RRT2 - Probability and Statistics II

This course supports the assessment for Probability and Statistics II. The course covers 6 competencies and represents 2 competency units.

Introduction

Overview
This course is designed to provide you with a broad overview of the field of probability and statistics with a fundamental understanding of some key concepts and principles. This course will delve more deeply into topics studied during Probability and Statistics I and will also introduce new topics such as estimating population parameters and hypothesis testing. Hypothesis testing allows you to test a hypothesis or claim about a population parameter. The general technique uses probability theory to distinguish between events that can easily occur by chance and events that are unlikely to occur by chance. All of this will become clearer as you progress through this course.

The National Council of Teachers of Mathematics (NCTM) has published principles and standards that address these important probability and statistics topics, and note that these strands can now be found throughout the K-12 curriculum. Many states have followed NCTM’s lead and are increasingly requiring that these concepts be taught to students throughout the course of their mathematical education. A firm grasp of the concepts covered in this course will thus allow you to confidently teach this material when you are required to as a future teacher in a classroom.

RQT Co-enrollment
If you are concurrently enrolled in Probability and Statistics I, please consider interweaving the two courses, since three of the tasks in RRT and be done at the same time both tasks from RQT are being completed. If you’re interested, please view the "Integrated RQT/RRT Stats" document.

Competencies
This course provides guidance to help you demonstrate the following 6 competencies:

- **Competency 210.3.1: Problem Solving II**
  The graduate applies the principles of probability and statistics to solve problems.

- **Competency 210.3.2: Data Collection and Display II**
  The graduate describes data using appropriate displays and interprets given data representations.

- **Competency 210.3.3: Descriptive Statistics II**
  The graduate demonstrates an understanding of descriptive statistics concepts and describes data appropriately.

- **Competency 210.3.4: Statistical Inference II**
  The graduate demonstrates understanding of statistical inference and simulation and uses these techniques to solve problems.

- **Competency 210.3.5: Statistics II**
  The graduate demonstrates an understanding of concepts and practices related to statistics and applies statistical concepts to solve problems.
• **Competency 210.3.6: Probability II**
  The graduate demonstrates an understanding of concepts and practices related to probability and applies those concepts to solve problems.

**Teaching Dispositions Statement**
Please review the [WGU Statement of Teaching Dispositions](#).

**Course Mentor Assistance**
As you prepare to successfully demonstrate competency in this subject, remember that course mentors stand ready to help you reach your educational goals. As subject matter experts, mentors enjoy and take pride in helping students become reflective learners, problem solvers, and critical thinkers. Course mentors are excited to hear from you and eager to work with you.

Successful students report that working with a course mentor is the key to their success. Course mentors are able to share tips on approaches, tools, and skills that can help you apply the content you're studying. They also provide guidance in assessment preparation strategies and troubleshoot areas of deficiency. Even if things don't work out on your first try, course mentors act as a support system to guide you through the revision process. You should expect to work with course mentors for the duration of your coursework, so you are welcome to contact them as soon as you begin. Course mentors are fully committed to your success!