PROBABILITY AND STATISTICS [IT2110]

By Department of Mathematics and Statistics Faculty of Humanities and Sciences, SLIIT

COURSE

- Course Delivery
 - ✓ 2 Hour Lecture
 - ✓ 2 Hour Tutorial
 - ✓ 2 Hour Lab Session (R)
- Course Web Enrollment Key
 - ✓ IT2110
- Module Outline
 - ✓ Refer course web

COURSE EVALUATION

- Continuous Assessments 50 Marks
 - ➤ Mid Term Examination 30%
 - R Practical Test 20%
- Final Examination 50 Marks

CONTACT INFORMATION

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COURSE CONTENT

- Introduction to Statistics
- Sampling Methods
- Descriptive Statistics
- Probability
- Random variables & Probability Distributions
 - Discrete Probability Distributions
 - ✓ Binomial Distribution
 - ✓ Poisson Distribution
- Continuous Probability Distributions
 - ✓ Exponential Distribution
 - ✓ Normal Distribution

- Sampling Distributions
 - ✓ Sampling Distribution of the Means
 - ✓ Central Limit Theorem
- Statistical Inference
 - ✓ Parameter Estimation
 - ✓ Hypothesis Testing
- Chi squared Tests
 - ✓ Goodness of Fit Test
 - ✓ Independence Test
- Regression Analysis
 - ✓ Scatter Plot
 - **✓** Correlation
 - ✓ Simple Linear Regression Model

Introduction to Time Series

BLOOM'S TAXONOMY



Produce new or original work

Design, assemble, construct, conjecture, develop, formulate, author, investigate

evaluate

Justify a stand or decision

appraise, argue, defend, judge, select, support, value, critique, weigh

analyze

Draw connections among ideas

differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test

apply

Use information in new situations

execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch

understand

Explain ideas or concepts

classify, describe, discuss, explain, identify, locate, recognize, report, select, translate

remember

Recall facts and basic concepts define, duplicate, list, memorize, repeat, state

REFERENCES

- Probability and Statistics for Engineers and Scientists (9th Edition)
 - Authors: Ronald E. Walpole, Raymond H. Myers, Sharon L. Myers & K. Ye
 - Publisher: Prentice Hall
- Schaum's Outlines of Statistics (6th Edition)
 - Author: M. R. Spiegel & L.J. Stephens
 - Publisher: McGraw-Hill Education