

Syllabus for B.Sc. (Hons) Agriculture Year – III (Sem. VI)

Subject Code: 16AS0614

Subject Short Name: Ag. Stat. 6.2

Subject Name: Basic and Applied Agril. Statistics

Objective:

- To provide an idea on statistical concepts of both descriptive and inference Statistics which will be useful to do statistical analysis.

Credits Earned: 3 Credits (2+1)

Course Outcomes: After completion of this course, Students will be able to

- Select the proper experimental design for a particular agricultural research project.
- Analyze the data of agricultural research projects and draw the conclusion from the results.
- Gain knowledge about the proper experimental design for a particular agricultural research project.
- Analyze the data of agricultural research projects and draw the conclusion from the results.

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE (E)	Mid Sem (M)	Progressive Assessment (PA)	Viva (V)	Term work (TW)	
2	0	2	3	40	20	20	10	10	100

Theory Content:

Unit	Topics	Contact Hours
1	Introduction to Statistics and its Applications in Agriculture.	2
2	Study of Data, Frequency Distribution and Diagrammatic Presentation of Data	2
3	Measures of Central Tendency	2
4	Measures of Dispersion	2
5	Measures of Skewness and Kurtosis	2
6	Probability, addition and Multiplication Theorem and Normal distribution	2

7	Correlation and Regression. Scatter Diagram. Karl Pearson's Coefficient of Correlation. Definition of Linear Regression. Regression Equations. Regression Coefficients.	2
8	Tests of Significance, Null and Alternative Hypothesis, Type I and Type II Error and One Tailed and Two Tailed Tests	2
9	One Sample, Two Sample and Paired t-test	2
10	F-test for Variance	2
11	ANOVA and Experimental Designs	2
12	Sampling Theory	2
	Total	24

Practical Content:

Unit	Topics	Contact Hours
1	Diagrammatic and Graphical representation of data	2
2	Calculation of A.M., Median and Mode (Ungrouped and Grouped data).	2
3	Calculation of S.D. and C.V. (Ungrouped and Grouped data).	2
4	Correlation and Regression analysis	2
5	Application of t-test (one sample, two sample independent and dependent).	2
6	Analysis of variance one-way classification	2
7	CRD	2
8	Selection of random sample using simple random sampling	2
	Total	16

Reference Books:

- Fundamentals of Statistics by D. N. Elhance, Kitab Mahal Publishers. 2024
- Fundamentals of Applied Statistics by S.C. Gupta and V. K. Kapoor, Sultan Chand and Sons. 2007
- Basic Statistics by B. L. Agarwal, New Age International Publishers. 2006
- Agricultural Statistics by S.P. Singh and R.P.S. Verma, Rama Publishing House. 2017
- Agriculture and Applied Statistics-I by P.K. Sahu, Kalyani Publishers. 2007
- Agriculture and Applied Statistics-II by P. K. Sahu and A. K. Das, Kalyani Publisher. 2009

Suggested Theory distribution:

The suggested theory distribution as per Bloom's taxonomy is as per follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process.

Distribution of Theory for course delivery and evaluation					
Remember	Understand	Apply	Analyze	Evaluate	Create
25%	25%	20%	10%	10%	10%

Instructional Method:

1. The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by white board may also use any of tools such as demonstration, role play, quiz, brain storming, MOOCs etc.
2. The internal evaluation will be done on the basis of continuous evaluation of students in the class-rooms.
3. Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory/ field.
4. Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.