *Mathematical Excursions - 4e; Aufmann, Lockwood, Nation, and Clegg*

Supplemental Materials: *Thinking Mathematically - Eighth Edition; Blitzer*

## Assessment Information

### Department of Mathematics - Liberal Arts Mathematics

Probability & Statistics		
Category	Percentage	Types of Assignments
Major	50%	<ul style="list-style-type: none"><li>● Summative Assessments</li><li>● Large Project-based assessments</li></ul>
Minor	30%	<ul style="list-style-type: none"><li>● Formative Assessments (Quiz, Warm/up, Closure, etc...)</li><li>● Smaller Project-based assessments</li></ul>
Class Participation	10%	
Homework	10%	