

# Possible Secondary Mathematics Course Offerings Summer 2014

## **Focus on Functions for Middle School**

This course focuses on the progressions of function in the Utah Mathematics Core from Grade 6-8. The course will focus on the understanding of function, representations of functions, and linear functions. Participants will explore function using a variety of modeling methods, engage in mathematical discourse, and learn to examine their instructional practice through video. This course may not be new material for those who have previously taken Focus on Functions, although the content has been retooled to reflect changes in the 2010 Core.

## **Focus on Functions for High School**

This course focuses on the progressions of function in the Utah Mathematics Core from Secondary I through Precalculus. The course will focus on interpreting and building functions, including linear, quadratic, and exponential models. Participants will explore function using a variety of modeling methods, engage in mathematical discourse, and learn to examine their instructional practice through video. This course may not be new material for those who have previously taken Focus on Functions, although the content has been retooled to reflect changes in the 2010 Core.

## **All Things Rational**

This course will allow teachers to explore how the contexts, models, and ideas for rational numbers progress from 6th Grade Mathematics to Calculus, with an emphasis on the development of rational number and proportional reasoning in middle school. The course will reflect the focus, coherence, and rigor of the 2010 Mathematics Core by engaging participants in deep mathematical thinking and discourse. This course may not be new material for those who have previously taken All Things Rational, although the content has been retooled to reflect changes in the 2010 Core.

## **Statistics is Fundamental for Middle School**

This course examines statistics in the Utah Core Standards for Mathematics with a focus on statistics in middle school. Topics include understanding variability, summarizing data distributions, randomness, and investigations of chance in probability models for univariate and bivariate data. The course will reflect the focus, coherence, and rigor of the 2010 Mathematics Core by engaging participants in deep mathematical thinking and discourse. This course may not be new material for those who have previously taken Statistics is Fundamental, although the content has been retooled to reflect changes in the 2010 Core.

### **Statistics is Fundamental for High School**

This course examines statistics in the Utah Core Standards for Mathematics with a focus on statistics in Secondary I, II, and III. Topics include interpreting categorical and quantitative data, making inferences and justifying conclusions, conditional probability and the rules of probability, and using probability to make decisions. The course will reflect the focus, coherence, and rigor of the 2010 Mathematics Core by engaging participants in deep mathematical thinking and discourse. This course may not be new material for those who have previously taken Statistics is Fundamental, although the content has been retooled and new topics have been added to reflect changes in the 2010 Core.

### **Creating and Using Quality Assessments in Secondary Mathematics**

This course will provide a deep dive into the SAGE system in mathematics. Participants will learn ways to choose and write assessment items that address the focus, coherence, and rigor of the Utah Mathematics Core Standards. Participants will build their own bank of items and contribute to the item bank in the SAGE system.

### **Basic Essentials of the Utah Mathematics Core**

This course is for new teachers and those new to teaching the Utah Secondary Mathematics Core, especially those who have not previously attended a Core Academy. It will focus on understanding the changes to the Utah Core—focus, coherence, and rigor—and looking at the associated changes in teaching required to help students reach higher standards. The course will not be focused on implementation of individual courses, a deep understanding of any single course, or provide an opportunity for mapping curriculum onto the school year; however, it will provide substantial opportunities for engaging in mathematics tasks appropriate for teaching the new core and will direct teachers towards resources that will help them with their individual planning.