

QUANTITATIVE APPLICATIONS

COMPETENCY STATEMENT

Determine and use appropriate statistical and quantitative methods to interpret data, solve problems, and make decisions; distinguish between appropriate and inappropriate uses of samples, descriptive statistics, and inferential statistics; describe the basic functions, applications, and limitations of computers.

RATIONALE

In today's society, people are constantly confronted with quantitative facts and arguments. As a citizen and as a professional, you will make decisions based on these facts and arguments. In many cases, the ability to use and understand statistical and other quantitative techniques can provide a clearer picture of the situation and can be used to interpret data, solve problems and make decisions. Many of these techniques will require the use of graphs, formulas, algebra, calculators, and computers.

WHAT IS THE ASSESSMENT?

The assessment is a written examination which requires that you are familiar with the concepts outlined in the criteria below. Also, some problems on the examination will require an ability to use a calculator that has: a) a square root button; b) a change sign button; and c) a memory.

WHAT ARE THE CRITERIA FOR SUCCESSFUL DEMONSTRATION OF THE COMPETENCY?

You must demonstrate an ability to determine and use the appropriate statistical and quantitative methods to interpret data, solve problems and make decisions. Some of the skills and knowledge you need are:

1. Basic algebra: solving equations; using formulas; solving problems dealing with ratio and proportion and percent; graphing the equation of a straight line.
2. Probability: An understanding of what probability means for individuals and populations.
3. Statistics: Frequency distributions, histograms, and scattergraphs; mean, median, and mode; standard deviation; an understanding of random sampling and interpreting results based on a random sample; an understanding of the use of randomization in statistical experiments; an understanding of correlation and an ability to distinguish between correlation and causation.

WHAT COLLEGE TRANSFER WORK OR LIFE EXPERIENCE MAY HAVE IMPROVED YOUR SKILL IN THIS AREA?

Courses in algebra and statistics.

WHAT COMPETENCY READINESS COURSE IS DESIGNED TO IMPROVE YOUR SKILL IN THIS AREA?

The competency readiness course is MTH 115 Quantitative Applications. However, this course has a prerequisite of MTH 100 Basic Algebra or placement by the Kirkhof College Mathematics Placement Test. All Kirkhof College students must take this placement test before enrolling in MTH 100 or MTH 115.