Module: **Business Mathematics for Hospitality Managers (BAIHH-BMHM)**

Allocation of Marks: **50% Continual Assessment**
50% Final Examination

Intended Module Learning Outcomes

On successful completion of this module, the learner will be able to:

1. Analyse data using measures of location and dispersion.
2. Apply mathematical techniques to problem solving relevant to the hospitality industry.
3. Calculate and interpret the nature of correlation between variables; derive the OLS regression equation and use the latter for forecasting within a hospitality management context.
4. Apply appropriate mathematical tools to financial data related to the hospitality industry including discounting and investment appraisal
5. Explain probability and be able to use a range of techniques to calculate probabilities with a hospitality management context.

Module Objectives

The main objective is to ensure that learners appreciate the importance of mathematics and statistics for successful decision making in the hospitality industry. Learners learn a range of mathematical skills applicable to the hospitality industry.

They learn how to apply these mathematical skills to manipulate and interpret numerical data. They are required to use a statistical package to support them in their application of mathematics and statistics in their analysis of hospitality related business data.

Module Curriculum

Collection and presentation of data (Hospitality Specific Data)

- Data types and sampling methods
- Tables, diagrams and graphs
- Frequency distributions

Analysis of Hospitality Business Data

- Measures of central tendency
- Measures of dispersion
- The Normal distribution

Financial Mathematics

- Simple and compound interest
- Depreciation
- Sinking funds
- Discounting cash flows including annuities and perpetuities
- Investment appraisal using net present value and internal rate of return

Correlation and Regression

- Scatter graphs
- The correlation coefficient
- The coefficient of determination
- The least squares regression equation
- Interpolation and extrapolation

Probability

- The laws of probability
- Calculating probabilities using Binomial, Poisson and Normal distributions.