

# **ADVANCED PLACEMENT TEST**

## **MODULE DESCRIPTION**

### **ST1131 - Introduction to Statistics**

This module introduces students to the basic concepts and the methods of statistics. A computer package is used to enhance learning and to enable students to analyse real life data. Topics include descriptive statistics, basic concepts of probability, sampling distribution, statistical estimation, hypothesis testing, linear regression. This module is targeted at students interested in Statistics who are able to meet the prerequisite. It is also an essential module for students in the following programmes: Industrial and Systems Engineering (FoE); E-Commerce (SoC); Project & Facilities Management and Real Estate (SDE).

#### **Syllabus**

Chapter 1: Data Collection

Chapter 2: Organizing and Summarizing Data

Chapter 3: Numerically Summarizing Data

Chapter 4: Describing the Relation between Two Variables

Chapter 5: Probability

Chapter 6: Discrete Probability Distributions

Chapter 7: The Normal Probability Distributions

Chapter 8: Sampling Distributions

Chapter 9: Estimating the Value of a Parameter Using Confidence Intervals

Chapter 10: Hypothesis Tests Regarding a Parameter

Chapter 11: Inferences on Two Samples

#### **Recommended Text**

1. *Statistics: Informed Decisions Using Data*. (3rd ed) by Michael Sullivan, Pearson, 2010.
2. *Statistics: The art and science of learning from data*. (2<sup>nd</sup> ed) by Alan Agresti & Christine Franklin. Pearson Prentice Hall, 2009.