

ALGEBRA I BLOCK

MAT 101/102•2015/2016

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Course description*

This course covers Algebra I topics during two class periods in one year. Study skills, organization, and fundamental mathematical concepts will provide students with additional support.

Credit weight*

Students earn two College Prep credits: one math credit, one general elective credit

[Link to published core curriculum map*](#)

Materials Needed:

Textbook: Intensified Algebra I Student Activity Book

Folder/Binder

Pencil--work will not be accepted in pen.

Retake/Late Work/Missing Assignment Policy:

Homework: You can expect an assignment every night. Each homework assignment is due at the beginning of class on the following school day. You must show all work!

Grading Categories* (Common for all instructors of this course)	Category Percent Weights* (Common for all instructors of this course)
Assessments - 65%	
Homework - 35%	

Priority Standards*

Semester 1	Semester 2
Students will construct well designed graphs and build number sense by defining appropriate quantities. N.Q.1, N.Q.2, F.IF.5	Students will solve systems of linear equations using the substitution method and the linear combination method. A.CED.3, A.REI.5, A.REI.6
Students will compare and contrast multiple representations of a linear problem (i.e. words, concrete elements, numbers, graphs, and expressions) A.SSE.1a/b, A.CED.1, A.CED.2, A.CED.3, A.REI.10, F.BF.1a	Students will Identify functions as linear or nonlinear from tables and graphs, including quadratic, square root, cube root, and exponential functions. A.CED.2, F.IF.2, F.IF.4, F.IF.6, F.IF.7b, F.BF.1

<p>Students will understand functions (definition, notation, domain and range, and use)</p> <p>F.IF.1, F.IF.2, F.IF.3, F.IF.4, F.IF.5, F.IF.9</p>	<p>Students will write expressions involving radicals and rational exponents using the properties of exponents.</p> <p>N.RN.1, N.RN.2</p>
<p>Students will model rate of change graphically, algebraically, and from a table.</p> <p>F.IF.4, F.IF.6</p>	<p>Students will model situations that involve repeated multiplication with exponential functions using tables and graphs.</p> <p>A.CED.2, F.BF.1a, F.IF.4, F.IF.7e, F.IF.8b, F.IF.8b, F.IF.9, F.BF.1</p>
<p>Students will create basic linear models and graphs based on rate of change.</p> <p>F.IF.4, F.IF.6</p>	<p>Students will summarize, represent, and interpret data on two categorical and quantitative variables.</p> <p>S.ID.1, S.ID.2, S.ID.3, S.ID.5</p>
<p>Students will create linear models and graphs through the use of slope-intercept form, point-slope form, and standard form.</p> <p>F.IF.7A, F.IF.9, F.BF.3, F.LE.2, F.LE.5</p>	<p>Students will perform transformations on parent functions, for example, exploring how changes in a and c in $y = ax^2 + c$ affect the parent function $y = x^2$.</p> <p>A.CED.2, F.IF.4, F.IF.7a, F.BF.1a, F.BF.3</p>
<p>Students will create linear models and graphs for data.</p> <p>A.CED.2, F.IF.9, F.BF.3, F.LE.2, F.LE.5, S.ID.6A/B/C, S.ID.7, S.ID.8, S.ID.9</p>	<p>Students will multiply, add, subtract polynomials and factor trinomials using concrete models and analytic techniques.</p> <p>A.SSE.1a, A.SSE.2, A.SSE.3a</p>
<p>Students will solve linear equations and inequalities.</p> <p>A.REI.1, A.REI.3, A.REI.11, A.REI.12</p>	<p>Students will build quadratic functions that model real-world situations and/or fit data from real world situations. A.CED.2,</p> <p>A.REI.7, F.IF.4, F.IF.7a, F.IF.8a</p>
<p>Students will solve absolute value equations and piecewise functions using tables, graphs, and algebraic operations.</p> <p>F.IF.7b</p>	<p>Students will solve quadratic equations that arise from quadratic functions by graphing, factoring, completing the square, and the quadratic formula as appropriate to the initial form of the equation.</p> <p>A.APR.3, A.CED.3, A.REI.4a, A.REI.4b</p>
<p>Students will solve systems of linear equations and inequalities using graphs and tables and check the solution for reasonableness.</p> <p>A.CED.3, A.REI.6, A.REI.12</p>	<p>Students will use the discriminant to identify the nature of the solutions.</p> <p>A.REI.4a, A.REI.4b</p>

Leyden High School D212 Common Grading Scale*: 90 - 100 A; 80-89 B; 70 - 79 C; 60 - 69 D; Below 60- F