HINDU COLLEGE
University of Delhi

Course Outcomes – Program Outcomes (COPO) Mapping and Attainment

Program Outcomes (PO): B.Sc. (H) Statistics

PO1: This course exposes the students to the beautiful world of Statistics and how it affects each and every aspect of our daily life. The course is designed to equip students with all the major concepts of Statistics along with the tools required to implement them.

PO2: Introduction to computer software help them in analysis of data by making optimum usage of time and resources. This software gives them the necessary support and an edge when progressing to their professional careers.

PO3: Exposure to plethora of real-life data helps in honing their analytical skills. Having practical component with every paper invokes their exploratory side and fine-tunes the interpretation abilities.

PO4: Such a pedagogy goes a long way in giving them the required impetus and confidence for consultancy start-ups/jobs in near future. The structure of the course also motivates/helps the students to pursue careers in related disciplines, especially the data sciences, financial statistics and actuarial sciences.

Course Outcomes (CO): B.Sc. (H) Statistics

| Sem	Code	Course	CO	Statement
I	32371101	Descriptive Statistics	CO1	Concepts of statistical population and sample, variables and attributes. Tabular and graphical representation of data based on variables.
			CO2	Conditions for the consistency' and criteria for the independence of data based on attributes. Measures of central tendency, Dispersion, Skewness and Kurtosis.
			CO3	Moments and their use in studying various characteristics of data. Different approaches to the theory of probability.
			CO4	Important theorems on probability and their use in solving problems. Concept of random variables and its probability distributions.
			CO5	Concept of joint, marginal and conditional probability distribution for two dimensional random variables and their independence. Univariate transformation and expectation of random variables.
II	32371202	Algebra	CO1	Theory of Equations The fundamental concepts of matrices and determinants
			CO2	Echelon form, Linear equations

			CO3	Rank of a Matrix, Characteristic roots and vectors	
			CO4	Quadratic forms, Partitioning of matrices, Generalized inverse	
III	32371301	Sampling Distributions	CO1	Laws of convergence, their inter relations and applications. Central Limit Theorem and its applications.	
			CO2	Order statistics and distribution of sample median and range. Basic concepts of hypothesis testing, including framing of null and alternative hypothesis.	
			CO3	Hypothesis testing based on a single sample and two samples using both classical and p-value approach. Chi square distribution.	
			CO4	Analyse categorical data by using Chi square techniques. t and F distributions and their applications.	
IV	32371401	Statistical Inference	CO1	Different methods of finding point estimators for unknown population parameters, their advantages and disadvantages. Desirable properties of point estimators based on which estimators can be compared.	
			CO2	Methods to develop/find best point estimators based on the desirable properties (Using Cramer- Rao inequality, Rao-Blackwell theorem, and Lehmann-Scheffe Theorem). General methods of constructing interval estimators (Confidence Intervals) for unknown population parameters.	
			CO3	Basic principle of Bayesian estimation (Finding posterior distributions of unknown population parameters). Developing/ constructing best/most powerful statistical tests to test hypotheses regarding unknown population parameters (Using Neyman-Pearson Lemma and Likelihood Ratio tests).	
			CO4	Practical applications of estimation theory and hypothesis testing pertaining to all discussed methods.	
V	32371502	Statistical Computing Using C/C++ Programming	CO1	Various data types, operators, library functions, Input/Output operations. Decision making and branching and looping.	
			CO2	Arrays, Character and strings. User defined functions, recursion functions. Storage class of Variables.	
			CO3	Pointers and arrays, arrays of pointers, pointers as function arguments, functions returning pointers. Structure, array of structures, structure pointers.	
			CO4	Dynamic memory allocation functions. Pre-processors: Macro substitution, macro with argument. File inclusion in C/C++, I/O operations on files.	
VI	32371602	Multivariate Analysis and Nonparametric Methods	CO1	The understanding of basic concepts associated with Multivariate Normal Distributions and their properties with special emphasis on Bivariate Normal Distribution.	
			CO2	Analysing Multivariate data using data reduction techniques like Principal Component Analysis, Factor Analysis. Classification method namely Discriminant Analysis.	
			CO3	Application of Wald's SPRT for testing simple null hypothesis vs simple alternative hypothesis along with the study of the O.C. function and the ASN function for various underlying continuous and discrete distributions.	
			CO4	Testing of hypothesis using Non-Parametric tests like Median test, Runs test, U test, Kruskal Wallis test etc. and ability to use them judiciously for the testing of given data.	

COPO Mapping: B.Sc. (H) Statistics

Sem	CO	PO1	PO2	PO3	PO4
I	CO1	x			
	CO2	x			
	CO3	x			
	CO4		x		
	CO5	x			
II	CO1	x			
	CO2		x		
	CO3		x		
	CO4		x		
III	CO1		x		
	CO2			x	
	CO3			x	
	CO4				x
IV	CO1		x		
	CO2		x		
	CO3			x	
	CO4				x
V	CO1			x	
	CO2			x	
	CO3				x
	CO4				x
VI	CO1				x
	CO2			x	
	CO3				x
	CO4			x	

Attainment of COs and POs in B.Sc. (H) Statistics

Assessment Tools:
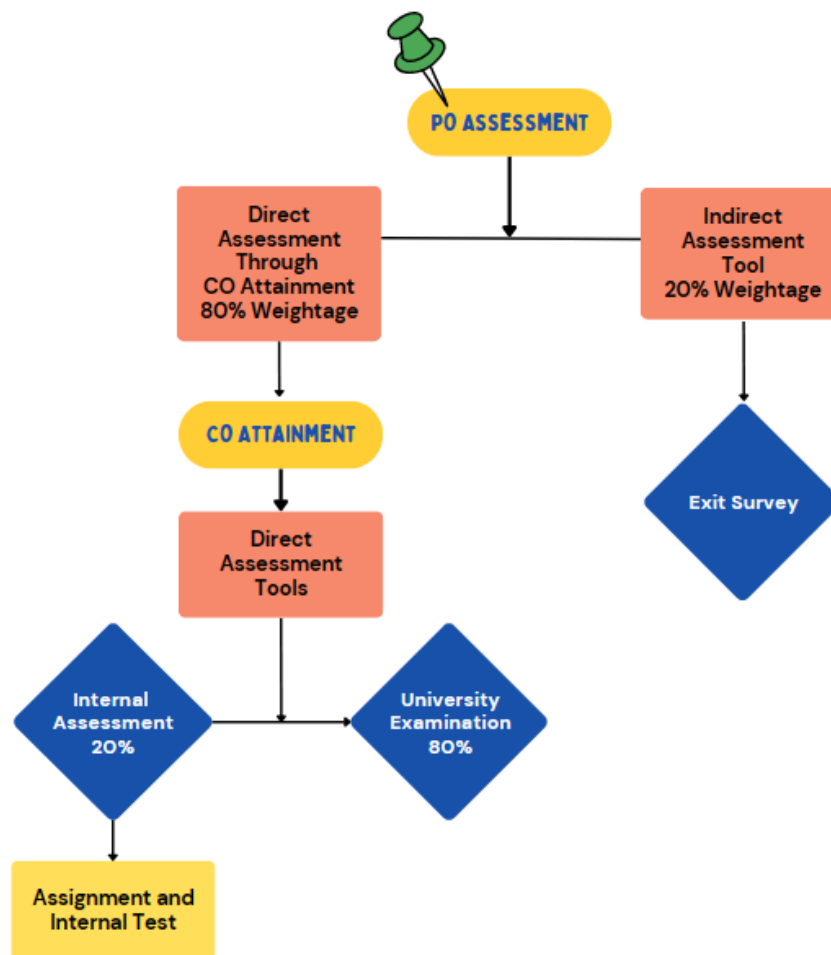
CO Attainment Tools:
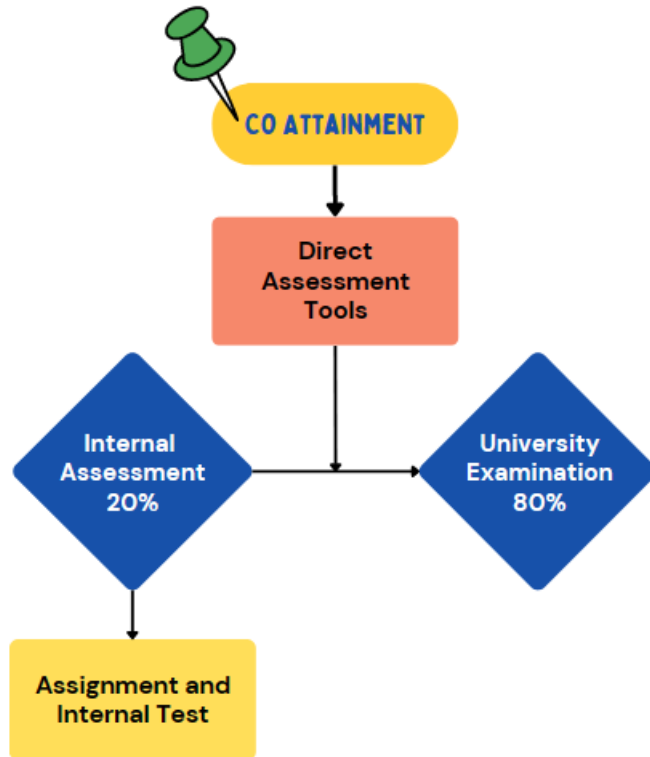
Internal Assessment Score:

➤ The internal assessment score is determined as per the following rubrics:

Range (% of attempts >= 60%)	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

University Examination Score:

➤ The University examination score is determined as per the following rubrics:

Range (% of attempts >= 60%)	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Overall CO Attainment

➤ The overall CO attainment is calculated on a scale of 3 by considering 80 % of the level of attainment from University examination and 20% of the level of attainment from Internal assessment.

Program: B.Sc. (H) Statistics
Course Name: Descriptive Statistics
Course Code: 32371101
Semester I

Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026568001	TURJO DAS	24	10	95
19026568002	ISHA JAIN	25	9	85.5
19026568003	GOVIND TAYAL	24	10	95
19026568004	AYUSHI MARWAHA	21	9	85.5
19026568005	YUVIKA YADAV	25	10	95
19026568006	TUSHAR DANGI	23	8	76
19026568007	ANIRUDDH SINGH PANGTEY	22	9	85.5
19026568008	ANIRUDDHA KHATI	21	8	76
19026568009	B. SAIKUMAR	23	9	85.5
19026568010	MEBIN ALEX	21	8	76
19026568011	ERPULA SATHISH KUMAR	14	7	66.5
19026568012	NUTAN DHANGAR	25	10	95
19026568013	ASMIT SHUKLA	25	8	76
19026568014	ERICK GEORGE	18	8	76
19026568015	AKSHAT AGARWAL	21	9	85.5
19026568016	SHRIYA MANUJA	23	8	76
19026568017	SHRADDHA IYER	25	8	76
19026568018	GODISHALA THARUN	15	8	76

19026568019	SAKSHI BAJAJ	24	10	95
19026568020	MANPREET KAUR	23	9	85.5
19026568021	KSHONEESH SHARMA	15	7	66.5
19026568022	SPANDAN ROY	25	10	95
19026568023	DAADIMALLA SRIKANTH	21	7	66.5
19026568024	MD. IRFAN KASHIF	24	9	85.5
19026568025	BHUKYA ANNAMAIAH	23	9	85.5
19026568026	AARTI JANGIR	24	9	85.5
19026568027	SHRESHTHA GUPTA	25	9	85.5
19026568028	BALBIR SINGH	24	6	57
19026568029	RISHIKA TITIYAL	24	10	95
19026568030	SHUBHAM NAUTIYAL	22	7	66.5
19026568031	SARITA KUMARI	24	9	85.5
19026568032	MODALA CHAKRADHAR SAGAR	24	9	85.5
19026568033	PUNNA HARISH	24	8	76
19026568034	AAKASH MALVIYA	17	7	66.5
19026568035	CHANDAN KUMAR SINGH	25	10	95
19026568036	MANAN KANSAL	25	9	85.5
19026568037	VAIBHAV SHARMA	24	9	85.5
19026568038	ANKIT SETH	25	10	95
19026568039	SHASHWAT RAMAN	23	10	95
19026568040	PRINCE LAUHAN	18	8	76
19026568041	DEEPALI GANDOTRA	25	10	95
19026568042	ARUN PARIHAR	23	8	76
19026568043	ASHISH DWIVEDI	24	8	76
19026568044	BHASKAR SHARMA	25	10	95
19026568045	KORTHE THIRUPATHI	18	6	57

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
I	No: of attempts >= 60%	44		43		
	Total Attempts	45	3	45	3	3
	% of attempts >= 60%	97.77		95.55		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem I	PO1	PO2	PO3	PO4
CO1	3			
CO2	3			
CO3	3			
CO4		3		
CO5	3			

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Statistics
Course Name: Algebra
Course Code: 32371202
Semester II

Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026568001	TURJO DAS	25	10	95
19026568002	ISHA JAIN	22	9	85.5
19026568003	GOVIND TAYAL	25	10	95
19026568004	AYUSHI MARWAHA	18	9	85.5
19026568005	YUVIKA YADAV	25	10	95
19026568006	TUSHAR DANGI	21	9	85.5
19026568007	ANIRUDDH SINGH PANGTEY	19	8	76
19026568008	ANIRUDDHA KHATI	20	9	85.5
19026568009	B. SAIKUMAR	22	9	85.5
19026568010	MEBIN ALEX	22	9	85.5
19026568011	ERPULA SATHISH KUMAR	18	8	76
19026568012	NUTAN DHANGAR	22	10	95
19026568013	ASMIT SHUKLA	16	8	76
19026568014	ERICK GEORGE	17	8	76
19026568015	AKSHAT AGARWAL	23	9	85.5
19026568016	SHRIYA MANUJA	25	10	95
19026568017	SHRADDHA IYER	24	8	76
19026568018	GODISHALA THARUN	23	8	76

19026568019	SAKSHI BAJAJ	25	10	95
19026568020	MANPREET KAUR	23	9	85.5
19026568021	KSHONEESH SHARMA	22	7	66.5
19026568022	SPANDAN ROY	22	10	95
19026568023	DAADIMALLA SRIKANTH	20	8	76
19026568024	MD. IRFAN KASHIF	19	9	85.5
19026568025	BHUKYA ANNAMAIAH	23	9	85.5
19026568026	AARTI JANGIR	18	9	85.5
19026568027	SHRESHTHA GUPTA	25	9	85.5
19026568028	BALBIR SINGH	25	6	57
19026568029	RISHIKA TITIYAL	25	10	95
19026568030	SHUBHAM NAUTIYAL	21	9	85.5
19026568031	SARITA KUMARI	24	10	95
19026568032	MODALA CHAKRADHAR SAGAR	24	9	85.5
19026568033	PUNNA HARISH	25	9	85.5
19026568034	AAKASH MALVIYA	17	8	76
19026568035	CHANDAN KUMAR SINGH	24	10	95
19026568036	MANAN KANSAL	23	9	85.5
19026568037	VAIBHAV SHARMA	24	10	95
19026568038	ANKIT SETH	25	10	95
19026568039	SHASHWAT RAMAN	23	9	85.5
19026568040	PRINCE LAUHAN	20	9	85.5
19026568041	DEEPALI GANDOTRA	24	10	95
19026568042	ARUN PARIHAR	23	9	85.5
19026568043	ASHISH DWIVEDI	21	9	85.5
19026568044	BHASKAR SHARMA	24	10	95
19026568045	KORTHE THIRUPATHI	19	7	66.5

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
II	No: of attempts >= 60%	45		44		
	Total Attempts	45	3	45	3	**3**
	% of attempts >= 60%	100		97.77		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem II	PO1	PO2	PO3	PO4
CO1	3			
CO2		3		
CO3		3		
CO4		3		

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Statistics
Course Name: Sampling Distributions
Course Code: 32371301
Semester III
Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026568001	TURJO DAS	25	10	95
19026568002	ISHA JAIN	25	10	95
19026568003	GOVIND TAYAL	25	10	95
19026568004	AYUSHI MARWAHA	23	10	95
19026568005	YUVIKA YADAV	25	10	95
19026568006	TUSHAR DANGI	23	9	85.5
19026568007	ANIRUDDH SINGH PANGTEY	23	9	85.5
19026568008	ANIRUDDHA KHATI	23	10	95
19026568009	B. SAIKUMAR	24	10	95
19026568010	MEBIN ALEX	23	10	95
19026568011	ERPULA SATHISH KUMAR	24	10	95
19026568012	NUTAN DHANGAR	25	10	95
19026568013	ASMIT SHUKLA	23	9	85.5
19026568014	ERICK GEORGE	24	10	95
19026568015	AKSHAT AGARWAL	25	10	95
19026568016	SHRIYA MANUJA	25	10	95
19026568017	SHRADDHA IYER	25	10	95
19026568018	GODISHALA THARUN	24	10	95
19026568019	SAKSHI BAJAJ	25	10	95
19026568020	MANPREET KAUR	25	9	85.5

19026568021	KSHONEESH SHARMA	24	10	95
19026568022	SPANDAN ROY	25	9	85.5
19026568023	DAADIMALLA SRIKANTH	23	10	95
19026568024	MD. IRFAN KASHIF	23	8	76
19026568025	BHUKYA ANNAMAIAH	23	9	85.5
19026568026	AARTI JANGIR	25	10	95
19026568027	SHRESHTHA GUPTA	25	9	85.5
19026568028	BALBIR SINGH	23	10	95
19026568029	RISHIKA TITIYAL	25	10	95
19026568030	SHUBHAM NAUTIYAL	24	9	85.5
19026568031	SARITA KUMARI	25	10	95
19026568032	MODALA CHAKRADHAR SAGAR	24	10	95
19026568033	PUNNA HARISH	23	9	85.5
19026568034	AAKASH MALVIYA	25	9	85.5
19026568035	CHANDAN KUMAR SINGH	25	9	85.5
19026568036	MANAN KANSAL	24	10	95
19026568037	VAIBHAV SHARMA	24	10	95
19026568038	ANKIT SETH	25	10	95
19026568039	SHASHWAT RAMAN	24	9	85.5
19026568040	PRINCE LAUHAN	24	10	95
19026568041	DEEPALI GANDOTRA	25	10	95
19026568042	ARUN PARIHAR	24	9	85.5
19026568043	ASHISH DWIVEDI	23	10	95
19026568044	BHASKAR SHARMA	25	10	95
19026568045	KORTHE THIRUPATHI	25	10	95
19079568008	DIVYA BHARDWAJ	25	10	95

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
III	No: of attempts >= 60%	46		46		
	Total Attempts	46	3	46	3	3
	% of attempts >= 60%	100		100		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem III	PO1	PO2	PO3	PO4
CO1		3		
CO2			3	
CO3			3	
CO4				3

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Statistics
Course Name: Statistical Inference
Course Code: 32371401
Semester IV
Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026568001	TURJO DAS	25	10	95
19026568002	ISHA JAIN	25	10	95
19026568003	GOVIND TAYAL	25	10	95
19026568004	AYUSHI MARWAHA	25	10	95
19026568005	YUVIKA YADAV	25	10	95
19026568006	TUSHAR DANGI	25	10	95
19026568007	ANIRUDDH SINGH PANGTEY	25	9	85.5
19026568008	ANIRUDDHA KHATI	25	10	95
19026568009	B. SAIKUMAR	25	10	95
19026568010	MEBIN ALEX	25	10	95
19026568011	ERPULA SATHISH KUMAR	25	10	95
19026568012	NUTAN DHANGAR	25	10	95
19026568013	ASMIT SHUKLA	25	9	85.5
19026568014	ERICK GEORGE	25	10	95
19026568015	AKSHAT AGARWAL	25	10	95
19026568016	SHRIYA MANUJA	25	10	95
19026568017	SHRADDHA IYER	25	10	95
19026568018	GODISHALA THARUN	25	10	95
19026568019	SAKSHI BAJAJ	25	10	95
19026568020	MANPREET KAUR	25	9	85.5

19026568021	KSHONEESH SHARMA	25	10	95
19026568022	SPANDAN ROY	25	9	85.5
19026568023	DAADIMALLA SRIKANTH	25	10	95
19026568024	MD. IRFAN KASHIF	25	8	76
19026568025	BHUKYA ANNAMAIAH	25	9	85.5
19026568026	AARTI JANGIR	25	10	95
19026568027	SHRESHTHA GUPTA	25	9	85.5
19026568028	BALBIR SINGH	25	10	95
19026568029	RISHIKA TITIYAL	25	10	95
19026568030	SHUBHAM NAUTIYAL	25	9	85.5
19026568031	SARITA KUMARI	25	10	95
19026568032	MODALA CHAKRADHAR SAGAR	25	10	95
19026568033	PUNNA HARISH	25	9	85.5
19026568034	AAKASH MALVIYA	25	9	85.5
19026568035	CHANDAN KUMAR SINGH	25	9	85.5
19026568036	MANAN KANSAL	25	10	95
19026568037	VAIBHAV SHARMA	25	10	95
19026568038	ANKIT SETH	25	10	95
19026568039	SHASHWAT RAMAN	25	9	85.5
19026568040	PRINCE LAUHAN	25	10	95
19026568041	DEEPALI GANDOTRA	25	10	95
19026568042	ARUN PARIHAR	25	10	95
19026568043	ASHISH DWIVEDI	25	9	85.5
19026568044	BHASKAR SHARMA	25	10	95
19026568045	KORTHE THIRUPATHI	25	9	85.5
19079568008	DIVYA BHARDWAJ	25	10	95

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
IV	No: of attempts >= 60%	46	3	46	3	3
	Total Attempts	46		46		
	% of attempts >= 60%	100		100		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem IV	PO1	PO2	PO3	PO4
CO1		3		
CO2		3		
CO3			3	
CO4				3

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Statistics
Course Name: Statistical Computing Using C/C++ Programming
Course Code: 32371502
Semester V
Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026568001	TURJO DAS	24	9	85.5
19026568002	ISHA JAIN	24	9	85.5
19026568003	GOVIND TAYAL	24	10	95
19026568004	AYUSHI MARWAHA	24	10	95
19026568005	YUVIKA YADAV	23	10	95
19026568006	TUSHAR DANGI	25	9	85.5
19026568007	ANIRUDDH SINGH PANGTEY	24	9	85.5
19026568008	ANIRUDDHA KHATI	24	9	85.5
19026568009	B. SAIKUMAR	23	9	85.5
19026568010	MEBIN ALEX	23	9	85.5
19026568011	ERPULA SATHISH KUMAR	23	9	85.5
19026568012	NUTAN DHANGAR	23	10	95
19026568013	ASMIT SHUKLA	23	9	85.5
19026568014	ERICK GEORGE	24	9	85.5
19026568015	AKSHAT AGARWAL	25	9	85.5
19026568016	SHRIYA MANUJA	23	10	95
19026568017	SHRADDHA IYER	23	10	95
19026568018	GODISHALA THARUN	24	9	85.5
19026568019	SAKSHI BAJAJ	25	10	95
19026568020	MANPREET KAUR	24	9	85.5

19026568021	KSHONEESH SHARMA	24	10	95
19026568022	SPANDAN ROY	23	9	85.5
19026568023	DAADIMALLA SRIKANTH	24	10	95
19026568024	MD. IRFAN KASHIF	24	8	76
19026568025	BHUKYA ANNAMAIAH	24	9	85.5
19026568026	AARTI JANGIR	24	10	95
19026568027	SHRESHTHA GUPTA	24	9	85.5
19026568028	BALBIR SINGH	24	10	95
19026568029	RISHIKA TITIYAL	24	10	95
19026568030	SHUBHAM NAUTIYAL	24	9	85.5
19026568031	SARITA KUMARI	24	10	95
19026568032	MODALA CHAKRADHAR SAGAR	24	10	95
19026568033	PUNNA HARISH	24	9	85.5
19026568034	AAKASH MALVIYA	23	9	85.5
19026568035	CHANDAN KUMAR SINGH	23	10	95
19026568036	MANAN KANSAL	24	10	95
19026568037	VAIBHAV SHARMA	25	9	85.5
19026568038	ANKIT SETH	23	9	85.5
19026568039	SHASHWAT RAMAN	24	9	85.5
19026568040	PRINCE LAUHAN	24	9	85.5
19026568041	DEEPALI GANDOTRA	24	10	95
19026568042	ARUN PARIHAR	24	9	85.5
19026568043	ASHISH DWIVEDI	24	9	85.5
19026568044	BHASKAR SHARMA	24	9	85.5
19026568045	KORTHE THIRUPATHI	24	9	85.5
19079568008	DIVYA BHARDWAJ	24	10	95

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
V	No: of attempts >= 60%	52	3	36	0	0.6
	Total Attempts	64		64		
	% of attempts >= 60%	81.25		56.25		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem V	PO1	PO2	PO3	PO4
CO1			3	
CO2			3	
CO3				3
CO4				3

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program: B.Sc. (H) Statistics
Course Name: Multivariate Analysis and Nonparametric Methods
Course Code: 32371602
Semester VI
Attainment (Direct Assessment)

Roll No.	Name	Internal Assessment Out of 25	University Exam. Out of Scale 10	University Exam. (Percentage = scale 10*9.5)
19026568001	TURJO DAS	24	9	85.5
19026568002	ISHA JAIN	23	8	76
19026568003	GOVIND TAYAL	23	8	76
19026568004	AYUSHI MARWAHA	20	9	85.5
19026568005	YUVIKA YADAV	23	10	95
19026568006	TUSHAR DANGI	25	8	76
19026568007	ANIRUDDH SINGH PANGTEY	23	7	66.5
19026568008	ANIRUDDHA KHATI	23	6	57
19026568009	B. SAIKUMAR	20	7	66.5
19026568010	MEBIN ALEX	20	9	85.5
19026568011	ERPULA SATHISH KUMAR	21	9	85.5
19026568012	NUTAN DHANGAR	25	10	95
19026568013	ASMIT SHUKLA	24	9	85.5
19026568014	ERICK GEORGE	22	9	85.5
19026568015	AKSHAT AGARWAL	25	9	85.5
19026568016	SHRIYA MANUJA	23	10	95
19026568017	SHRADDHA IYER	21	10	95
19026568018	GODISHALA THARUN	20	9	85.5
19026568019	SAKSHI BAJAJ	23	10	95
19026568020	MANPREET KAUR	23	9	85.5

19026568021	KSHONEESH SHARMA	23	10	95
19026568022	SPANDAN ROY	22	9	85.5
19026568023	DAADIMALLA SRIKANTH	21	10	95
19026568024	MD. IRFAN KASHIF	22	8	76
19026568025	BHUKYA ANNAMAIAH	23	9	85.5
19026568026	AARTI JANGIR	23	10	95
19026568027	SHRESHTHA GUPTA	25	9	85.5
19026568028	BALBIR SINGH	21	8	76
19026568029	RISHIKA TITIYAL	19	7	66.5
19026568030	SHUBHAM NAUTIYAL	20	9	85.5
19026568031	SARITA KUMARI	24	9	85.5
19026568032	MODALA CHAKRADHAR SAGAR	20	8	76
19026568033	PUNNA HARISH	22	9	85.5
19026568034	AAKASH MALVIYA	22	7	66.5
19026568035	CHANDAN KUMAR SINGH	25	10	95
19026568036	MANAN KANSAL	19	6	57
19026568037	VAIBHAV SHARMA	25	10	95
19026568038	ANKIT SETH	20	6	57
19026568039	SHASHWAT RAMAN	25	8	76
19026568040	PRINCE LAUHAN	25	7	66.5
19026568041	DEEPALI GANDOTRA	22	8	76
19026568042	ARUN PARIHAR	22	7	66.5
19026568043	ASHISH DWIVEDI	22	8	76
19026568044	BHASKAR SHARMA	19	7	66.5
19026568045	KORTHE THIRUPATHI	23	6	57
19079568008	DIVYA BHARDWAJ	23	10	95

Level of CO Attainment

Sem	Attempts	Internal Assessment	Level of Attainment	University Examination	Level of Attainment	*Overall CO Attainment
VI	No: of attempts >= 60%	46	3	42	3	3
	Total Attempts	46		46		
	% of attempts >= 60%	100		91.30		

*Overall Attainment = (20% of Internal Assessment Attainment + 80% of University Examination Attainment)

Course Level COPO Attainment Metrix

Sem VI	PO1	PO2	PO3	PO4
CO1				3
CO2			3	
CO3				3
CO4			3	

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low

Program level CO-PO matrix of one course from each semester:

Sem	Code	Course	PO1	PO2	PO3	PO4
I	32371101	Descriptive Statistics	3	3		
II	32371202	Algebra	3	3		
III	32371301	Sampling Distributions		3	3	3
IV	32371401	Statistical Inference		3	3	3
V	32371502	Statistical Computing Using C/C++ Programming			3	3
VI	32371602	Multivariate Analysis and Nonparametric Methods			3	3
Overall			**3**	**3**	**3**	**3**

% of attempts >= 60%	Level of Attainment	
>=80 %	**3**	**High**
>70 to <80 %	2	Medium
60-70 %	1	Low

PO Assessment Tools:
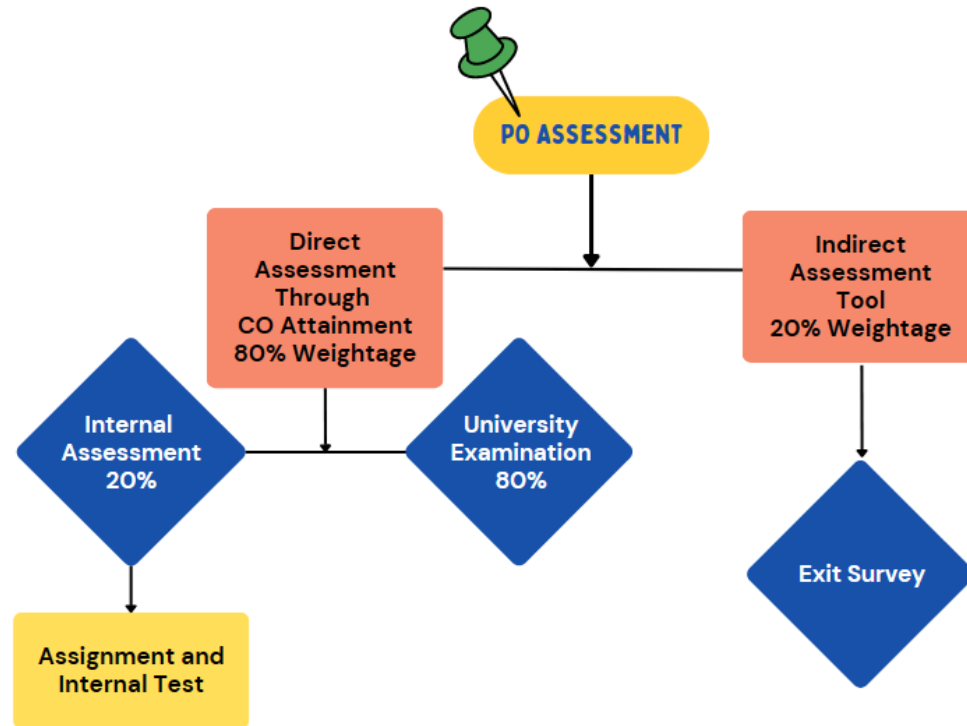
	Assessment Methods	Weightage 1	Weightage 2	Remarks
DIRECT ASSESSMENT	University Examination	80%	80%	Assessment through Cos attainment
	Assignments	20%		
	Internal Examination			
INDIRECT ASSESSMENT	Exit Survey	100%	20%	Direct evaluation to POs

Indirect PO Assessment (Through Exit Survey)

| S. No. | Question | Score | | | | | POs | No: of Attempts >=60% of Excellent Score | Total No. of Attempts |
		Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)			
1	Syllabus is need based and suitable to the course.	9	21	14	2	-	PO1	44	46
2	The curriculum provides options for continuous assessment through quiz and exams	7	22	13	4	-	PO3	42	46
3	Curriculum developed and implementation have relevance to the local and national care needs	7	18	18	3	-	PO4	43	46
4	The curriculum facilitates adequate self-learning.	8	21	14	3	-	PO1	43	46
5	The curriculum provides the ability to express thoughts and ideas effectively in writing and orally.	9	20	15	2	-	PO2	44	46
6	The curriculum provides experiential learning through student seminar, group discussion, projects, field visits.	7	16	19	4	-	PO4	42	46

Indirect PO Assessment (Attainment Through Survey)

	PO1	PO2	PO3	PO4
No: of Attempts >=60% of Excellent Score	87	44	42	85
Total No. of Attempts	92	46	46	92
% of attempts >= 60%	94.56	95.65	91.30	92.39
Attainment	3	3	3	3

PO Attainment Level:

	PO1	PO2	PO3	PO4
*PO Attainment	3	3	3	3
Direct Attainment	3	3	3	3
Indirect Attainment	3	3	3	3

*PO Attainment = (80% of Direct Attainment + 20% of Indirect Attainment)

% of attempts >= 60%	Level of Attainment	
>=80 %	3	High
>70 to <80 %	2	Medium
60-70 %	1	Low