



Re-Accredited 'B++' 2.86 CGPA by NAAC

VEER NARMAD SOUTH GUJARAT UNIVERSITY

University Campus, Udhna-Magdalla Road, SURAT - 395 007, Gujarat, India.

વીર નર્મદ દક્ષિણ ગુજરાત યુનિવર્સિટી

યુનિવર્સિટી કેમ્પસ, ઉદ્ધના-મગદલા રોડ, સુરત - ૩૯૫ ૦૦૭, ગુજરાત, ભારત.

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-: પરિપત્ર :-

યુનિવર્સિટી સંલગ્ન વિજ્ઞાન વિદ્યાશાખા હેઠળની તમામ કોલેજોનાં આચાર્યશ્રીઓને જણાવવાનું કે, શૈક્ષણિક વર્ષ ૨૦૨૫-૨૬ થી અમલમાં આવનાર B.Sc. Statistics Sem.- 4 ભારતીય જ્ઞાન પરંપરા (BGP) ના અભ્યાસક્રમ સંદર્ભે આંકડાશાસ્ત્ર વિષયની અભ્યાસ સમિતિની તા.૨૭/૦૩/૨૦૨૫ ની સભાના ઠરાવ ક્રમાંક:૦૬ થી કરેલ ભલામણ સ્વીકારી વિજ્ઞાન વિદ્યાશાખાની તા.૩૦/૦૪/૨૦૨૫ની સભાનાં ઠરાવ ક્રમાંક:૭ થી કરેલ ભલામણ સ્વીકારી એકેડેમિક કાઉન્સિલની તા.૦૫/૦૫/૨૦૨૫ ની સભાનાં ઠરાવ ક્રમાંક: ૭૪ થી મંજૂર કરેલ છે. જેનો અમલ કરવા આથી જાણ કરવામાં આવે છે.

બિડાણ: ઉપર મુજબ

ક્રમાંક:ઓથો./પરિપત્ર/સિલેબસ/૧૧૯૪૯/૨૦૨૫
તા.૦૨-૦૬-૨૦૨૫

W. J. Patel
કુલસચિવ

પ્રતિ,

૧) યુનિવર્સિટી સંલગ્ન વિજ્ઞાન વિદ્યાશાખા હેઠળની તમામ કોલેજોનાં આચાર્યશ્રીઓ.

.....આપશ્રીની કોલેજ/વિભાગના સંબંધિત શિક્ષકોને જાણ કરી અમલ કરવા સારું.

૨) ડીનશ્રી, તમામ વિદ્યાશાખા (એપેક્ષ બોડી સિવાયની)

૩) પરીક્ષા નિયામકશ્રી, પરીક્ષા વિભાગ, વીર નર્મદ દ. ગુ. યુનિવર્સિટી, સુરત.

.....તરફ જાણ તેમજ અમલ સારું.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT



**UNDER GRADUATE PROGRAM
IN
STATISTICS
UNDER FACULTY OF SCIENCE
3 (YEARS DEGREE) AND 4 (YEARS HONOURS)**

B.sc Sem -II and Sem-IV (BGP)

M. R. S.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT
UNDER GRADUATE PROGRAMME IN STATISTICS
3 (YEARS DEGREE) AND 4 (YEARS HONOURS)
B.Sc.- SEM-II and IV STATISTICS (BGP)

Programme Outcomes	<p>PO-01: <u>Scientific Knowledge & Conceptual Understanding</u>: Develop a strong foundation in scientific principles, theories and concepts across disciplines, fostering interdisciplinary learning, advance knowledge and problem-solving abilities.</p> <p>PO-02: <u>Analytical & Critical Thinking</u>: Apply critical thinking and analytical reasoning to evaluate scientific data, hypothesis and real-world problems, leading to evidence-based conclusions.</p> <p>PO-03: <u>Research & Inquiry-based Learning</u>: Develop investigative skills through experimentation, data analysis and scientific inquiry to contribute to research and innovation.</p> <p>PO-04: <u>Laboratory & Technical Skills</u>: Gain hands-on experience with laboratory techniques, instrumentation and computational tools relevant to scientific research and industry applications.</p> <p>PO-05: <u>Digital & Computational Literacy</u>: Utilize digital tools, computational techniques and emerging technologies such as AI, bioinformatics and statistical modelling to enhance scientific learning and problem-solving.</p> <p>PO-06: <u>Environmental & Societal Responsibility</u>: Understand the role of science in addressing environmental, health and societal challenges, promoting sustainability and ethical responsibility.</p> <p>PO-07: <u>Effective Communication & Collaboration</u>: Develop proficiency in scientific communication, both written and oral, for effective dissemination of knowledge while collaborating in multidisciplinary teams.</p> <p>PO-08: <u>Innovation & Entrepreneurship</u>: Foster an entrepreneurial mind-set by applying scientific knowledge for innovation, technology development, and industry-oriented applications. Develop sustainable solutions to address real-world challenges in research and environmental management.</p> <p>PO-09: <u>Lifelong Learning & Professional Growth</u>: Cultivate curiosity and adaptability for continuous learning, equipping students for higher education, research, and professional careers.</p> <p>PO-10: <u>Ethical Leadership & Value-based Education</u>: Develop leadership qualities, ethical values, and a sense of responsibility in applying science for societal progress, aligning with Indian knowledge systems and global perspectives.</p>
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<p>Programme Specific outcomes</p>	<p>PSO1: Understanding Statistical Principles Graduate Should comprehend the importance and value of statistical principles and be able to convert problem description into testable research hypothesis.</p> <p>PSO2: Professional and Entrepreneurial Skills Development The program enhances student's professional skills and entrepreneurial capabilities, fostering independent logical and analytical thinking. It also emphasizes teamwork and leadership, preparing students for diverse environments by providing skill enhancement Certificate courses.</p> <p>PSO3: Real-World Problem Solving Students are trained to investigate, design, and develop practical solutions for real-world challenges, ensuring they can apply theoretical knowledge to practical situations through Experiential Learning and by providing platform for extracurricular activities.</p> <p>PSO4: Self-Learning and Problem-Solving Skills Students gain hands-on experience with advanced statistical tools and software, enhancing their ability to tackle real-world problems efficiently.</p> <p>PSO5: Performing data Analysis Graduate should be able to apply analytical and statistical methods to analyze data, interpret results, and provide solutions in various settings.</p> <p>PSO6: Develop Communication Skills Effectively Communicate Statistical results through clear & informative data visualizations.</p> <p>PSO7: Commitment to Lifelong Learning and Research The program focuses not only on imparting core education but also to developing interest in research.</p> <p>PSO8: Provide Employability Identify & explore career opportunities in statistics, including roles in industry, government & academia.</p>								
<p>Mapping of PO and PSO</p>		PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
PO1	✓		✓		✓				
PO2	✓	✓	✓	✓	✓				
PO3	✓		✓					✓	
PO4			✓	✓	✓			✓	
PO5	✓		✓	✓	✓				
PO6	✓		✓		✓				✓
PO7		✓	✓				✓		
PO8	✓	✓							✓
PO9			✓	✓	✓			✓	✓
PO10		✓	✓				✓		

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VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

Programme Name: Bachelor of Science Sem-II

About course: B.Sc statistics(BGP)

Teaching and Evaluation Scheme:

Structure

Course Category	Course Code	Course Title	Mark sheet title in English	Level of course	Teaching hours per week		Exam Duration		Credit		Internal Marks		External Marks		Total	
					TH	PR	TH	PR	TH	PR	TH	PR	TH	PR	TH	PR
BGP	ST-BGP-201	Indian Official Statistics (BGP)	Indian Official Statistics (BGP)	100	2	0	1	0	2	0	25	0	25	0	50	0

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VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT
 F.Y.B.Sc.- SEM-II STATISTICS (BGP)
 Paper-ST-BGP-201
 Indian Official Statistics(BGP) (2 credits Th)
As per NEP 2020
 To be implemented from the Academic year 2025-26

Course code	ST-BGP-201									
Course title	Indian Official Statistics(BGP) (Theory)									
Credit	2									
Teaching per week	2 hours									
Effective from	2025-2026									
Purpose of course	To introduce students to the role of official statistics in policymaking and socio-economic planning in India.									
Objective of course	To familiarize students with various organizations, methods, and sources of Indian official statistics.									
Course outcomes	<p>CO1: Understand the institutional framework for official statistics in India. Define and explain the concept of official statistics.</p> <p>CO2: Identify the sources and types of official statistics. Differentiate between official statistics and other forms of statistical data.</p> <p>CO3: Understand the role of national statistical agencies in the collection, compilation, and dissemination of official statistics.</p> <p>CO4: Understand the structure, responsibilities, and functions of the Ministry of Statistics and Programme Implementation (MoSPI). Learn the functions of CSO and NSSO in data collection and survey administration.</p>									
Mapping Between COs and PSOs		PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
	CO1	✓	✓		✓			✓	✓	
	CO2				✓	✓	✓	✓	✓	
	CO3	✓	✓	✓		✓		✓	✓	
	CO4	✓	✓	✓			✓		✓	
Course content	<p>Unit-1: Introduction to Official Statistics in India.</p> <ul style="list-style-type: none"> • What are official statistics? • Importance of official statistics for governance, policy-making, and research. • The connection between statistical data and policy formulation. • The evolution of economic planning in India and its reliance on statistical information. • The history of official statistics. 									50%
	<p>Unit-2: Statistical Agencies and Their Functions</p> <ul style="list-style-type: none"> • Overview of MoSPI's role in official data production. • Key divisions: <ul style="list-style-type: none"> ➤ Central Statistical Office (CSO) 									50%

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	<ul style="list-style-type: none"> ➤ National Sample Survey Office (NSSO) ➤ Structure and functions of the NSO. ➤ functions of National Statistical commission(NSC) 	
References	<ol style="list-style-type: none"> 1. Ministry of Statistics and Programme Implementation (MoSPI) Reports and Publications Website: www.mospi.gov.in 2. Economic Survey of India (Annual publication by the Ministry of Finance) 3. Indian Official Statistics: A Handbook by D. N. Rao and R. K. Sharma 4. Statistical Methods by S. P. Gupta (for understanding the basics of statistics used in official data collection) 	

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VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

programme Name: Bachelor of Science Sem-IV

About course: B.Sc statistics(BGP)

Teaching and Evaluation Scheme:

Structure																
Course Category	Course Code	Course Title	Mark sheet title in English	Level of course	Teaching hours per week		Exam Duration		Credit		Internal Marks		External Marks		Total	
					TH	PR	TH	PR	TH	PR	TH	PR	TH	PR	TH	PR
BGP	ST-BGP-401	Vital Statistics Of India (BGP)	Vital Statistics Of India (BGP)	100	2	0	1	0	2	0	25	0	25	0	50	0

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VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT
S.Y.B.Sc.- SEM-IV STATISTICS (BGP)
Paper-ST-BGP-401
Vital Statistics Of India (BGP) (2 credits Th)
As per NEP 2020
To be implemented from the Academic year 2025-26

Course code	ST-BGP-401									
Course title	Vital Statistics Of India (Theory)									
credit	2									
Teaching per week	2 hours									
Effective from	2025-2026									
Purpose of course	To familiarize students with the sources and methods of data collection for vital statistics in India.									
Objective of course	Students will understand the concept and significance of vital statistics in public health and policy. Acquaint them to analyze trends in key vital statistics and their implications for national development.									
Course outcomes	<p>CO1: Understand the key components and sources of vital statistics in India. Explain the significance of the Census of India in population studies and policy formulation.</p> <p>CO2: understand dual recording methodology of the Sample Registration System (SRS). Explain the role of civil registration in maintaining legal records of births and deaths.</p> <p>CO3: Examine NFHS methodologies and indicators related to maternal and child health, nutrition, and disease prevalence. Analyze trends in births, deaths, fertility, mortality, and migration, and relate them to socio-economic development.</p> <p>CO4: Critically assess the importance of vital statistics in policy making and public health.</p>									
Mapping Between COs and PSOs		PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8	
	CO1	✓	✓				✓	✓	✓	
	CO2		✓	✓	✓	✓			✓	
	CO3	✓	✓				✓	✓	✓	
	CO4	✓	✓	✓	✓	✓		✓	✓	
Course content	<p>Unit I: Introduction to Vital Statistics and Their Importance.</p> <ul style="list-style-type: none"> vital statistics meaning Key components: Births, Deaths, Marriages, Divorces, and Migration. Vital statistics as a foundation for health policies, demographic analysis, and socio-economic planning. 									50%

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	<ul style="list-style-type: none"> • Influence policy of vital statistics in various sectors. • Evolution of vital statistics systems in India. • Major reforms and changes over time in data collection and reporting. 	
	<p>Unit II : Sources of Vital Statistics in India.</p> <ul style="list-style-type: none"> • Census of India: Role in providing demographic and mortality data. • Sample Registration System (SRS): Methodology and its significance. • Civil Registration System (CRS): The role of civil registration in collecting birth and death data. • National Family Health Survey (NFHS): Contribution to vital statistics through periodic health surveys. • Understanding vital statistics through government reports and surveys. 	50%
References	<ol style="list-style-type: none"> 1. Vital Statistics in India: Sources and Methods by P. K. Bhatnagar 2. India's Vital Statistics: Issues and Concerns by Shireen J. Jejeebhoy 3. Sample Registration System (SRS) Reports – Published by the Office of the Registrar General of India 4. National Family Health Survey (NFHS) Reports – Available on the Ministry of Health and Family Welfare website. 5. Census of India Reports – Available on the official Census of India website. 	

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