



# **PROBABILITY AND STATISTICS**

## **[IT2110]**

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

# COURSE

- Course Delivery
  - ✓ *2 Hour Lecture*
  - ✓ *1 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%***
  - ***Online R Assignment (Practical) – 20%***
- ***Final Examination – 50 Marks***

# CONTACT INFORMATION

- Ms. Lakmali Guruge ([malika.l@sliit.lk](mailto:malika.l@sliit.lk))
- Dr. Chandima Priyadarshani ([chandima.p@sliit.lk](mailto:chandima.p@sliit.lk))
- Ms. Pubudini Anuradhi ([pubudini.j@sliit.lk](mailto:pubudini.j@sliit.lk))

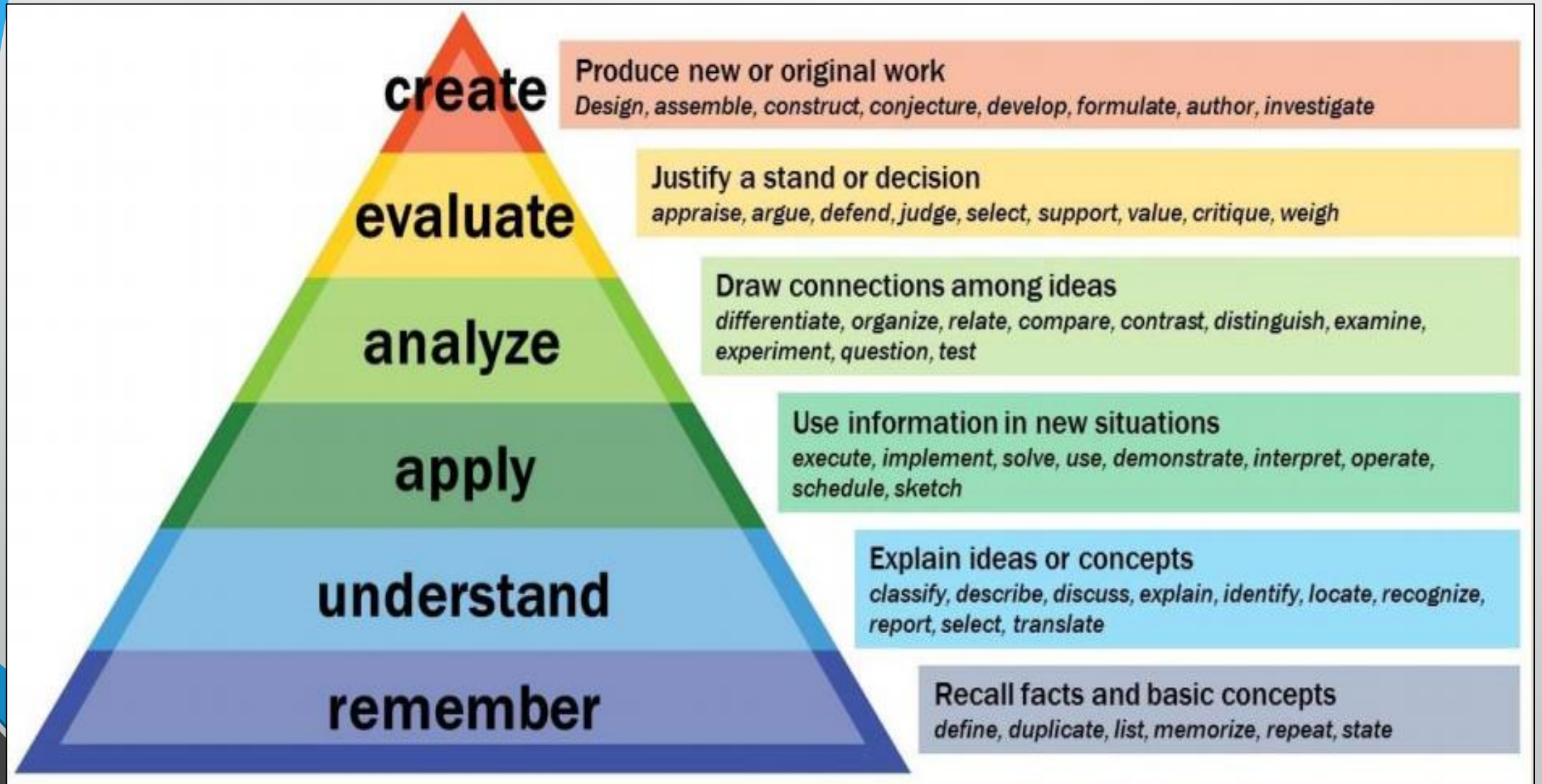
# COURSE CONTENT

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