

3. Evaluative Report of the Department

1. Name of the Department:
Department of Statistics
2. Year of establishment
1962
3. Is the Department part of a School/Faculty of the university?
Yes, Department of Statistics is a part of Faculty of Science
4. Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc. D.Litt., etc.)
Department offers UG (Pass) courses in Statistics at three constituent colleges of this university while PG, Ph. D. and D.Sc. programmes are being offered by the Department of Statistics itself.
UG - B.Sc. (Pass course)
UG - B.A. (Pass course)
PG - M. Sc. in Statistics
Ph.D. Yes
D.Sc. Yes
5. Interdisciplinary programmes and departments involved:
Department of Statistics is not involved in any interdisciplinary programme.
6. Courses in collaboration with other universities, industries, foreign institutions, etc
Department of Statistics has not established any collaboration with any other universities, industries, foreign institutions.
7. Details of programmes discontinued, if any, with reasons
No programme has been discontinued during 2009-14.
8. Examination System: Annual/Semester/Trimester/Choice Based Credit System
University has adopted annual scheme for UG exams in Statistics & Applied Statistics and semester system with Choice Based Credit System for PG exams in Statistics. Department is also running one semester Pre Ph.D. course work in Statistics.
9. Participation of the department in the courses offered by other departments
Faculty member of this department are regularly invited to take course based classes and other related activities in the following PG departments: MCA, M.Tech. (IT), M.Sc.(Biotech.), M.A.(Economics), Pre-Ph.D. Programmes of Economics and Education.

10. Number of teaching posts sanctioned, filled and actual (Professors/ Associate Professors/ Asst. Professors/ others)

Following are the details of faculty members in this department:

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	2	NIL	3 (CAS)
Associate Professors	3	NIL	6 (CAS)
Asst. Professors	16	NIL	NIL
Others	---	---	---

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Following are the details of faculty members in this department:

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D./ M.Phil students guided for the last 4 years
Dr. Jagdish Prasad	M.Sc., Ph.D.	Professor & Head	Design of Experiment, Neural Network, Data Mining, Medical Statistics, Applied Statistics	31 Years	06 Ph.D.
Dr. Amita Sharma	M.Sc., M.Phil, Ph.D.	Professor	Applied Statistics, Environmental Statistics	34 Years	03 Ph.D.
Dr. Vipin Tayal	M.Sc., M.Phil, Ph.D.	Professor	Distribution Theory	26 Years	NIL
Dr. Lata Joshi	M.Sc., M.Phil, Ph.D.	Associate Professor	Distribution Theory, Applied Statistics, Statistical Inference	35 Years	02 Ph.D.
Dr. S.K. Gupta	M.Sc., Ph.D.	Associate Professor	Statistical Inference, Distribution Theory	27 Years	01 Ph.D.
Dr. Pankaj Nagar	M.Sc., M.Phil, Ph.D., M.Tech.	Associate Professor	Statistical Inference, Statistical Computing, Bio-Statistics	26 Years	05 Ph.D.
Dr. Yashbir Singh	M.Sc., M.Phil., Ph.D.	Associate Professor	Design of Experiment, Distribution Theory, Actuarial Science	26 Years	NIL

Dr. Jayant Singh	M.Sc., M.Phil., Ph.D., MCA	Associate Professor	Applied Statistics, Statistical Inference	26 Years	04 Ph.D.
Dr. Anil Kr. Bhardwaj	M.Sc., M.Phil., M.C.A.,M.B.A., Ph.D.	Associate Professor	Design of Experiment, Computer Application, Applied Statistics, Operation Research	17 Years	02 Ph.D.
Dr. S.K. Saxena	M.Sc., Ph.D. (Retd. in 2013)	Professor	Statistical Inference	35 Years	-

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

No senior Visiting Fellows, Adjunct Faculty, Emeritus Professors visited this department during 2009 – 15. However following eminent persons were involved in various teaching programmes for the past five years:

- Prof. P.C. Gupta Visiting Faculty
- Prof. G.C. Tikkiwal Visiting Faculty
- Prof. S.K. Saxena Visiting Faculty

13. Percentage of classes taken by temporary faculty – programme-wise information

All the PG classes are being engaged by regular faculty members.

14. Programme-wise Student Teacher Ratio:

Following are the approximate programme-wise Student Teacher Ratios in different courses run by department:

UG: Students & Teachers: 23:1

PG: Students & Teachers: 06:1

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and act

Following is the position of ministerial, technical staff and lab bearers in this department:

Post	Sanctioned	Working
Ministerial Staff	2	1
Class Fourth	2	2
Contractual	1	1

16. Research thrust areas as recognized by major funding agencies

Following the thrust areas recognized by major funding agencies:

- Design of Experiment
- Statistical Inference
- Distribution Theory
- Applied Statistics

17. Number of faculty with ongoing projects from.

- a. National
NIL
- b. International
NIL
- c. Total grants received
NIL

18. Inter-institutional collaborative projects and associated grants received

- a) National collaboration
NIL
- b) International collaboration
NIL

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR,AICTE, etc.; total grants received.

Following are the details of departmental projects funded during last five years:

- A Financial Grants of Rs. 47 lacs has been sanctioned to the department under DST-FIST programme.
- Department has applied for DST- FIST and DST-PURSE (P-II) programmes.

20. Research facility/ center with

- State recognition
NIL
- National recognition
NIL
- International recognition
NIL

21. Special research laboratories sponsored by / created by industry or corporate bodies

NIL

22. Publications:

- * Number of papers published in peer reviewed journals (national/international)
88+8
- * Monographs
NIL
- * Chapters in Books
05
- * Edited Books
05

- * Books with ISBN with details of publishers
04
- * Number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.):
05 (as per Scopus)
- * Citation Index – range/ average:
Range/Average: 0 to 68
- * SNIP
NIL
- * SJR
NIL
- * Impact Factor – range/ average
The range of impact factor is 2.62 to 3.75 with average IF 3.18
- * h-index
Maximum h-index as per SCOPUS is 3 (Dr. Pankaj Nagar)

23. Details of patents and income generated

- No faculty of this department has registered any patent during past five years.
- Department has One Copyright under the name of Dr. Pankaj Nagar (Associate Professor of the Department) in a joint collaboration with Prof. Sangeeta Sharma (Public Admn.) entitled as “Governometrics”. The patent of same title is accepted and certificate is still awaited. (CBR No 5169 dated 6.6.2012)
- No income is generated from the same.

24. Areas of consultancy and income generated

NIL

25. Faculty selected nationally/ internationally to visit other laboratories/ institutions/ industries in India and abroad

No faculty member visited other laboratories/ institutions/ industries in India and abroad in past five years.

26. Faculty serving in

a) National committees

Dr. Pankaj Nagar- Member, Steering Committee of Workstation for Research in collaboration with Directorate of Census Operation, New Delhi

b) International committees

NIL

c) Editorial Boards

NIL

d) Other (please specify)

- (i) Following faculty members are involved in the Editorial Board of the Journal “Indian Journal of Statistics and Application (ISSN: 2278-1102)” published by the Department of Statistics, Univ. of Rajasthan, Jaipur.

Prof. Jagdish Prasad

Prof. Amita Sharma

Prof. VipinTayal

Dr. Lata Joshi

Dr. Jayant Singh

Dr. Pankaj Nagar

Dr. Yashbir Singh

Dr. S.K. Gupta

Dr. Anil Bhardwaj

- (ii) Following faculty members are involved in the Editorial Board of the Journal “Journal of Rajasthan Statistical Association (ISSN: 2278-4845)” published by the Department of Statistics, Univ. of Rajasthan, Jaipur.

Prof. Jagdish Prasad

Prof. Amita Sharma

Dr. Pankaj Nagar

Dr. S.K. Gupta

Dr. Yashbir Singh

27. Faculty recharging strategies (UGC, ASC, Refresher/ orientation programs, workshops, training programs and similar programs).

During 2009-2015; department has conducted following faculty recharging activities:

- 2010- 3 days Workshop on SPSS. (8-10 Nov. 2010)
- 2010-Refresher Course in IT(7.2.2011-26.2.2011)
- 2012- National Workshop on Research methodology 19-21 Oct. 2012

28. Student projects

- percentage of students who have done in-house projects including interdepartmental projects

All PG students i.e. 100% students of this department have done in-house projects including interdepartmental projects

- percentage of students doing projects in collaboration with other universities/ industry / institute

NIL

29. Awards/ recognition received at the national and international level by

- Faculty

NIL

- Doctoral / post doctoral fellows

NIL

- Students

NIL

30. Seminars/ Conferences/Workshops organized and the source of funding (national/ international) with details of outstanding participants, if any.

Three conferences/ seminars/ workshops were organized by the department during past five years. These are:

S. No.	Year	Seminars/ Conferences/ Workshops	Duration	Funding Agency
(i)	2010	Workshop on SPSS. (8-10 Nov. 2010)	8-10 Nov.,2010	-
(ii)	2011	Refresher Course in IT	7.2.2011-26.2.2011	UGC
(iii)	2012	National Workshop on Research Methodology	19-21 Oct. 2012	ICSSR

31. Code of ethics for research followed by the departments

Code of conducted for research are followed as per UGC and University of Rajasthan norms.

32. Student profile programme wise: 2009-2015

Following is the programme wise student profile:

Name of the Programme	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
M.A./M.Sc. Statistics (2009-10)	41	12	29	75.00	75.86
M.A./M.Sc. Statistics (2010-11)	50	20	30	90.00	93.33
M.A./M.Sc. Statistics (2011-12)	49	17	32	76.47	92.62
M.A./M.Sc. Statistics (2012-13)	52	22	30	62.13	84.43
M.A./M.Sc. Statistics (2013-14)	54	19	35	75.3	95.6
M.A./M.Sc. Statistics (2014-15)	65	14	42	71.4	100.00
M. Phil Programme (2009-10)	05	04	01	50.00	100.00
M. Phil Programme (2010-11)	-	-	-	-	-
M. Phil Programme (2011-12)	-	-	-	-	-
M. Phil Programme (2012-13)	-	-	-	-	-
M. Phil Programme (2013-14)	-	-	-	-	-
M. Phil Programme (2014-15)	-	-	-	-	-
Ph.D. Programme (2009-10)	16	13	03	01	01

Ph.D. Programme (2010-11)	02	02	-	01	02
Ph.D. Programme (2011-12)	-	-	-	-	-
Ph.D. Programme (2012-13)	13	06	07	01	04
Ph.D. Programme (2013-14)	13	04	09	01	03
Ph.D. Programme (2014-15)	16	06	10	01	-

33. Diversity of students

Following is the diversity of students:

Name of the Programme	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.A./M.Sc. Statistics (2009-10)	90.24	09.75	-	-
M.A./M.Sc. Statistics (2010-11)	94.24	6.00	-	-
M.A./M.Sc. Statistics (2011-12)	100.00	-	-	-
M.A./M.Sc. Statistics (2012-13)	88.46	11.54	-	-
M.A./M.Sc. Statistics (2013-14)	94.45	5.55	-	-
M.A./M.Sc. Statistics (2014-15)	87.5	10.7	1.8	-
M.Phil Programme (2009-10)	100.00	-	-	-
M.Phil Programme (2010-11)	-	-	-	-
M.Phil Programme (2011-12)	-	-	-	-
M.Phil Programme (2012-13)	-	-	-	-
M.Phil Programme (2013-14)	-	-	-	-
Ph.D. Programme (2009-10)	100.00	-	-	-
Ph.D. Programme (2010-11)	75.00	25.00	-	-
Ph.D. Programme (2011-12)	66.67	-	33.33	-
Ph.D. Programme (2012-13)	20.00	20.00	60.00	-

Ph.D. Programme (2013-14)	92.00	8.00	-	-
Ph.D. Programme (2014-15)	81.00	12.5	6.25	-

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

As per available information in the department

- * Nearly 22 students have qualified ISS during past five years.
- * Nearly 05 students have qualified RBI Grade during past five years.
- * Nearly 09 students have qualified Statistical Officer during past five years.
- * Nearly 02 students have qualified Public Sector Banks during past five years.

35. Student progression

Following is the student's progression:

Student progression	Percentage against enrolled
UG to PG	100%
PG to M.Phil.	40%
PG to Ph.D.	20%
Ph.D. to Post-Doctoral	NIL
Employed <ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	NIL UPSC-ISS : 22 RBI Grade-B : 05 Statistical Officer: 09 National Banks: 02
Entrepreneurs	NIL

36. Diversity of staff

Following is the diversity of staff:

Percentage of faculty who are graduates	
of the same university	55%(5)
from other universities within the State	NIL
from universities from other States	45%(4)
from universities outside the country	NIL

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period

No faculty member was awarded M.Phil., Ph.D., D.Sc. and D.Litt. degree during the assessment period.

38. Present details of departmental infrastructural facilities with regard to

a) Library

The Department has its own departmental library which houses nearly 1000 text books.

b) Internet facilities for staff and students

Wi-Fi and LAN facilities are provided to all faculty members, research scholars and PG students through University INFONET center.

c) Total number of class rooms

Department has 02 class rooms

d) Class rooms with ICT facility

All class rooms including Office and Chamber of HOD has ICT facility

e) Students' laboratories

Three (1 Computer Lab and +Practical labs)

f) Research laboratories

Rooms are available for research activities

39. List of doctoral, post-doctoral students and Research Associates

a) from the host institution/ university (2009-2015)

Doctoral students (Ph.D. awarded)

S. No.	Name of Candidate	Year of Awarded
1.	Madhulika Kedawat	2009
2.	Namrata Rawtani	2010
3.	Hansraj Yadav	2010
4.	Smita Jain	2011
5.	Deepa Rohin	2011
6.	Rakesh Singhal	2012
7.	Smita Joshi	2012
8.	Shalini Saxena	2013
9.	Manoj Kumar Gupta	2013
10.	Kanak Modi	2013
11.	Archana Singh	2013
12.	Tarun Kumar Saxena	2013
13.	Yogendar Kumar Verma	2014

b) from other institutions/universities (2009-2013)

S. No.	Name of Candidate	Last University (P.G.)	Year of Awarded
1.	Jagjeet Prasad Singh	Poorvanchal University, Jaunpur	2010
2.	Abhay Bansal	Vinayak Mission University	2011
3.	Triloki Nath Sharma	JRN Rajasthan Vidyapeeth University, Udaipur	2012
4.	Avdesh Kumar Gupta	Dr. B.R.A. Agra University, Agra	2012
5.	Nripendra Dwivedi	VBS University (U.P.)	2013
6.	Sheesh Kumar Sharma	JNV University, Jodhpur	2013

7.	Surendra Kumar Yadav	JRN Rajasthan Vidyapeeth University, Udaipur	2013
8.	Samsher Singh	M.D.U., Rohtak	2013
9.	Jyoti Sharma	Banasthali Vidyapeeth, Banasthali	2013

40. Number of post graduate students getting financial assistance from the university.

No post graduate student of this department is getting financial assistance from the university.

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

- Yes, department has undertaken need assessment exercises through BoS/ CoC, Methodology. Workshops & meetings were arranged to make syllabus, revision of syllabus, pattern of assessment and exams. For example Pre. Ph.D. course Work.
- New academic programmes are taken up at the BoS/ CoC and Academic Council meetings after due consultation at the departmental level in staff council.

42. Does the department obtain feedback from

a. Faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

Yes, Earlier to year 2013, the feedback from students through informal discussion of was taken by HOD, Rector, Proctor and senior faculty members for the improvement of teaching learning system. During the session 2013-2014 the feedback is taken, from the students, in the form of Optical Response Sheet.

b. Students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

Yes the matter is discussed in the departmental staff council as well as in informal meetings of the faculty members. Further the suggestions were invited from the students and faculty members.

c. Alumni and employers on the programmes offered and how does the department utilize the feedback?

Yes, matter was discussed with senior and the retired faculty members during an informal meeting and during interactions in conferences/ seminars/ workshops.

43. List the distinguished alumni of the department

Following are few distinguished alumni of the department

1. Prof. P.C. Gupta
2. Prof. G.C. Tikkiwal, Professor and Dean (Rtd.), JNV University, Jodhpur.
3. Prof. P.K. Dashora, Member, RPSC.
4. Dr. Hans Raj Yadav (ISS)
5. Mr. Arun Kumar Gupta (RAS)
6. Mr. A.K. Yogi, Director General (Retd.) CSO, New Delhi.

7. Mr. A.K. Takshali
8. Mr. Pradeep Vyas, DG, Raj.Police
9. Mr. Manoj Mittal (Industrialist)
10. Mr. Anoop Kr. Meena, GM, RBI

44. Give details of student enrichment programmes (special lectures/ workshops/seminar) involving external experts.

Following are the details of special lectures delivered by the Experts during 2009-2015

S.No.	Year	Name of Expert and Designation	Title	Date
1.	2010	Dr. Alok Goswami, Professor	Probability Modeling	9/2/2010
2.	2010	Dr. D.K. Gosh, Professor	Orthogonality of Incomplete	25/2/2010
3.	2012	Prof. G.C. Tikkiwal	Small Area Estimate Techniques	16/2/2012
4.	2012	Dr. D.K. Gosh, Professor	Different Techniques to Estimate Variances	26/3/2012
5.	2012	Dr. H.C. Taneja, Professor	Use of Statistics in Engineering	6/8/2012
6.	2012	Dr. D.K. Ghosh, Professor	Fundamentals of Design of Experiment	23/8/2012
7.	2012	Dr. R.B. Singh, Professor	Use of ANOVA Techniques	28/9/2012
8.	2013	Dr. S.D. Sharma, Professor	Use of Statistics in Ancient Indian Culture	15/1/2013
9.	2013	Dr. Rakesh Gupta, Professor	Reliability Theory	15/7/2013
10.	2013	Dr. R.K. Singh, Professor	Recent Advances in Statistical inference	16/9/2013

45. List the teaching methods adopted by the faculty for different programmes.

Faculty members normally adopt blackboard teaching method during their class room teaching. Several times they also apply power point presentation for better understanding. Allotment of home assignments to students is also a regular practice. Department also organizes tutorials, Student Seminars and Group Discussions for the benefit of students.

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

The department ensures that programme objectives are constantly met through regular interactions with the students, regular assessment of the students, internal assessment, mid-term examinations and special lectures.

47. Highlight the participation of students and faculty in extension activities.

Students regularly participate in the NSS and NCC activities at UG level. Cultural Programs, Sports activities are being organized by the Department and University and students take active part in these activities. Students also participate in various competitions organized by other Institutions.

48. Give details of “beyond syllabus scholarly activities” of the department.

Department periodically organizes popular lectures by the eminent persons regarding present situations and future prospects of Statistics for the benefit of students. Students actively participate in workshops and other academic activities organized by the department, organize sports week, fresher day and farewell programmes for students and celebrate special occasions including “Teacher’s day”.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

NO

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Following are the contributions of the department in generating new knowledge:

- * Faculty members contribute to the department as well as University by publications of Research Papers & Books, participation in conferences/ seminars/ workshops etc.
- * Students perform the project work on applied as well as theoretical aspect of the subject under the guidance of faculty members
- * Two journals are published from Dept. of Statistics. Namely, (a) Indian Journal of Statistics and Application (IJSAA, ISSN: 2278-1102) (b) Journal of Rajasthan Statistical Association (JRSA, ISSN: 2278-4845).
- * In addition to class room teaching, faculty members are engaged in helping the student to complete with National/ State level Examinations viz. ISSE, RBI (Grade –B), Statistical Officers etc. It helps a lot to the students. Due to this help, for the last so many years students of the department are performing well. As a result, the topper in the UPSC-ISS Examination is from our department in the year 2012, 2013. The result of year 2014 is still awaited.

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Following are major Strengths, Weaknesses, Opportunities and Challenges of the department:

Strength

- Each year large number of students are applying for admission in PG courses as university is centrally located and it is well connected to all state through air/rail/bus.
- Our syllabus is well designed therefore every year 5 to 8 students get selected in ISS examination with merit positions.
- Faculty members are highly qualified (M.Sc., M. Tech., M.B.A., M.C.A., M. Phil, and Ph.D.)
- Availability of Smart Class room and computer lab with 20 PCs.

Weakness

- Lack of Space/facility.
- Lack of available infrastructure for the department.
- Lack of faculty members.
- Lack of none availability of Statistical Software.
- Lack of skilled Office/ Lab staff.

Opportunities

- To prepare students to compete globally
- Opportunities for the students in Government Job like ISS, Research Officer in RBI, and other UPSC,SSC ns RPSC jobs.
- Jobs as Statistician in Pharmaceutical and Medical Industry
- Opportunity in National/ International Research projects as Statistician/ Statistical Consultant after getting knowledge of Statistical Software
- Opportunity of becoming Actuarial.

Challenges-

- Rajasthan Central University has been established where M.Sc. Statistics course has been started.
- Corporate sector are not approaching to the department for the recruitment.

52. Future plans of the department.

Following are the future plans of this department:

- Procurement of New Statistical Software and designing of the course on the basis of Statistical Software.
- Organizing Short term Courses for Non-Statistical/ Industrial persons.
- MOU with other institutions for enhancement of research through Faculty Exchange Programme.
- Department will plan to organize Seminar/ Conference/ Workshop, Sponsored by other Govt. Private agencies, while coordinating with other faculty members.
- Invite eminent scholars in the different discipline to deliver popular lectures on latest developments in the Subjects for the benefit of Students and Faculty members.
- Effort will be made to invite industries for campus placement for PG students.
- Efforts will be made to submit the application for recognition of department for UGC-SAP/ DST-FIST etc.

- Faculty members are also applying some projects on applied statistics to UGC/ DST or other reputed financial institution.
- Effort will be made to include Statistics as one the Optional Subject in CBSE as well as in Rajasthan Board of Sec. Education in Sr. Secondary Level.
- Establishment of Cell for Statistical Consultancy.