**Liberal Arts Mathematics 2 (1.0 credit)**

This course bridges Geometry to Algebra II. Content includes intermediate level algebra, geometry, statistics, probability, trigonometry, and consumer math. This course meets high school math graduation requirements. **Text: Larson Algebra II (Primary Text)**

**Topics of Instruction & Pacing Guide … 2015-2016**

Below is the suggested number of teaching days per topic.

**1st semester (80 teaching days)**

**Orientation, Algebra Diagnostics, & Test …………………………………. 5 days**

**Chap One (1.1-1.7) …………………………………………………….………….. 10 days**

* Properties of Real #’s
* Evaluate & Simplify Algebraic Expressions
* Solving Linear Equations
* Rewriting Formulas & Equations
* Problem Solving Strategies
* Solving Linear Inequalities
* Solving Absolute Value Equations & Inequalities

**Chap Two (2.1-2.4, 2.9) ……………………………………………….…….……. 10days**

* Relations & Functions
* Slope
* Graphing Linear Equations
* Writing Linear Equations
* Graphing Linear Inequalities in Two Variables

**Consumer Topic “General Spending / Consumer Shopping” ………. 10 days**

* Purchases
* Finding the Best Prices
* Sales Tax
* Checking Accounts

**Chap Three (3.1-3.3) ……………………………………………………………... 10days**

* Solving systems by graphing Equations
* Solving systems by substitution & elimination
* Graphing systems of inequalities

**Chap Four (4.1-4.5, 4.7, 4.8) ……………………………………………………. 10 days**

* Graphing Quadratic Functions
* Solving Quadratic equations by Factoring, Sq Roots
* Solving Quadratic equations by Completing the Square, Quad Formula

**Consumer Topic “Payroll” …………………………………………………........ 10 days**

* Wages & Deductions
* Commission
* Payroll
* Budgeting

**Chap Five (5.1, 5.3, 5.4) …………………………………………………….………. 10 days**

* Properties of Exponents
* Add, Subtract, & Multiply Polynomials
* Factor & Solve Polynomial Equations

**REVIEW FOR FIRST SEMESTER EXAM & EXAM ……………………… 5 days**

**Liberal Arts Mathematics 2 (1.0 credit)**

**2nd semester ( 84 teaching days)**

**Text: Larson Geometry Workbook**

**Chap One (sect 1-6)………………………………………………………….. 6 days**

* Points, Lines, Planes, and Angles (Chap 1)

**Chap Three (sect 1-6)…….……………………………………………….… 6 days**

* + Perpendicular and parallel lines
  + Transversals
  + Slope

**Consumer Topic “Payroll” …………………………………………………........ 6 days**

* + Buying a car
  + Buying a house vs renting
  + Travel (figuring costs) … planning an itinerary w/ expenses

**Chap Four (4.1-4.8) & Chap Five (5.1 – 5.6) ………………………. 8 days**

* + Classifying triangles
  + Measuring angles
  + Congruent Triangles
  + Isosceles Triangles
  + Corresponding parts in a congruence
  + Triangle inequality (1 & 2 Triangles)
  + Properties/relationships of angles and segments in triangles
  + Transformations

**Chap Six (sect 1-7)………………………………………….…………… 8 days**

* + General Math review of measurement & conversion
  + Ratio & proportion
  + Similar Triangles
  + Transformations

**Chap Seven (Sect 1-7)………………………………………………..……… 8 days**

* + Geometric Mean
  + Pythagorean Theorem
  + Special Right Triangles
  + Sine, cosine & tangent to solve triangles
  + Angle of elevation & depression

**Consumer Topic “Payroll” …………………………………………………........ 4 days**

* + Income Tax
  + (Project) - Researching Careers (Requirements, Opportunity, Salary)

**Chap Eight (sect 1-7)…………………………………………………….……… 8 days**

* Quadrilaterals
  + Parallelograms (squares, rectangles, rhombi, etc.)
  + Quadrilaterals (incl Trapezoids & Parallelograms))
  + Angles Measures in polygons

**Chap Nine (sect 5, 7) ………………………………….………………… 4 days**

* + Reflections, Rotations, Translations
  + Dilations

**Chap Ten (sect 1-7)…………………………………………………… 8 days**

* + Circles
  + Arc Measures
  + Chords
  + Inscribed Angles
  + Tangents & secants
  + Segment lengths
  + Graphing circles (if time permits)

**Chap Eleven (sect 1-7)…………………………………………………… 8 days**

* Area of Polygons & Circles
  + Area of Parallelograms & Triangles
  + Area of Trapezoids, Rhombi, Kites
  + Area of circles & sectors
  + Area of regular polygons
  + Areas of similar figures
  + Geometric Probability

**Chap Twelve (sect 1-7) …………….………………….……………… 8 days**

* + Nets
  + Lateral & Surface area of prisms, cylinders, cones, pyramids
  + Volume of prisms, cylinders, cones, pyramids
  + Congruent & Similar solids
  + Comparison of ratios of perimeter, area, & volume as the # of dimensions increase

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**Miscell Topics – as time permits**

**(Chap’s 6-10)**

* 6.1 Evaluate nth root
* 6.2 Rational Exponents
* 6.3 Function Operations
* 6.6 Solving Radical Equations
* 8.4 Multiply & Divide Rational Expressions
* 8.5 Add & Subtract Rational Expressions
* 8.6 Solving Rational Equations
* 9.1 Distance & Midpoint
* 9.2 Graphing & writing Equations Parabolas
* 9.3 Graphing & writing Equations of Circles
* Supplemental … Intro to statistics & probability