Karmaveer Bhaurao Patil University, Satara
Faculty of Science and Technology
B. Sc. (Statistics)
Programme and Credit Structure as per NEP 2020

{Ref. Government of Maharashtra letter no. एनइपी.२०२२/प्र.क.०९/विशि-३शि का ना दिनांक: १३ मार्च २०२४}
The degree shall be titled as 'Bachelor of Science (Statistics) under the faculty of Science and Technology

B. Sc. Sem. I & II from Academic Year 2024-25
B. Sc. Sem. III & IV from Academic Year 2025-26
B. Sc. Sem. V & VI from Academic Year 2026-27
B. Sc. Sem. VII&VIII from Academic Year 2027-28

Programme Outcomes for B. Sc. (Statistics)

PO. No.	Programme Outcomes After completing B. Sc. (Statistics) Programme the students will be able to……….
PO-1	The students will graduate with proficiency in the subject of their choice.
PO-2	Shape good and informed citizens from the students entering into programme.
PO-3	Develop skills in practical work, experiments and laboratory materials.
PO-4	Understand scientific terms, concepts, facts, phenomenon, and their relationships.
PO-5	Continue higher studies in the subject Statistics.
PO-6	Pursue higher studies abroad.
PO-7	Develop the ability for the application of acquired knowledge to improve agriculture and related fields to make themselves self-reliant
PO-8	Impart the knowledge of statistics.
PO-9	Nurture academicians with focus and commitment to their subject.
PO-10	Impart the knowledge of applied statistics such as 'index number', 'timeseries', 'demography', 'reliability theory', 'industrial statistics', 'operation research'
PO-11	Develop scientific attitude among the students and to make the students open minded, critical and curious so that they enter research field with a positive approach.
PO-12	Appear the examinations for jobs in the government organizations
PO-13	Make the students aware of environment sustainable goals.
PO-14	Apply for jobs with a minimum requirement of B. Sc
PSO. NO	**Programme Specific Outcomes** **The student will be able to……**
PSO-1	Improve knowledge of descriptive statistics and inferential statistics, sampling techniques
PSO-2	Improve knowledge about the univariate, bivariate, multivariate data analysis.
PSO-3	Improve knowledge about the correlation and regression analysis.
PSO-4	Improve knowledge of probability, discrete and continuous probability distribution and various measures of these distributions.
PSO-5	Improve knowledge of different methods of estimation of parameters of discrete and continuous probability distributions.
PSO-6	Explain, describe and discuss the concepts of Statistics
PSO-7	Perform and design experiments related to Statistics
PSO-8	Adopt and undertake a project based on Social Real-Life Problem
PSO-9	Achieve skills needed in the Statistics based industries through an internship.
PSO-10	Improve the research-based skills by entering into a research internship as well as in house project.
PSO-11	Present their research findings in research conglomerations like conferences and in research

	journals in the form of publications.
PSO-12	Critically analyze their role as an environment sustainability goals oriented citizen.

Semester, Credit Framework, NSQF Level and Exit Points

Sr. No.	Semester	Year	Year	Credits	Level	Exit Points &Award
1	Sem. I & II	2024-25	1Year	44	4.5	UG Certificate in Statistics
2	Sem. III & IV	2025-26	2Year	88	5.0	UG Diploma in Statistics
3	Sem. V &VI	2026-27	3Year	132	5.5	B. Sc. in Statistics (UG Three Year Degree)
4	Sem. VII & VIII	2027-28	4Year	176	6.0	B. Sc. in Statistics [Honors/Research] (UG Four Year Degree)

Credit Distribution

Sr. No.	Course	3 Year Degree Programme			4 Year Honors Degree Programme			4 Year Honors with Research Degree Programme		
		Courses (3 Yrs.)	Credits (3 Yrs.)	%	Courses (4 Yrs.)	Credits (4 yrs.)	%	Courses (4 yrs.)	Credits (4 yrs.)	%
1	Major	26	52	39.39	34	80	45.45	32	72	40.91
2	Elective	04	08	6.06	08	16	9.09	08	16	9.09
3	IKS	02	04	3.03	02	04	2.27	02	04	2.27
4	VSC	04	08	6.06	04	08	4.55	04	08	4.55
5	FP	01	02	1.52	01	02	1.14	01	02	1.14
6	OJT	01	04	3.03	02	08	4.55	01	04	2.27
7	RP	00	00	0.00	00	00	00	02	12	6.82
8	SEC	03	06	4.55	03	06	3.41	03	06	3.41
9	CEP	01	02	1.52	01	02	1.14	01	02	1.14
Total (Major) (A)		**42**	**86**	**65.15**	**55**	**126**	**71.59**	**54**	**126**	**71.59**
1	Minor & RM	12	24	18.18	13	28	15.91	13	28	15.91
Total (Minor) (B)		**12**	**24**	**18.18**	**12**	**28**	**15.91**	**13**	**28**	**15.91**
1	OE	04	08	6.06	04	08	4.55	04	08	4.55
2	AEC	04	08	6.06	04	08	4.55	04	08	4.55
3	VEC	02	04	3.03	02	04	2.27	02	04	2.27
4	CC	01	02	1.52	01	02	1.14	01	02	1.14
Total (C)		**11**	**22**	**16.67**	**11**	**22**	**12.50**	**11**	**22**	**12.50**
Grand Total (A+B+C)		**65**	**132**	**100**	**79**	**176**	**100**	**78**	**176**	**100**

Duration:

➢ The program shall be a full-time program.

➢ The duration of program shall be three years for Bachelor of Science and four years for Bachelor of Science with Honors or Bachelor of Science with Research.

➢ Every year students will have existed option with:

➢ (1st Year: Certificate, 2nd Year: Diploma, 3rd Year: Degree, 4th Year: Honors / Research)

➢ These students are allowed to re-enter the degree program within three years and complete the degree program within the stipulated maximum period of Seven Years.

Eligibility: 12th Pass with Science, or equivalent.

Medium of Instruction: The medium of instructions shall be in English.

Scheme of Examination & Standard of Passing (CCE and ESE):

➢ End Semester Exam (ESE): 30 Marks (Min 12 Marks for Passing)

➢ Continuous Comprehensive Evaluation (CCE): 20 Marks (Min 08 Marks for Passing)

➢ Total Marks = 50 Marks

- Minimum 40% Marks Required for Passing and there is separate head of Passing for End Semester Examination (ESE) and Continuous Comprehensive Evaluation (CCE).

- Scheme of Examination & Standard of Passing for ESE and CCE:

- As per the decision of the concern Board of Studies or Competent Authority.

- A candidate who acquires 32 credits or more during semester – I & II shall be admitted to B. Sc. II (appear for semester – III & IV examination).

- However, the candidate shall not be admitted to B.Sc. III (Semester - V) unless he/she passed in all the subjects at B.Sc. I (Semester - I & Semester - II) and acquire 32 credits or more during semester – III & IV.

- However, the candidate shall not be admitted to B. Sc. IV (Semester - VII) unless he/she passed in all the subjects at B. Sc. III (Semester - V & Semester - VI).

- However, under the National Education Policy the rules extended by KBP University, time to time regarding ATKT will be applicable.

Eligibility of the Core Faculty:

- As per rules and regulations of Karmaveer Bhaurao Patil University, Satara and Govt. of Maharashtra.

- Eligibility for Professor of Practice or Professional Trainer:

Any other eligibility as per the guidelines and regulations passed by concern board of studies, academic council of the autonomous college and rules & regulations of Karmaveer Bhaurao Patil University, Satara and Government of Maharashtra and UGC norms.

B. Sc. (Statistics) Part-I

Semester I

Sr. No.	Components	Course Code	Course	Credits
1	Course-I	BST-111	Descriptive Statistics-I	02
		BST-112	Elementary Probability Theory	02
		BSP-113	Practical-I	02
2	Course-II	-	DSC I, DSC II, DSP I	06
3	Course-III	-	DSC I, DSC II, DSP I	06
4	OE	BST-117	Stock Market Operations P-I	02
5	IKS	BSTIKS 1	Introduction to Indian Knowledge System	02
			Total	**22**

Semester II

Sr. No.	Components		Course	Credits
1	Course-I	BST-121	Descriptive Statistics-II	02
		BST-122	Probability Distribution	02
		BSP-123	Practical-II	02
2	Course-II	-	DSC III, DSC IV, DSP II	06
3	Course-III	-	DSC III, DSC IV, DSP II	06
4	OE	BST-127	Stock Market Operations P-II	02
5	VEC	BSTVEC1	Democracy, Good Governance and Constitution of India	02
			Total	**22**

EXIT OPTION: Award of UG Certificate in Major **with 44 credits** & an additional 4 credits core NSQF Course/Internship OR Continue with Major & Minor.

B. Sc. (Statistics) Part-II

Semester III

Sr. No.	Components	Course Code	Course	Credits
1	Major	BST 231	Continues Probability Distribution	02
		BST 232	Statistical Methods	02
		BSP 233	Practical-III	02
2	Minor	-	DSC V, DSC VI, DSP III	06
3	OE	BSTOE 3	Stock Market Operations P-III	02
4	VSC	BSPVSC 1	Introduction to Power BI	02
5	SEC	BSPVEC 1	Fundamentals of MATLAB-I	02
6	AEC	BSTAEC 1	English P-I	02
7	IKS	BSTIKS 2	Vedic Mathematics	02
			Total	**22**

Semester IV

Sr. No.	Components	Course Code	Course	Credits
1	Major	BST 241	Probability Distribution	02
		BST 242	Sampling Distribution and Statistical Tests	02

		BSP 243	Practical IV	02
2	Minor	-	DSC VII, DSC VIII, DSP IV	06
3	OE	BSTOE 4	Stock Market Operations P-IV	02
4	VSC	BSPVSC 2	Data Integration to Power BI	02
5	SEC	BSPSEC 2	Fundamentals of MATLAB-II	02
6	AEC	BSTAEC 2	English P-II	02
7	VEC	BSTVEC 2	Environmental Studies	02
			Total	**22**

EXIT OPTION: Award of UG Diploma in Major and Minor with 88 Credits & an additional 4 credits core NSQF Course/ Internship OR Continue with Major & Minor

B. Sc. (Statistics) Part-III

Semester V

Sr. No.	Components	Course Code	Course	Credits
1	Major	BST 351	Probability Distribution-I (P-IX)	02
2	Major	BST 352	Statistical Inference-I (P-X)	02
3	Major	BST 353	Operation Research (P-XI)	02
4	Electives	BST 354	Design of Experiment (P-XIIE1)	02
		BST 354	Demography and Vital Statistics (P-XIIE2)	
5	Major Lab	BSP 355	Lab - V	02
6	Elective Lab	BSP 356	Lab - I	02
7	VSC	BSPVSC 3	R-Programming-I	02
8	AEC	BSTAEC 3	English P-III	02
9	OJT	BSTOJT 1	On Job Training in Statistics	04
10	CEP	BSTCEP 1	Community Engagement Programme in Statistics	02
			Total	**22**

Semester VI

Sr.	Components	Course Code	Course	Credits
1	Major	BST 361	Probability Distribution-II (P-XIII)	02
2	Major	BST 362	Statistical Inference-II (P-XIV)	02
3	Major	BST 363	Industrial Statistics (P-XV)	02
4	Electives	BST 364	Sampling Theory (P-XVIE1)	02
		BST 364	Survey Sampling and Official Statistics (P-XVIE2)	
5	Major Lab	BSP 365	Lab - VI	02
6	Elective Lab	BSP 366	Lab - II	02
7	VSC	BSPVSC 4	R-Programming-II	02
8	SEC	BSPSEC 3	Python Programming	02
9	FP	BSTFP 1	Field Project in Statistics	02
10	CC	BSTCC 1	Co-curricular Course in Statistics	02
11	AEC	BSTAEC 4	English P-IV	02
			Total	**22**

EXIT OPTION: Award of UG Degree in Major with 132 credits OR Continue with Major & Minor.

B. Sc. (Statistics) Part-IV Honors Degree

Semester VII

Sr. No.	Components	Course Code	Course	Credits
1	Major	BST 471	Mathematical Statistics (P-XVII)	04
2	Major	BST 472	Estimation Theory (P-XVIII)	04

3	Major	BST 473	Optimization Technique(P-XIX)	04
4	Electives	BST 474	Sampling Theory (P-XXE1)	02
		BST 474	Population Studies (P-XXE2)	
5	Major Lab	BSP 475	Lab – VII	02
6	Elective Lab	BSP 476	Lab - III	02
7	Minor	BST 477	Research Methodology	04
			Total	**22**

Semester VIII

Sr.	Components		Course	Credits
1	Major	BST 481	Probability Theory (P-XXI)	04
2	Major	BST 482	Theory of Testing of Hypotheses (P-XXII)	04
3	Major	BST 483	Regression Analysis (P-XXIII)	04
4	Electives	BST 484	Linear Model and Design of Experiment (P-XXIVE1)	02
		BST 484	Computational Statistics (P-XXIVE2)	
5	Major Lab	BSP 485	Lab – VIII	02
6	Elective Lab	BSP 486	Lab - IV	02
7	OJT	BSTOJT 2	On Job Training in Statistics II	04
			Total	**22**

Award of Four-year UG Honors Degree in Major and Minor with 176 credits.

B. Sc. (Statistics) Part-IV Honors with Research Degree

Semester VII

Sr. No.	Components	Course Code	Course	Credits
1	Major	BST 471	Mathematical Statistics (P-XVII)	04
2	Major	BST 472	Estimation Theory (P-XVIII)	04
3	Electives	BST 473	Optimization Technique (P-XIXE1)	04
		BST 473	Distribution Theory (P-XIXE2)	
4	Major Lab	BSP 474	Lab – VII	02
5	Minor	BST 475	Research Methodology	04
6	RP	BSTRP 1	Research Project in Statistics I	04
			Total	**22**

Semester VIII

Sr. No.	Components	Course Code	Course	Credits
1	Major	BST 481	Probability Theory (P-XX)	04
2	Major	BST 482	Theory of Testing of Hypotheses (P-XXI)	04
3	Electives	BST 483	Regression Analysis (P-XXIIE1)	04
		BST 483	Multivariate Analysis (P-XXIIE2)	
4	Major Lab	BSP 484	Lab – VIII	02
5	RP	BSPRP 2	Research Project in Statistics II	08
			Total	**22**

Award of Four-year UG Honors Degree in Major and Minor with 176 credits.

Chairman
BoS in Statistics

Secretary
Academic Council

Chairman
Academic Council