

## Fall 2018 ECA ASM IV

### **Ms. Spindt**

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Office Hours:

T/R 12:00PM – 1:50PM

& by appointment

ECA Math Lab M-Th 3:30 – 5:00

**Concept Mastery:** A list of concepts is printed on the other side of this page. Concept mastery means the student is able to complete calculations involving the concept and to apply the concept in word problems and other scenarios. Students will also learn to communicate their reasoning using valid mathematical notation and representations. TI 84 Graphing calculators will be used in this course and are available for check-out from Mr. Cooper.

**Grading:** This course is graded based on **concept mastery**, with scores of 7 or higher representing mastery (see other side). Quiz and exam “grades” will consist of a concept mastery score for each concept covered on the assessment. Concepts will be assessed multiple times throughout the semester, with the most recent score counting in the final grade. Reassessment of quizzes for full credit is available once the student attends Office Hours or Math Lab and must be completed before the final exam. The midterm and final cannot be retaken or corrected. Powerschool is updated weekly with assessment scores and comments.

**Studying and Homework:** Even though homework is not a component of the course grade, it is HIGHLY RECOMMENDED that students complete the recommended assignments each night. This includes a combination of reading and problem solving. Students should work through examples and take notes as they read the text (or any other assigned readings), and may need to reread the text multiple times to master material. Students also are expected to practice problem solving outside of the classroom for the necessary time needed to achieve mastery on weekly assessments. Even though this practice is not part of the course grade, it will be incorporated into the student’s Soft Skills Credential. This is measured with weekly notebook checks; student should have evidence of practice and complete lecture notes for all new topics by Friday of each week.

**Retaking Quizzes:** Students are required to attend Office Hours or Math Lab if they earn less than a 6 on a quiz (and is highly recommended for anything less than a 7). Once they attend Office Hours or Math Lab, they can retake the quiz in order to replace the grade. Retaking a quiz must occur before the final exam.

**Additional Help:** Ms. Spindt has office hours on Tuesdays and Thursdays from 12:00 – 1:50 PM. In addition, she runs the ECA Math Lab and consequently is available Mondays-Thursday from 3:30 – 5:00PM in 122 King. Please contact me if you have any questions or concerns about the course or your students’ math experiences (past, present, or future)

**ASM IV Concepts****Number Sense**

Number Systems
Solving Equations and Inequalities
Logic

**Functions**

Introduction to Functions
The Graph of a Function
Solving Equations and Inequalities by Graphing

**Linear Functions**

Linear Models
Slope
Equations of Lines

**Absolute Value Functions**

Piecewise-Defined Functions
Absolute Value
Absolute Value Equations and Inequalities

**Quadratic Functions**

The Graphs of Quadratics
Vertex Form
Zeros of the Quadratic
The Quadratic Formula
Motion and Optimization

**Polynomial Functions**

Zeros of Polynomials
Extrema and Models

**Rational Functions**

Reducing Rational Functions
Graphing Rational Functions
Operations Properties of Rational Functions
Complex Fractions
Solving Rational Equations

**Exponential Functions**

Exponents and Roots
Exponential Graphs
Inverse Functions
Logarithmic Functions
Exponential Growth and Decay

**Radical Functions**

Operation Properties of Radicals
Radical Expressions
Radical Equations
The Pythagorean Theorem

**Trig**

Angle Measurements
Right Triangles
Graphing Periodic Functions
Proving Identities
Solving Trigonometric Equations

**Linear Algebra**

Augmented Matrices
Matrix Operations
Inverses of Matrices
Determinants