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

- Ms. Lakmali Guruge (*malika.l@sliit.lk*)

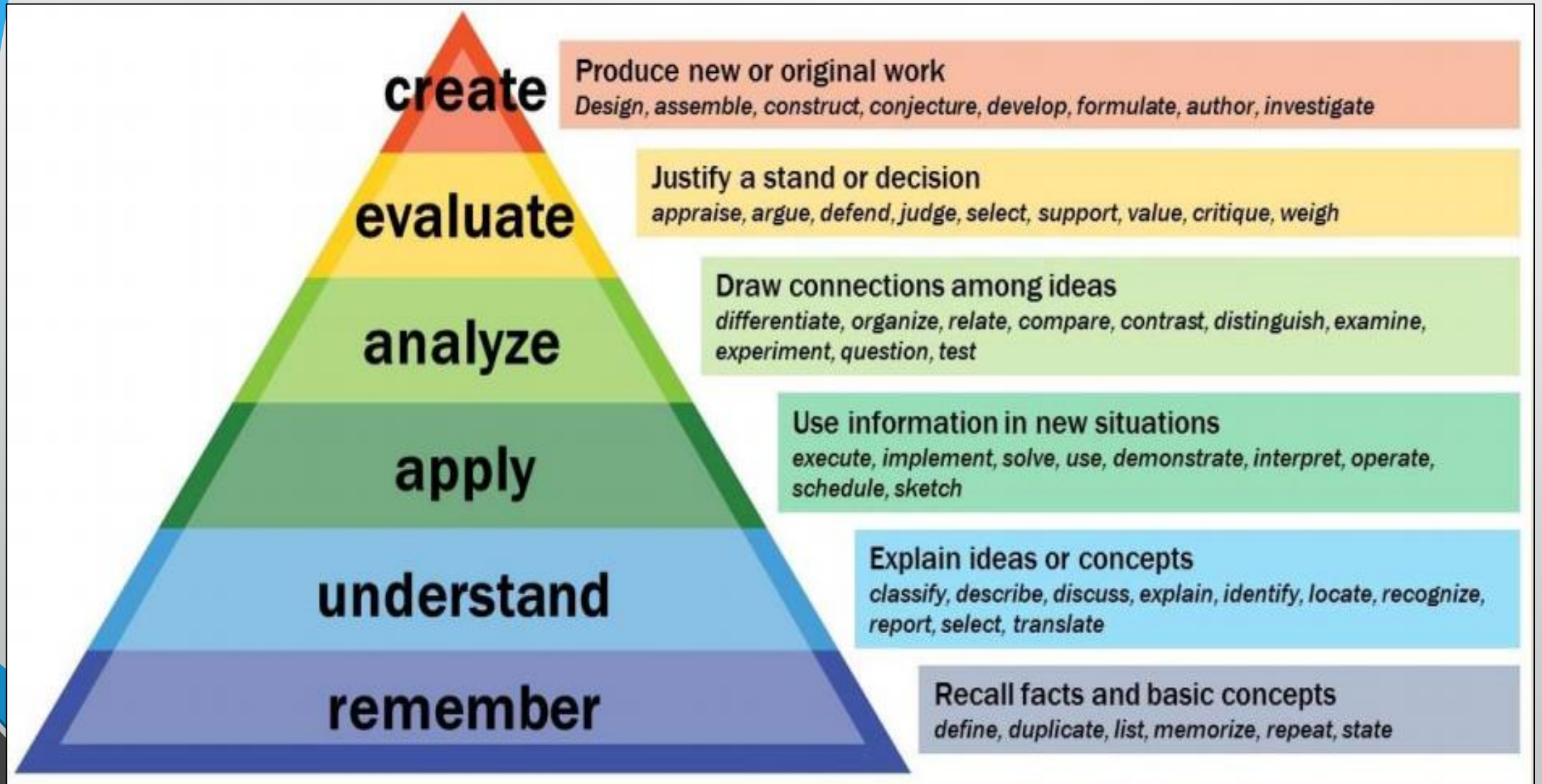- Ms. Pubudini Anuradhi (*pubudini.j@sliit.lk*)

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

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*