

Program Outcome, Programme Specific Outcome and Course Outcome

Program specific outcome (PSO)

We are offering six semester undergraduate course (General) in Statistics under Manipur University, Canchipur, Prescribed by UGC, India. A student may opt for statistics as a subsidiary subject.

In modern times, statistics is viewed not as a mere device for collecting numerical data but as a means of developing sound techniques for their handling and analyses and drawing valid inferences from them. As such it is not confined to the affairs of the state but is intruding constantly into various diversified sphere of life-social as well as physical-such as biology, psychology, education, economics, business management, etc.

On completion of undergraduate (BA/B.Sc) course in statistics

1. Students learn scientific method which deals with the data obtained by counting or measuring the properties of population of natural phenomena.
2. They trained the methods and principles that have been developed to handle the collection, description, summarization and analysis of numeral data. Its primary objective is to assist the researcher in making decisions or generalization about the nature and characteristics of all the potential observations under consideration of which the collected data form only a small part.
3. They are trained with basic technique or methodology which has been developed for the collection, presentation and analysis of quantitative data and for the use of such data in decision making.
4. Statistics is the science and art of handling, aggregate of facts-observing, enumeration, recording, classifying and otherwise systematically treating them.
5. The general courses train the students as a complementary for their major courses and they may also apply for various trainee jobs with substantial salary package.

Course Outcome: After graduating from the 3 years degree course in Statistics, the students will have indepth knowledge on the subject

Course	Outcomes
STA-101(G)	<ul style="list-style-type: none"> - Descriptive Statistics - Measures of Central Tendency - Measures of Dispersion - Moments - Skewness and Kurtosis - Probability
STA-101(P)	<ul style="list-style-type: none"> - Diagrammatic representation of statistical data. - Construction of frequency distribution and its graphical representation. - Measures of central tendency, partition values - Measures of dispersion, co efficient of variation - Calculation of moments - Measures of skewness and kurtosis
STA- 303(G)	<ul style="list-style-type: none"> - Discrete probability distributions - Continuous probability distributions - Theory of Estimation-1 - Sample Survey -1 - Theory of attributes - Demography
STA- 303(P)	<ul style="list-style-type: none"> - Consistency of qualitative data and coefficient of association, independent of attributes - Mortality and fertility rates - Construction of complete life table - Population growth and projection(including logistic curve) - Selection of simple random sample by using random number table and

8/7/2019
Principal
South East Manipur College
Komlathabi

	<ul style="list-style-type: none"> estimation of population total, variance and S.E of Estimates - Fitting of Binomial and Poisson distribution
STA-202	<ul style="list-style-type: none"> - Random variables, Mathematical Expectations and Generating functions-I - Random variables, mathematical expectations and generating functions-II - Correlation - Curve fitting and regression analysis - Limit Theory - Finite difference and numerical analysis
STA- 202(P)	<ul style="list-style-type: none"> - Karl Pearson's correlation coefficient - Spearman's rank correlation coefficient - Fitting of 1st and 2nd Degree polynomial - Interpretation - Numerical integration
SPA-303(P)	<ul style="list-style-type: none"> - Experiments for practical knowledge
STA-404(G) Elective Theory	<ul style="list-style-type: none"> - Sampling Distribution - Testing of Hypothesis I & II - Time series - ANOVA & Design of Experiments-I - Index Number
STA-404(P)	<ul style="list-style-type: none"> - Determination of trend by moving average method - Construction of index numbers and reversibility test(Fisher's Index number), cost of living index number - Analyses of CRD,RBD - Large and small sample test
STA-505(G) Elective	<ul style="list-style-type: none"> - Basic Mathematics - Computer Programming - Normal Probability Distribution - Theory of Estimation - Design of Experiments - Sample survey
STA-555(P)	<ul style="list-style-type: none"> - Drawing of charts,calculation of sum,product,quotient in MSSEXEL - Fitting of Normal Distribution - LSD - One missing plot analyses of CRD & RBD - Fractional Experiment - Partial and Total confounding - Stratified random sampling - Systematic sampling
STA-606(G)	<ul style="list-style-type: none"> - Sampling Distribution - Statistical Quality control - Correlation - Operation Research - Psychological & Educational Statistics - Indian Official statistics
STA-606(P)	<ul style="list-style-type: none"> - Construction of Control Charts - LPP by graphical and simplex methods - Scale(T-score & p.c. graph) - Intra-class correlation coefficient and correlation ratio.
	-

Programme Specific Outcomes:

Three years undergraduate course in statistics general prepares the students for career as teachers or researchers in some different sectors and disciplines

8/7/2019

Principal
South-East Manipur College
Konglathabi

1. **Statistics and Planning:** Statistics is indispensable to planning. In the modern age which is termed as "the age of planning" almost all organizations in the government or managements of business are resorting to planning for efficient working and for formulating policy decisions. To achieve this end, the statistical data relating to production, consumption, prices, investment, income, expenditure, etc and various advance statistical techniques for handling and analyzing complex data are of paramount importance.
2. **Statistics and Mathematics :** Statistics is a branch of applied mathematics specializes in data. It is intimately related to and essentially dependent upon mathematics. The modern theory of statistics has its foundations on the theory of probability which in turn is a particular branch of more advanced mathematical theory of measure and integration.
3. **Statistics and Economics:** Statistical data and techniques of statistical analysis have proved immensely useful in solving a variety of economic problems such as wages, prices, consumption, production, distribution of income and wealth etc. The extensive use of mathematics and statistics in the study of economics have led to the development of new disciplines called Economics.
4. **Statistics and Business:** Statistical techniques have also been used widely by business in
 - a) Carrying out time and motion studies
 - b) Marketing decisions
 - c) Investment
 - d) Personal Administration
 - e) Credit Policy etc.

Statistical tools of probability and expectation are extremely useful in life insurance.

5. **Statistics and Biology, Astronomy and medical science**

In astronomy, the theory of Gauss's 'Normal law of Errors' for the study of the movement of stars and planets is developed by using the 'Principle of Least Squares'.

In Medical Science also, the statistical tools for collection, presentation and analyses of observed facts relating to the causes and incidence of diseases and the results obtained from the use of various drugs and medicines are of great importance.

6. **Statistics and Psychology and Education:**

In education and psychology too, statistics has found wide applications eg. To determine the reliability and validity of a test, "Factor Analyses" etc. so much so that a new subject called 'Psychometry' has come into existence.

7. **Statistics and War:** In war, the theory of 'Decision functions' can be of great assistance to military and technical personnel to plan maximum destruction with minimum effort.

Thus we see that the science of statistics is associated with almost all the sciences-social as well as physical. Bowley has rightly said "A knowledge of statistics is like a knowledge of foreign language or of algebra; it may prove of use at any time under any circumstance.

8/7/2019

Principal
South East Manipur College
Komlathabi