

Dr. Linda Sundbye  
Metropolitan State University of Denver  
Department of Mathematics and Statistics

**MTH 1110 - COLLEGE ALGEBRA FOR CALCULUS ONLINE**

**SYLLABUS**

**FALL 2025**

<b>WEEK</b>	<b>SECTIONS COVERED</b>
Week 1	Introduction 1.1 - Real Numbers and the Rectangular Coordinate System 1.2 - Introduction to Relations and Functions 1.3 - Linear Functions
Week 2	1.4 - Equations of Lines and Linear Models 1.5 - Linear Equations and Inequalities 1.6 - Applications of Linear Functions
Week 3, Part 1	<b>Quiz 1 covers Sections 1.1–1.6</b> <b>Quiz 1 will be online on Tuesday, September 2, 2025</b> <b>Read Weeks 1–2 Online Lecture Notes in the Learning Modules</b>
Week 3, Part 2	2.1 - Graphs of Basic Functions and Relations; Symmetry 2.2 - Vertical and Horizontal Shifts of Graphs 2.3 - Stretching, Shrinking, and Reflecting Graphs
Week 4	2.4 - Absolute Value Functions 2.5 - Piecewise-Defined Functions
Week 5, Part 1	<b>Quiz 2 covers Sections 2.1–2.5</b> <b>Quiz 2 will be online on Tuesday, September 16, 2025</b> <b>Read Weeks 3–4 Online Lecture Notes in the Learning Modules</b>
Week 5, Part 2	2.6 - Operations and Composition 3.2 - Quadratic Functions and Graphs 8.1 - Circles Revisited and Parabolas
Week 6	3.3 - Quadratic Equations and Inequalities 3.4 - Applications of Quadratic Functions and Models 4.1 - Graphs of Polynomial Functions
Week 7, Part 1	<b>Quiz 3 - Sections 2.6 3.2–3.4, 4.1</b> <b>Quiz 3 will be online on Tuesday, September 30, 2025</b> <b>Read Weeks 5–6 Online Lecture Notes in the Learning Modules</b>
Week 7, Part 2	4.2 - Topics in the Theory of Polynomial Functions I 4.3 - Topics in the Theory of Polynomial Functions II 4.4 - Polynomial Equations, Inequalities, Applications and Models

Week 8	5.1 - Rational Functions and Graphs I 5.2 - Rational Functions and Graphs II
Week 9, Part 1	<b>Quiz 4 - Sections 4.2–4.4, 5.1–5.2, 8.1</b> <b>Quiz 4 will be online on Tuesday, October 14, 2025</b> <b>Read Weeks 7–8 Online Lecture Notes in the Learning Modules</b>
Week 9, Part 2	5.3 - Rational Equations, Inequalities, Models, and Applications 5.4 - Functions Defined by Powers and Roots
Week 10	5.5 - Equations, Inequalities, and Applications Involving Root Functions 6.1 - Inverse Functions
Week 11, Part 1	<b>Quiz 5 - Sections 5.3–5.5, 6.1</b> <b>Quiz 5 will be online on Tuesday, October 28, 2025</b> <b>Read Weeks 9–10 Online Lecture Notes in the Learning Modules</b>
Week 11, Part 2	6.2 - Exponential Functions 6.3 - Logarithms and Their Properties
Week 12	6.4 - Logarithmic Functions 6.5 - Exponential and Logarithmic Equations and Inequalities
Week 13	6.5 - Exponential and Logarithmic Equations and Inequalities 6.6 - Further Applications and Modeling with Exponential and Logarithmic Functions
Week 14, Part 1	<b>Quiz 6 - Sections 6.2–6.6</b> <b>Quiz 6 will be online on Tuesday, November 18, 2025</b> <b>Read Weeks 11–13 Online Lecture Notes in the Learning Modules</b>
Week 14, Part 2	7.1 - Systems of Equations 12.5 - The Binomial Theorem
<b>Thanksgiving/Fall Break, November 24 – 28 (No Class)</b>	
Week 15	Review
Week 16	<b>Comprehensive Online Final</b> <b>Two 1-hour parts</b> <b>Monday, December 8 – Tuesday, December 9, 2025</b>