



ENATHUR, KANCHIPURAM - 631 561.

Phone : 044-27264066

Mail : admin@sankaracollege.edu.in Website : www.sankaracollege.edu.in

26/07/2025

### MINUTES OF MEETING OF THE BOARD OF STUDIES

**Department:** Biotechnology

**Venue:** Board Room

**Date:** July 26<sup>th</sup>, 2025

**Agenda:** Approval of Syllabus and Regulation of Diploma in Advanced Statistics using Jamovi- Value Added Program to take effect from the academic year 2025- 2026.

#### **The following members were present in the meeting:**

1. Prof.R. Puvanakrishnan, Ph.D., Professor, CSIR Emeritus, Central Leather Research Institute, Adyar, Chennai - External Subject Expert.
2. Prof.N. Munuswamy, D.Sc., Professor, Department of Zoology, University of Madras, Guindy Campus, Chennai-600025- External Subject Expert.
3. Prof.B.Ramesh, Ph.D., Professor and Head, Dept. of Biotechnology, Sri Sankara Arts and Science College, Enathur, Kanchipuram – Chairman.
4. Dr.V.Guruchandran, Ph.D., Assistant Professor, Dept. of Biotechnology, Sri Sankara Arts and Science College, Enathur, Kanchipuram – Member.
5. Dr.P.Saravanan, Ph.D., Assistant Professor, Dept. of Biotechnology, Sri Sankara Arts and Science College, Enathur, Kanchipuram – Member.
6. Dr.D.Chitra, Ph.D., Assistant Professor, Dept. of Biotechnology, Sri Sankara Arts and Science College, Enathur, Kanchipuram – Member.
7. Dr.A.Rajalakshmi, Ph.D., Assistant Professor, Dept. of Biotechnology, Sri Sankara Arts and Science College, Enathur, Kanchipuram – Member.
8. Dr.K.R.Venkatesan, Ph.D., Principal, Sri Sankara Arts and Science College, Enathur, Kanchipuram – Special invitee.

**SRI SANKARA ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)  
Enathur, Kanchipuram - 631561.**

**CENTER FOR ADVANCED STATISTICS AND RESEARCH  
METHODOLOGY**

**SYLLABUS FOR DIPLOMA IN ADVANCED STATISTICS USING JAMOVI**

**Module 1**

1. Introduction to Jamovi. Data and its types. Statistical series types. Level of measurement.
2. Exploration: Descriptives – Frequency tables,
3. Central Tendency – Mean, Median, Mode and Sum; Percentile Values;
4. Dispersion – Standard deviation, Variance, Range, Minimum, Maximum and IQR;
5. Distribution – Skewness and Kurtosis; Normality -Shapiro-Wilk; Outliers.
6. Plots: Histogram, Density, Q-Q plot, Box plot and Bar plot
7. Exploration: Scatterplot – Regression line, Exploration: Pareto Chart – Angle of X-axis labels.

**Module 2**







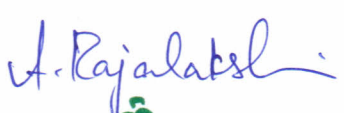

8. T-Test: Independent Samples T – Test – Student's, Paired Samples T – Test, One Sample T-Test
9. ANOVA: One-Way ANOVA, Two-way, Repeated Measures of ANOVA, ANCOVA.
10. Regression: Correlation Matrix – Correlation Coefficients
11. Regression: Partial Correlation– Correlation Coefficients
12. Regression: Linear Regression
13. Frequencies: 2 outcome – Binomial Test
14. Frequencies: N outcome Chi square (Goodness of fit) -
15. Frequencies: Paired Samples – McNemar Test

**Module 3**

16. Factors: Reliability Analysis
17. Factors: Principal Component Analysis
18. Factors: Exploratory Factor Analysis
19. Factors: Confirmatory Factor Analysis
20. SEM: Path Analysis
21. SEM: SEM (interactive)
22. Snowcluster: PCA and Group plot - Tables
23. Snowcluster: PCA and Group plot – Plots

- Board of Studies unanimously approved the Syllabus and Regulation of Diploma in Advanced Statistics using Jamovi – Value Added Program for the academic year 2025-26 (Annexure I)

**Signature of members:**

1. Prof.R.Puvanakrishnan - 
2. Prof.N.Munuswamy - 
3. Prof.B.Ramesh - 
4. Dr.V.Guruchandran - 
5. Dr.P.Saravanan - 
6. Dr.D.Chitra - 
7. Dr.A.Rajalakshmi - 
8. Dr.K.R.Venkatesan -   
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