



# Course Outcome Summary

**Standard Course**

## **Mathematics 162 – Introduction to Statistics**

### Course Information

Division	Science/Mathematics
Contact Hours	3
Theory	3
Lab Hours	
Off-Campus Clinical Hours	
Total Credits	3

**Prerequisites** RDG 090 and ENGL 090 and MATH 124 or MATH 126 or MATH 151 or MATH 157 or MATH 159 or MATH 164 or MATH 171 or above or qualifying scores on accepted placement tests

### Co-requisites

### Course Description

A basic course to acquaint the student with the theory and application of statistical methods to engineering, health, social, and business problems. Topics considered are graphical representation of data, central tendency measures, bivariate data, probability, distribution, sampling, and hypothesis testing and correlation aspects. Out of classroom use of microcomputers will be expected.

### Course Outcomes

In order to evidence success in this course, students will be able to:

1. Describe and explain the differences between descriptive and inferential statistics.
2. Choose either descriptive or inferential statistics appropriately in a given practical problem.
3. When descriptive statistics is used, choose the appropriate display (either graphical or analytical).
4. Use descriptive statistics with the appropriate graphical techniques that best emphasize the issues resolved in the problem.
5. Use descriptive statistics with the appropriate analysis to clarify the results to the reader.
6. Given a practical problem, select from a number of research and experimental designs, the best (most appropriate) solution.
7. Given raw data, apply the appropriate statistics (formulas and tables) warranted by the nature of the particular study, i.e., hypothesis testing, correlational investigations, surveys, descriptive data summaries, etc.
8. Apply the laws of probability to sampling and decision problems.