



DEVI AHILYA VISHWAVIDYALAYA, INDORE

School of Statistics

1.1.1

Program outcome and course outcome



SCHOOL OF STATISTICS, DAVV, INDORE

Programme Specific Outcomes(PSO)

The mission of the Statistics programs is to provide high-quality education in theoretical and practical aspects of statistics to students in order to prepare them for research opportunities, professional courses for high salaried and challenging jobs.

The completion of the Statistics programme students will have developed and displayed:

PSO1(ST5A)

1. An ability to identify, formulate, and solve complex statistical problems by applying principles science and mathematics.
2. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use judgment to draw conclusions.
3. An ability to solve mathematics problems in probability, statistical methods, linear equations, linear programming, complex variables, and discrete mathematics as they relate to problems in business and industry.
4. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies in the field of statistics.
5. An ability to get complete knowledge of students to face Indian Statistical Service, State Public Service commission examination.

PSO2(ST8X)

6. An ability to develop programming language and computer software skills to enable to the students to perform statistical data analysis.
7. An ability to preparing research background of the students of theoretical and applied Statistics.
8. An ability to develop solve problems related to Applied Probability Models, Reliability and Life Testing, Bayesian Inference, Non-Parametric Methods, Probability and Statistical Inference & Order Statistics

PSO3(ST9Z)


9. An ability to preparing research background of the students of theoretical and applied Statistics at the specialization level.
10. An ability to prepare students for career in research and teaching at the university level or in equivalent positions in industry and government jobs.
11. An ability to interact collaboratively with researchers in applied field, through the formulation and computational implementation of novel statistical models and methods to demonstrating statistical properties in all of academia, industry and government.



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S.No.	Course code	Course Name	Course Outcome
1.	ST-101	Measure and Probability Theory	<ul style="list-style-type: none"> To expose the students with the foundation of probabilistic and statistical analysis mostly used for prediction and modeling.
2.	ST – 102	Linear algebra	<ul style="list-style-type: none"> To give the knowledge of vector, matrices and least squares methods for how they are used in many applications, including data fitting, machine learning, finance and artificial intelligence.
3.	ST – 103	Distribution Theory	<ul style="list-style-type: none"> To give the knowledge of distributions for better mechanism of analyzing theoretical and practical problems based on real life. Determine and interpret independence and conditional distributions The distribution strategy supports company-level objectives as well as marketing objectives for example of profitability or improve company efficiencies. These efficiencies benefit both consumers and businesses
4.	ST- 104	Statistical methods	<ul style="list-style-type: none"> To expose the students how statistical techniques fit into the general process of science. To organize data into a regular or a grouped frequency distribution. To incorporate a directional prediction into the hypothesis and conduct a directional test.
5.	ST – 105	Statistical Computing	<ul style="list-style-type: none"> Students will be able to restate an investigative question in terms of a statistical model or algorithm with software SPSS and C programming . To demonstrate the ability to find appropriate research literature appropriate to the investigative task with software. To provide an expanded scope for computation of statistical technique on C programming
6.	ST – 201	Sample Surveys and Indian Official Statistics for	<ul style="list-style-type: none"> To study population and any subgroups that is of special interest in addressing the scientific questions under different sampling schemes. To learn the organization of the population which often has implications for gathering information on units in the population


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7.	ST – 202	Stochastic Processes	<ul style="list-style-type: none"> To demonstrate Model-based analysis of randomization and time varying experiments
8.	ST – 203 ST-301	Statistical Inference – I and II	<ul style="list-style-type: none"> Inferential statistics can be contrasted with descriptive statistics, providing students Verbally communicate statistical results and obtaining conclusion on the problems under study. Demonstrate the ability to find appropriate research literature for investigative task.
9.	ST – 204	Word Processing Through MS Word and Spreadsheets: MS Excel	<ul style="list-style-type: none"> The students will learn features within MS Word, MS Excel and identify how to use various applications in Microsoft Office and to use screen capturing software. The students will be familiarized with the concepts of ethical and legal use of online resources.
10.	ST – 205	Multivariate Analysis	<ul style="list-style-type: none"> To learn how Multivariate techniques that look at interrelationships among variables and objects To demonstrate gradients or trends in multivariate data and testing procedures using multivariate data.
11.	ST – 302	Design and Analysis of Experiments	<ul style="list-style-type: none"> To describe or explain the variation of information under conditions that are hypothesized to reflect the variation. Experiment aims at predicting the outcome by introducing a change of the preconditions The experimental design may also identify control variables that must be held constant to prevent external factors from affecting the results. Experimental design include the establishment of validity and reliability of the treatment.
12.	ST – 303	Operations Research (i), ST – 403 Operations Research (ii)	<ul style="list-style-type: none"> Students will be able to learn scientific study of operation for the purpose of making better decisions. To deal with application of advanced analytical methods to facilitate better solution. To study of optimal resources allocation.
13.	ST – 304	Statistical process and Quality Control (SQC)	<ul style="list-style-type: none"> To understand appreciation of quality control. To learn how to reduces the number of rejects and saves the cost of material. It provides a basis for attainable specifications. To learn SQC methods for points out the

			<p>bottlenecks and trouble spots. To determining the capability of the manufacturing process.</p> <ul style="list-style-type: none"> • Quality control includes service quality given to customer, company management leadership, commitment of management, continuous improvement and fast response.
14.	ST – 401	Linear Models and Regression Analysis	<ul style="list-style-type: none"> • How to apply linear regression in almost every field, including engineering, social and biological sciences. • To study the casual effect of one variable upon another. • For example to study the effect of price increase upon demand or effect of change in the money supply upon the inflation rate.
15.	ST – 402	Econometrics	<ul style="list-style-type: none"> • Students will be able to learn the application of mathematic, statistical methods and computer science to economic data and described as the branch of economics that aims to give empirical content to economic relations • To study empirical estimation of economic relationships, models, together with data, represent the basic ingredients of any econometric study
16.	*ST – 404	Planning and Analysis of Industrial Experiments	<ul style="list-style-type: none"> • Observing a system or process helps us to understand how process or system work. • To understand cause and effect relationship in system we must deliberately change the input variables to the system and observe output. • Investigation perform experiments in all fields of industry • To identify reason for changes on output response.
17.	*ST-405	Real Analysis	<ul style="list-style-type: none"> • To understand the basics of Real analysis. • To apply the acquired knowledge in signals and Systems, Digital Signal Processing. etc • To understand the concepts of vector space, inner product space and orthogonal series. • Development of the mathematical skills to solve problems involving convolution, filtering, modulation and sampling.



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