

KRANTIGURU SHYAMJI KRUSHNA VERMA KACHCHH UNIVERSITY									
FACULTY OF SOCIAL SCIENCE AND HUMANITIES (DOE)									
Programme		Bachelor of Arts			Branch/Spec.		BA Statistics		
Semester		I (One)			Version/Pattern		NEP 2020		
Effective from Academic Year			2023-24		Effective for the batch Admitted in			2024-25	
Subject Code		DSCM - 101		Subject Name		FUNDAMENTALS OF STATISTICS – I			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture (DT)		Practical (Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	4	-	-		4	Theory	50	50	100
Hours	4	-	-	-	4	Practical	-	-	-
Pre-requisites:									
❖ The learners should have basic understanding of data and should have a logical thinking.									
Learning Outcome:									
❖ After successfully completing this course, the student will be able to perform the following tasks very easily.									
<ul style="list-style-type: none"> • Will be able to understand the meaning and importance of Statistics in research. • Become able to apply the data collection methods and to carryout various surveys independently. • Learn to classify and tabulate the data and will be able to interpret it. • Will become capable to represent the data in diagrammatic and graphical form. 									
Theory Syllabus									
Unit	Content							Hours	
1	Statistics: An Introduction ➤ Origin and Growth. ➤ Meaning and Definitions. ➤ Functions, Uses and Limitations.							15	
2	Collection of Data ➤ Population and Sample. ➤ Quantitative and Qualitative data. ➤ Primary and Secondary Data. ➤ Methods of collecting Primary data. ➤ Sources of Secondary data.							15	
3	Classification and Tabulation of Data ➤ Meaning and Basic terminologies. ➤ Types of Classification. ➤ Types of Tabulation. ➤ Simple Examples.							15	
4	Diagrams and Graphs ➤ Importance, Limitations and types of diagram. ➤ Importance, Limitations and types of Graph. ➤ Simple Examples.							15	
Reference (APA Style)									
1	Business Statistics by J. K. Sharma, Pearson India Pvt Ltd, Chennai.								
2	Statistical Methods by S. P. Gupta, Sultan Chand & Sons, New Delhi.								
3	Business Statistics by S. C. Gupta, Himalaya Publishing House, Mumbai.								
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Semester		I (One)			Version/Pattern		NEP 2020		
Effective from Academic Year			2023-24		Effective for the batch Admitted in			2024-25	
Subject Code		DSCM - 102	Subject Name		MATHEMATICAL STATISTICS – I				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture (DT)		Practical (Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	4	-	-	-	4	Theory	50	50	100
Hours	4	-	-	-	4	Practical	-	-	-
Pre-requisites:									
❖ The learners should have basic knowledge of mathematics up to high school level.									
Learning Outcome:									
❖ The course outcomes of Mathematical Statistics aim to prepare students for rigorous data analysis, research and decision-making across various domains. After successful completion of the course, the students should be well equipped to apply statistical reasoning and methodologies to the real life problems and contributes to evidence based practices in their respective fields.									
Theory Syllabus									
Unit	Content							Hours	
1	Function ➤ Introduction and Definition ➤ Domain, Codomain and Range. ➤ Notation and Types of Function. ➤ Equal and Real Function.							15	
2	Limits ➤ Introduction. ➤ Limit of a Function. ➤ Working Rules of Limit. ➤ Standard Forms of Limit.							15	
3	Arithmetic Progression ➤ Sequence and Series. ➤ Introduction of AP. ➤ n^{th} Term of an AP. ➤ Sum of First n Terms of AP.							15	
4	Geometric Progression ➤ Introduction. ➤ n^{th} Term of a GP. ➤ Sum of First n Terms of GP.							15	
Reference (APA Style)									
1	Business Mathematics by V. K. Kapoor, Sultan Chand & Sons, New Delhi.								
2	Mathematics by V. P. Jaggi & A. B. Mathur, Sultan Chand & Sons, New Delhi.								
3	Elementary Pure Mathematics by J. D. Hodson, MacMillan & Co. Ltd. London.								
4	Principles of Mathematics by C. B. Allendoerfer & C. O. Oakley, McGraw-Hill, NY.								
5	Mathematics and Statistics for Economics by G. S. Monga, Vikas Publishing House Pvt Ltd, Sahibabad (UP).								



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Programme		Bachelor of Arts			Branch/Spec.		BA Statistics		
Semester		I (One)			Version/Pattern		NEP 2020		
Effective from Academic Year			2023-24		Effective for the batch Admitted in		2024-25		
Subject Code		MI - 101		Subject Name		FUNDAMENTALS OF STATISTICS – I			
Teaching scheme				Examination scheme (Marks)					
(Per week)	Lecture (DT)		Practical (Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	4	-	-	-	4	Theory	50	50	100
Hours	4	-	-	-	4	Practical	-	-	-
Pre-requisites:									
❖ The learners should have basic understanding of data and should have a logical thinking.									
Learning Outcome:									
❖ After successfully completing this course, the student will be able to perform the following tasks very easily.									
<ul style="list-style-type: none"> • Will be able to understand the meaning and importance of Statistics in research. • Become able to apply the data collection methods and to carryout various surveys independently. • Learn to classify and tabulate the data and will be able to interpret it. • Will become capable to represent the data in diagrammatic and graphical form. 									
Theory Syllabus									
Unit	Content						Hours		
1	Statistics: An Introduction <ul style="list-style-type: none"> ➤ Origin and Growth. ➤ Meaning and Definitions. ➤ Functions, Uses and Limitations. 						15		
2	Collection of Data <ul style="list-style-type: none"> ➤ Population and Sample. ➤ Quantitative and Qualitative data. ➤ Primary and Secondary Data. ➤ Methods of collecting Primary data. ➤ Sources of Secondary data. 						15		
3	Classification and Tabulation of Data <ul style="list-style-type: none"> ➤ Meaning and Basic terminologies. ➤ Types of Classification. ➤ Types of Tabulation. ➤ Simple Examples. 						15		
4	Diagrams and Graphs <ul style="list-style-type: none"> ➤ Importance, Limitations and types of diagram. ➤ Importance, Limitations and types of Graph. ➤ Simple Examples. 						15		
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Programme		Bachelor of Arts			Branch/Spec.		BA Statistics		
Semester		I (One)			Version/Pattern		NEP 2020		
Effective from Academic Year			2023-24		Effective for the batch Admitted in		2024-25		
Subject Code		MD - 101		Subject Name		MATHEMATICAL STATISTICS – I			
Teaching scheme				Examination scheme (Marks)					
(Per week)	Lecture (DT)		Practical (Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	4	-	-	-	4	Theory	50	50	100
Hours	4	-	-	-	4	Practical	-	-	-
Pre-requisites:									
❖ The learners should have basic knowledge of mathematics up to high school level.									
Learning Outcome:									
❖ The course outcomes of Mathematical Statistics aim to prepare students for rigorous data analysis, research and decision-making across various domains. After successful completion of the course, the students should be well equipped to apply statistical reasoning and methodologies to the real life problems and contributes to evidence based practices in their respective fields.									
Theory Syllabus									
Unit	Content							Hours	
1	Function <ul style="list-style-type: none"> ➤ Introduction and Definition ➤ Domain, Codomain and Range. ➤ Notation and Types of Function. ➤ Equal and Real Function. 							15	
2	Limits <ul style="list-style-type: none"> ➤ Introduction. ➤ Limit of a Function. ➤ Working Rules of Limit. ➤ Standard Forms of Limit. 							15	
3	Arithmetic Progression <ul style="list-style-type: none"> ➤ Sequence and Series. ➤ Introduction of AP. ➤ n^{th} Term of an AP. ➤ Sum of First n Terms of AP. 							15	
4	Geometric Progression <ul style="list-style-type: none"> ➤ Introduction. ➤ n^{th} Term of a GP. ➤ Sum of First n Terms of GP. 							15	
Reference (APA Style)									
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FACULTY OF SOCIAL SCIENCE AND HUMANITIES (DOE)									
Programme		Bachelor of Arts			Branch/Spec.		BA Statistics		
Semester		II (Two)			Version/Pattern		NEP 2020		
Effective from Academic Year			2023-24		Effective for the batch Admitted in			2024-25	
Subject Code		DSCM - 201		Subject Name		FUNDAMENTALS OF STATISTICS – II			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture (DT)		Practical (Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	4	-	-	-	4	Theory	50	50	100
Hours	4	-	-	-	4	Practical	-	-	-
Pre-requisites:									
❖ The learners should have basic understanding of data and should have a logical thinking.									
Learning Outcome:									
❖ After successfully completing this course, the student will be able to perform the following tasks very easily.									
<ul style="list-style-type: none"> • Will be an enough understanding between sample and population. • Easily identify and select appropriate sampling methods. • Become familiar with the basic techniques of central tendency. • Able to analyse and interpret the results of various measures of central tendency. • Will able to use the various measures of central tendency. 									
Theory Syllabus									
Unit	Content							Hours	
1	Sampling Methods <ul style="list-style-type: none"> ➤ Meaning of Population and Sample. ➤ Population Inquiry and Sample Inquiry. ➤ Need of Sampling and Size of a Sample. ➤ Characteristics of a good Sample. ➤ Methods for Sampling. 							15	
2	Measure of Central Tendency - 1 <ul style="list-style-type: none"> ➤ Meaning of Central Tendency. ➤ Characteristics of a Good Measure. ➤ Arithmetic Mean (Simple Mean). ➤ Combined, Weighted and Geometric Mean. ➤ Advantages and Disadvantages of Mean. 							15	
3	Measure of Central Tendency - 2 <ul style="list-style-type: none"> ➤ Introduction to Measures of Positional Averages. ➤ Median, Quartiles and Deciles. ➤ Percentiles and Percentile Rank. ➤ Advantages and Disadvantages of Median. 							15	
4	Measure of Central Tendency - 3 <ul style="list-style-type: none"> ➤ Introduction and Meaning of Mode. ➤ Empirical formula for finding Mode. ➤ Graphical Method for finding Mode. ➤ Advantages and Disadvantages of Mode. ➤ Comparative study of Mean, Median and Mode. 							15	
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Effective from Academic Year			2023-24		Effective for the batch Admitted in		2024-25		
Subject Code		DSCM - 202		Subject Name		MATHEMATICAL STATISTICS – II			
Teaching scheme				Examination scheme (Marks)					
(Per week)	Lecture (DT)		Practical (Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	4	-	-	-	4	Theory	50	50	100
Hours	4	-	-	-	4	Practical	-	-	-
Pre-requisites:									
❖ The learners should have basic knowledge of mathematics up to high school level.									
Learning Outcome:									
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Theory Syllabus									
Unit	Content							Hours	
1	Determinant <ul style="list-style-type: none"> ➤ Meaning and Definition. ➤ Order 2 x 2 and 3 x 3. ➤ Properties (Rules). ➤ Minors and Co-factors. ➤ Cramer's Rule. ➤ Examples. 							15	
2	Matrix <ul style="list-style-type: none"> ➤ Meaning and Definition. ➤ Types of Matrices. ➤ Operations on Matrices. ➤ Adjoint and Inverse. ➤ Examples. 							15	
3	Permutation <ul style="list-style-type: none"> ➤ Meaning and Formula. ➤ Permutations of Different Things. ➤ Permutations of Similar Things. ➤ Circular Permutation. ➤ Examples. 							15	
4	Combination <ul style="list-style-type: none"> ➤ Meaning and Formula. ➤ Combination of things taken some or all at a time. ➤ Some Restricted Combinations. ➤ Examples. 							15	
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Subject Code		MI - 201		Subject Name		FUNDAMENTALS OF STATISTICS – II			
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Semester		II (Two)			Version/Pattern		NEP 2020		
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Subject Code		MD - 201		Subject Name		MATHEMATICAL STATISTICS – II			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture (DT)		Practical (Lab.)		Total	CE	SEE	Total	
	L	TU	P	TW					
Credit	4	-	-	-	4	Theory	50	50	100
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Unit	Content							Hours	
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3	Permutation <ul style="list-style-type: none"> ➤ Meaning and Formula. ➤ Permutations of Different Things. ➤ Permutations of Similar Things. ➤ Circular Permutation. ➤ Examples. 							15	
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