Program Outcome :

1. Problem Solving Approach :
   Students are supposed to do project work in the final year of graduation. There is tremendous scope to develop problem solving ability of the students as they have to identify one real life problems where different Statistical tools and techniques are used.

2. Communications Skills :
   While doing these projects, students have to collect real life data from the field. Where they have interaction with different sections of the society which helps in building their communication skills as they have to interact with different type of people like educated, uneducated, labour class , farmers , Government officials ,Professionals like Doctors and Army personnel's etc.

3. Team Work :
   These projects have to be carried out in group of four or five students so that develops the skill of working in a team which in turn develop their unity and integrity. During the completion of the project the students who are introvert, start making interaction with their fellow students.

4. Practical Approach :
   These projects helps them identify the real problems and apply the appropriate methods that they learn in three years of graduation program.

Program specific outcomes :

PSO1 :

Formulation of the real life problem in terms of Statistical Hypothesis, Setting up of suitable null hypothesis and alternative hypothesis. Use of appropriate test to arrive at a valid decision with a fixed probability of committing a error.

PSO2 :

Programming skills are developed in a course "C-Programming " .The programming skills are used for analysis of Statistical data by using Statistical softwares such as R-software

PSO3 :

Designing an experiment for comparison of different types treatments

Example 1 : In agricultural field experiments comparison of different manures ,type of seeds ,irrigation methods etc.

Example 2 :In Clinical trials comparison of different drugs on different group of subjects hailing from different geographical areas .

PSO 4:

To study the relationship between set of independent variables affecting a response variable .Testing significance of each of the independent variables affecting response variable.

PSO 5:

Sample Surveys : Designing the problem ,Identification of the relevant population ,Determining the sample size with predetermined accuracy ,Use of appropriate sampling method for the selection of sample ,Collection of data and Analysis of the data

PSO6 :

Determination of premium amount for fixed assured sum of benefit for a given duration for different types of insurance policies.

# Course Outcome
## Department of Statistics

| Sr. No. | Program | Program Objectives | Program Specific Objectives |
|---|---|---|---|
| **1** | **BSc Statistics** | PO 1<br>Problem Solving Approach :<br>Students are supposed to do project work in the final year of graduation. There is tremendous scope to develop problem solving ability of the students as they have to identify one real life problems where different Statistical tools and techniques are used. | PSO1 :<br>Formulation of the real life problem in terms of Statistical Hypothesis, Setting up of suitable null hypothesis and alternative hypothesis. Use of appropriate test to arrive at a valid decision with a fixed probability of committing a error. |
| | | PO 2 Communications Skills :<br>While doing these projects, students have to collect real life data from the field. Where they have interaction with different sections of the society which helps in building their communication skills as they have to interact with different type of people like educated, uneducated, labour class , farmers , Government officials ,Professionals like Doctors and Army personnel's etc. | PSO2 :<br>Programming skills are developed in a course "C-Programming " .The programming skills are used for analysis of Statistical data by using Statistical softwares such as R-software |
| | | PO 3: Team Work<br>These projects have to be carried out in group of four or five students so that develops the skill of working in a team which in turn develop their unity and integrity. During the completion of the project the students who are introvert, start making interaction with their fellow students. | PSO3 :<br>Designing an experiment for comparison of different types treatments<br>Example 1 : In agricultural field experiments comparison of different manures ,type of seeds ,irrigation methods etc.<br>Example 2 :In Clinical trials comparison of different drugs on different group of subjects hailing from different geographical areas . |

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| | | PO4 Practical Approach :<br>These projects helps them identify the real problems and apply the appropriate methods that they learn in three years of graduation program. | PSO 4:<br>To study the relationship between set of independent variables affecting a response variable .Testing significance of each of the independent variables affecting response variable. |
| | | | PSO 5:<br>Sample Surveys : Designing the problem ,Identification of the relevant population ,Determining the sample size with predetermined accuracy ,Use of appropriate sampling method for the selection of sample ,Collection of data and Analysis of the data |
| | | | PSO6 :<br>Determination of premium amount for fixed assured sum of benefit for a given duration for different types of insurance policies. |

**Courses offered**

| Sr. No. | Course | Course Outcomes |
|---|---|---|
| 1 | FYBSc : Descriptive Statistics | Introduction to the analysis of basic Statistical tools of the data such as averages, measures of variations, symmetry , peakedness of the data. |
| **2** | FYBSc : Probability Theory and distributions | Introduction to probability , Discrete probability distributions such as Binomial ,Poisson, Uniform ,Hypergeometric ,Geometric etc. |
| 3 | SYBSc : Discrete probability distribution ,R Software and multiple regression | Introduction to time series data ,truncated distributions ,Multiple regression ,Index Numbers , Demography and R-Software |
| 4 | SYBSc: Continuous Probability distribution | Introduction to continuous probability distributions such as Uniform, Normal ,Exponential ,Gamma ,Chi-Square ,t-Distribution ,F-distribution , Testing of Hypothesis procedure etc |
| 5 | T.Y.B.Sc : Distribution Theory | Introduction to continuous distributions such as Beta ,Weibull ,Cauchy ,Lognormal ,Laplace and Bivariate Normal etc |
| 6 | T.Y.B.Sc : Estimation and Testing of hypothesis | Introduction to basics of Statistical inference ,Estimation of Parameters and Testing of parameters |
| 7 | T.Y.B.Sc : Design of Experiments | Introduction to basics of Principles of design of experiments ,various types of designs and its analysis using Analysis of Variance methods |
| 8 | T.Y.B.Sc.: Regression Analysis | Introduction to simple linear regression analysis, Multiple linear regression Analysis and Logistics regression analysis. |
| 9 | T.Y.B.Sc.: C Programming | Introduction to the Basics of C Programming |
| 10 | T.Y.B.Sc.: Sampling Theory | Introduction to different sampling techniques , determination of sample size |
| 11 | T.Y.B.Sc : Statistical Quality Control | Introduction to Online Process control methods ,offline Process control methods, Sampling Plans |
| 12 | T Y B Sc: Survival Analysis | Introduction to methods of survival analysis data |
| 13 | TYBSc Actuarial Statistics | Introduction to the basic terms in actuarial science ,different types of insurances , Estimation of premium for different types of insurances. |
| 14 | TYBSc : Operations Research | Introduction to Linear Programming Problem , Transportation Problem , Assignment Problem , Critical Path Methods ,Project Evaluation and Review Technique etc |

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| 15 | TYBSc :<br>R-Software and Programming | Introduction to R-software and Programming for Statistical Analysis of the data |
| 16 | TYBSc:<br>Project Work | Identification of real life problem, Collection of Data ,Statistical Analysis of the collected data and Interpretation of the output |