Module Code	MA3013	Title	Applied Statistics		
Credits	02	Hours/ Week	Lectures	02	Pre-requisites	MA1023/ MA2073
			Lab/Tutorials	–		

Learning Outcomes

At the end of this module the student should be able to,
- Identify the role of probability and statistics in their discipline area.
- Perform a range of statistical procedures related to the manipulation and interpretation of data.
- Distinguish between types of statistical tests that may me used to analyze data.
- Demonstrate basic knowledge of assessing the appropriateness of statistical models.
- Demonstrate practical expertise associated with the use of statistical package in performing basic statistical procedure.

Outline Syllabus

Discrete and continuous random variables:

- Bivariate distributions.

- Moment generating function.

- Introduction to ML estimators.

- Basic properties of Geometric, Hyper geometric, Exponential and Gamma, distributions.

- Student's t-distribution.

- Fisher's distribution and Chi square distribution.

Statistical Inference:

- Sampling distributions, central limit theorem, confidence intervals for mean and variance.

- Hypothesis tests. Goodness-of-fit tests and contingency table.

- Simple linear regression.

- Least square estimation and hypothesis tests in simple linear regression.

Practical Work:

- Use of MINITAB for statistical testing and regression analysis.