SELF STUDY REPORT
SCHOOL OF STATISTICS

1. Name of the Department **School of Statistics** Faculty of **Science**.

2. Year of establishment **1971**

A.1 Academic programmes offered by the department at present, under the following categories and Sanctions Pertaining to each of the Courses.

Programmes	Number	Course/Subjects
UG	NIL	--------------
PG	**1**	**M.A /M.Sc.(Stat.)**
Integrated Masters	NIL	---------
M.Phil.	**1**	**Statistucs**
Ph.D.	**1**	**Statistics**
Integrated Ph.D.	NIL	--------------
Certificate	NIL	--------------
Diploma	NIL	--------------
PG Diploma	NIL	--------------
Any other (please specify)	NIL	--------------
Total	3	

A.1.1 Details approval/recognition and recommendations issued by the statutory body (for example, (UGC, AICTE, NCTE, PCI, MCI, DCI) governing the programme in case of Professional Programmes letters for the <u>first time</u> and <u>Last Academic Year</u> recognitions. **Not Applicable**

If the department offers Distance Education Programmes (DEP) then
Number of programmes offered. **None**
    Name of Each Programme
Letters for approvals by the Distance Education Council.
   None.

A.2 Copy of Ordinances related to the courses in the department **Yes**

File No.A.2.1   M.A./M.Sc. (Statistics)

File No.A.2.2   M.Phil (Statistics)

File No.A.2.3   Ph.d course work(Statistics)

A.3 Number of working days during the last academic year.

245

    Number of teaching days during the past four academic years.

| 178 | 176 | 176 | 180 |

('Teaching days' means days on which classes were engaged. Examination days are not to be included)

A.4 Number of positions in the Department, their appointment letters, joining reports and sanctions of Each

Positions	Teaching faculty			Non-teaching staff	Technical staff
	Professor	Associate Professor	Assistant Professor		
Sanctioned by the UGC / University / State Government	01	02	03	03	04
Recruited	00	01	01	02	03
Yet to recruit	01	01	02	01	01
Number of persons working on contract basis	**Nil**	**Nil**	**Nil**	**Nil**	**Nil**

A.4.1 Qualifications of the teaching staff

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.							
Ph.D.	01	01					**02**
M.Phil.							
PG							
Temporary teachers							
Ph.D.							
M.Phil.							
PG							
Part-time teachers (Courses Visiting Faculty)							
Ph.D.							
M.Phil.	**01**	**02**					**03**
PG	**01**	**01**					**02**

Emeritus, Adjunct and Visiting Professors and their sanctions.

	Emeritus	Adjunct	Visiting
Number	**Nil**	**Nil**	**01***

In 2011 &2012   Dr.C.C.Gujrathi tought in the School of Statistics as Visiting Professor under

UGC Scheme.*

Semester-wise Record of Courses Visiting Faculty and their Sanctions

S.No.	Academic Session	Semester	Course	Name	Qualification	Teaching/ Research/ Industry Experience	Number of Hours in the Semesters
1	2012-13	I & III	M,Sc.(Stat.)	K.B. Rajole	M,Sc.(Stat.)	31 Year	128 Hours
2	2012-13	I & III	''	Ku. Pooja Bundela	M,Sc.(M.Phil)	03 Year	108 Hours
3	2012-13	I & III	''	Sunita Khurana	M,Sc.(M.Phil)	03 Year	230 Hours
4	2012-13	III	''	Swati Agrawal	Ph.d(Statistics) (thesis submitted)	07 Year	20 Hours
5	2012-13	I & III	''	Anutosh Chorma	M,Sc.(M.Phil)	03 Year	119 Hours
1	2011-12	I & III	M,Sc.(Stat.)	K.B. Rajole	M,Sc.(Stat.)	30 Year	53 Hours
2	2011-12	I & III	M,Sc.(Stat.)	Ku. Pooja Bundela	M,Sc.(M.Phil)	02 Year	51 Hours
3	2011-12	I & III	M,Sc.(Stat.)	Sunita Khurana	M,Sc.(M.Phil)	02 Year	105 Hours
4	2011-12	I & III	M,Sc.(Stat.)	Anutosh Chorma	M,Sc.(M.Phil)	02 Year	59 Hours
5	2011-12	I & III	M,Sc.(Stat.)	Swati Agrawal		06 Year	20 Hours
1	2011-12	II & IV	M,Sc.(Stat.)	K.B. Rajole		30 Year	30 Hours
2	2011-12	''	M,Sc.(Stat.)	Anutosh Chorma		2 Year	51 Hours
3	2011-12	''	M,Sc.(Stat.)	Swati Agrawal		06 Year	20 Hours
1	2010-11	I & III	M,Sc.(Stat.)	K.B. Rajole		29 Year	48 Hours
2	2010-11	''	M,Sc.(Stat.)	Anutosh Chorma		01 Year	32 Hours
3	2010-11	''	M,Sc.(Stat.)	Swati Agrawal		05 Year	10 Hours
4	2010-11	II & IV	M,Sc.(Stat.)	K.B. Rajole		29 Year	62 Hours

5	2010-11	''	M,Sc.(Stat.)	Tarika Nandedkar			35 Hours
6	2010-11	''	M,Sc.(Stat.)	Swati Agrawal		05 Year	10 Hours
1	2009-10	I & III	M,Sc.(Stat.)	K.B. Rajole		28 Year	73 Hours
2	2009-10	''	M,Sc.(Stat.)	Arvind Sawaliya		03 Year	25 Hours
3	2009-10	''	M,Sc.(Stat.)	Swati Agrawal		04 Year	28 Hours
4	2009-10	''	M,Sc.(Stat.)	Jalaj Katare		10 Year	07 Hours
1	2009-10	II & IV	M,Sc.(Stat.)	K.B. Rajole		28 Year	40 Hours
2	2009-10	''	M,Sc.(Stat.)	Nirmala Sawan		03 Year	42 Hours
3	2009-10	''	M,Sc.(Stat.)	Swati Agrawal		04 Year	39 Hours
4	2009-10	''	M,Sc.(Stat.)	Jalaj Katare		09 Year	41 Hours
5	2009-10	''	M,Sc.(Stat.)	Tarika Nandedkar			16 Hours
1	2008-09	I & III	M,Sc.(Stat.)	K.B. Rajole		27 Year	59 Hours
2	2008-09	''	M,Sc.(Stat.)	Nirmala Sawan			07 Hours
3	2008-09	''	M,Sc.(Stat.)	Swati Agrawal			37 Hours
4	2008-09	''	M,Sc.(Stat.)	Jalaj Katare			36 Hours
5	2008-09	''	M,Sc.(Stat.)	Tarika Nandedkar			40 Hours
6	2008-09	''	M,Sc.(Stat.)	Pankaj Chauhan			13 Hours
7	2008-09	''	M,Sc.(Stat.)	Varun Parmal			04 Hours
1	2008-09	II & IV	M,Sc.(Stat.)	Nirmala Sawan			40 Hours
2	''	''	M,Sc.(Stat.)	Swati Agrawal			42 Hours
3	''	''	M,Sc.(Stat.)	Jalaj Katare			32 Hours
4	''	''	M,Sc.(Stat.)	Tarika Nandedkar			39 Hours
	''	''	M,Sc.(Stat.)	Sanjib			06 Hours

			Metei			
"	"	M,Sc.(Stat.)	Varun Parmal			02 Hours

Enclosure A .4.1

A.6 Copies of Latest Biodata of Faculty in positions in the Department **Yes**

Enclosure A.6

A.7 1. Copies of Yearly Performa Based Assessment Records of Faculty in positions in the Department

Submitted to the Establishment section of the university every year.

2. Number of teaching posts sanctioned and filled (Professors/Associate Professors/Asst. Professors)

	Sanctioned	Filled
Professor	**01**	**00**
Associate Professors	**02**	**01**
Asst. Professors	**03**	**01**

Presently both the permanent faculty are professors under C A S.

3.Faculty profile with name, qualification, designation and specialization (D.Sc./D.Litt./ Ph.D./M.Phil., etc.)

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. students guided for the last 4 years
Dr. Shakti Banerjee	**M.Sc., Ph.D.**	**Prof.& Head**	**Design of Experiments**	**24**	**02**
Dr. Snigdha Banerjee	**M.Sc., Ph.D.**	**Professor**	**Stochastic Proceses**	**32**	**03**

4.List of senior lan visiting professor scheme under unassigned grant Prof. C.C.Gujrathi(Retired Prof.) taught in the semester July-December-2011 and Semester January-June 2012

5. Percentage of classes taken by temporary faculty – programme-wise information each semester wise information   0%

6. Percentage of classes taken by visiting faculty – programme-wise each semester wise information

M.A./M.Sc. : 20% on average of the total lectures in every semester.

1. Number of academic support staff (technical) and administrative staff: sanctioned and filled

   Academic support: **Sanctioned: 04**   **Filled: 03**

   Administrative staff: **Sanctioned: 03**   **Filled: 02**

A.8 Students enrolled in the department during the current academic year, with the following details:

Students	UG	PG	Integrated Masters	M.Phil.	Ph.D.	D.Litt. / D.Sc.
	*M *F	*M *F	*M *F	*M *F	*M *F	*M *F
From the state where the university is located		**17 06**	Nil	Nil	**2 1** **1 1**	Nil
From other states of India	Nil	**01 01**	Nil	Nil	Nil	Nil
NRI students	Nil	Nil	Nil	Nil	Nil	Nil
Foreign students	Nil	Nil	Nil	Nil	Nil	Nil
Total		**18 07**			**3 2**	

*M-Male *F-Female

Externally registered students?

Yes ☐   No ✓ ☐

If yes, how many students avail of this provision annually?

A.7 Calculation of 'Unit cost' of education

(Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)

     (a) including the salary component = Rs. …**35,97,837 /75 = 47971.16**

     (b) excluding the salary component = Rs. …38163/ 75 =   508.84

A.8 A. Faculty recharging strategies

Motivating Faculty members regularly to attend national/international conferences and Publish

Research Papers in National/International Journals with good impact factor.To develop Good classroom teaching by the teachers with modern amenities.

    B.   Number and list of faculty with course details of faculty development programmes, academic staff college programs or other faculty recharge programs

Both the faculty members participate as resource persons in the refresher and orientation programs organized by Academic Staff college of the university.

Workshops and conferences attended 2012-2013 :

Dr.Snigdha Banerjee :

1. One day National Seminar(UGC supported) organized by the school of statistics in 16ᵗʰ March 2012 on " Statistics and its Applications."

One day workshop organized by the school of statistics on March-2013 to Popularise Statistics by N A S A(N.D.)

Dr.Shakti Banerjee :

1. **One day National Seminar(UGC supported) organized by the school of statistics in 16ᵗʰ March 2012 on " Statistics and its Applications"**
2. **One day workshop organized by the school of statistics on March-2013 to Popularise Statistics by N A S A(N.D.).**

A.9 Student projects

- percentage of students who have done in-house projects including inter-departmental projects **100%**
- percentage of students doing projects in collaboration with other universities / industry / institute **Nil**

A.10 Awards / recognitions received at the national and international level by

- Faculty

  Dr.Snigdha Banerjee have presented invited talks, chaired sessions at National Seminars, conferences in and outside Indore. Faculty have also published and reviewed papers in reputed journals.
- Doctoral / post doctoral fellows **Nil**
- Students

  One Research scholar was awarded M.P. Young Scientist Award 2010

A.11 Record of each of Seminar/ Conference/Workshop organized and the source of funding

(national / international) with details of outstanding participants, if any.

1. One day National Seminar(UGC supported) organized by the school of statistics in 16ᵗʰ March 2012 on " Statistics and its Applications" The registered participants were from M.P.,U.P.,Gujarat,Orissa and Punjab.

2. One day workshop organized by the school of statistics on March-2013 to Popularise Statistics by N A S A(N.D.). About 100 participants from various affiliated colleges of the University attended this workshop. The Ministry of Statistics and Program Implementation Funded Rs.50,000 to organize this workshop.

A.12 Write up of Code of ethics for research followed by the departments

1.Honesty,Dedication and Sincerity

2.Encourage the research students to carry out independent research work.

3.To avoid piracy.

4.Acknowledge and motivate the persons for better research activities.

5.Original research on latest topics.

A.12 Student profile course-wise:

Name of the Course (refer to question no. 4)	Applications received	Selected Male	Female	Pass percentage Male	Female
M.Sc. I Sem. (Statistics) 2013-15	43	**13**	**13**	**46**%	**28.26**%
M.Sc. I Sem. (Statistics) 2012-2014	Through CET	**05**	**04**	**Not Available**	
M.Sc. I Sem. (Statistics) 2011-13	36	**16**	**04**	**44.44**%	**11.11**%

A.13 Diversity of students

Name of the Course	% 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.Sc. I Sem (Statistics)	**77.77**	**11.11**	**11.11**	**Nil**

Name of the Course	% 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.Sc. III Sem (Statistics)	93.75	Nil	6.25	Nil

A.14 Record of how many students have cleared Civil Services and Defence Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

S. No.	Name	Year	Remark
1.	Mr. Vivek Singh Maravi	2004-06	Civil Services
2.	Mr.Chandra Kumar Vatte	2010-12	Civil Services
3.	Mr. Inder Singh Mujhalda	2011-13	Civil Services
4.	Mr. Himanshy Behare	2006-08	Defence Services
5.	Ms. Nutan Dattatraya	1985	NET
6.	Ms. Swati Agrawal	2004	NET

A.15 Record of Student progression

Student progression	Percentage against enrolled
UG to PG	NA
PG to M.Phil.	5
PG to Ph.D.	5+7+8
Ph.D. to Post-Doctoral	NIL
Employed • Campus selection • Other than campus recruitment	1+1+1 Almost 95%
Entrepreneurs	1+1

A.16 Record of Diversity of staff

Percentage of faculty who are graduates	
of the same university	100% PG
from other universities within the State	0%
from universities from other States	0%
from universities outside the country	0%

A.17 Number of faculty who were awarded Ph.D., D.Sc. and D.Litt. during the last four years **Nil**

A.18 Present details of infrastructural facilities in the department with regard to

    a) Library   **Yes (1072 Books)**

    b) Internet facilities for staff and students   **Yes**

     c) Total number of class rooms   **Two**

    d) Class rooms with ICT facility   **One**

    e) Students' laboratories   **One**

    f) Research laboratories   **One**

    g) Girls Common Room   **Not available at present**

    h) Office Room   **One**

A.19 List of doctoral, post-doctoral students and Research Associates

    a) from the host university

S. No.	Name	Doctoral Student	Year
1.	Mr. J.P. Parihar	Ph.D	1982
2.	Mr. Shakti Benarjree	Ph.D.	1985
3.	Mr. A.P. Khurana	Ph.D.	1991
4.	Ms. Nutan Dattatraya	Ph.D.	1992
5.	Mr. K.K. Chand	Ph.D.	1994
6.	Mr. B.L. Mishra	Ph.D.	1994
7	Mr. Jose Philips	Ph.D.	2000
8.	Mr. D.K. Bagga	Ph.D.	2004
9.	Ms. Shivani Rai	Ph.D.	2005
10.	Ms. Sarita Rudra	Ph.D.	2006
11.	Mr. Pankaj Chauhan	Ph.D.	2011

12.	Ms. Nirmala Savan	Ph.D.	2012

b) from other universities

S. No.	Neme	Year
1.	Ms. Snigdha Banerjee Ph.D. Fellow	1993
2.	Ms. Maya Ingle Ph.D. Fellow	2000

A.19 Records of financial assistance and Number of post graduate students getting financial assistance from the university, UGC, State, AICTE.

Besides, SC, ST, OBC Students are getting fellowship and Scholarship from State Government .The total no. of Students is : 10

A.20 Methodology of need assessment exercise undertaken before the development of new programme(s)

Nation needs Statisticians for State and Central Governments departments,Business and in Industrial planning. India has history of great Statisticians. Natioal universities syllabus and syllabi for National level examinations are taken into account for framing a new programe.

A.21 Records of feedback from

  a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback? **Yes, it is been analysed and discussed in the faculty meetings held every two months**. **Experts at the comprehensive Viva Examination also provide the suggestions**.

  b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback? **Departmental committee decides unanimously and acts accordingly.**

  c. alumni and employers on the programmes offered and how does the department utilize the feedback? **Take it by e-mails or personal contacts now.**

A.22 List the distinguished alumni of the department (maximum 10)

1. Dr. Snigdha Banerjee , 1975-1977, Professor,School of Statistics,DAVV

2. Dr.Shakti Banerjee,1979-1981,Prof. and Head,School of Statistics,DAVV.

3. Dr.Maya Ingle,1981-1983,Professor,School of Computer Science,DAVV.

4. Mr.Vishwajeet Ringe,1981-1983,Senior Technical Director,Govt. of India,New Delhi.

5.Dr. Nutan S.Mishra,1983-1985,Associate Professor,Univ. of South-Alabama,Deptt. of Math and Statistics,USA.

6.Dr.K.K.Chand,1983-1985,Reader and Head,Department of Statistics,Manipur University.

7.Dr.Jose Philip,   ,Associate Dean of General Studies,ITT Technical Institute, Lemont Illinois,USA.

8.Dr.Shivani Rai Gupta,1996-1998,Associate Vice President,Operations Optimization at Mphasis, H.P.-Company,Bangaluru.

9. Dr. Pankaj Chauhan ,2004-2006,Assistant Prof., IMS,DAVV.

10. Dr. Nirmala Sawan ,2004-2006,Assistant Prof.,IIPS,DAVV.

A.23 Details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Year	special lectures / workshops / seminar
2009-10	Workshop organized: 1.National workshop of lectures by Shanti Swarup Bhatnagar Awardee held July 17-19,2009. Distinguished awardees delivered lectures. 2. Workshop on Risk Management and Statistical Software" was organized from 8-10 October 2010 in conjunction with Senior Managers – Risk Management Practices, Fullerton India Credit Co. Ltd Mumbai, Special lectures :2009-2010: Lectures organized (Photographs available) Two lectures were delivered by on 11 and 12 January 2010 on the topics 1. Prof. D.K. Ghosh of Saurashtra Univerity, Rajkot, Gujrat 1 "Efficiency and BIBD" 2 Test of hypothesis ...With single degree of freedom
2010-11	Workshop 17 August 2011 "Statistics an attempt to Demystify " DDG (Mr. Praveen Shrivastava) and ADG (Mr. Manish Sammarwal) Ministry of Statistics and Program Implementation 01 Special lectures :Three lectures were organized by and delivered at the School of Statistics,DAVV: 1) Prof Shalabh, IIT, Kanpur, Mahalanobis awardee at The Indian Econometrics society conference held from 4-8 January 2011 : " " on 7th January 2011delivered a lecture on "Measurement Error Models""

	2) Dr. Ajit Kumar Pandey, Amity International Business School, Noida , delivered"Sustainability of the Chinese Economic Growth" on 7th January 2011. 3) Prof. R.N.Mishra, dept of Statistics,Patna University "Data Envelopement Analysis" on 7th January 2011 3. Prof. Umesh Singh, Department of Mathematical Sciences, Banaras Hindu University, Varanasi: "Mathematical Foundations of Probability theory" on 17th January 2011.
2011-12	Special lectures :Lectures by MOSPI (Ministry of Statistics and Program Implementation) Officials organized on 17 August 2011 : DDG(Mr. Praveen Shrivastava) and DD (Mr. Sammarwal) Ministry of Statistics and Program Implementation" on "Demystifying Statistics" and "Careers in ISS" Seminar ; National Seminar(UGC Supported) on "Statistics and its Applications" was organized on March 16, 2012. : UGC supported National Seminar on "Statistics and its Applications " was conducted on 16 March . There were registered participants with abstracts from M.P., Maharashtra, U.P.,Gujarat, Orissa, Punjab.
2013	One day workshop organized by the school of statistics on March-2013 to Popularise Statistics by N A S A(N.D.).

A.24 Record and List of the teaching methods adopted by the faculty for different programmes. **Using LCD,PPT and Black Board System.**

A.25 Record of Monitoring by the department ensure that programme objectives are constantly met and learning outcomes are monitored

Through meeting of faculty members.

A.26 Details and Highlight of the participation of students and faculty in extension activities in the department.

Our Students participate in every work of the department through various departmental committees. In fact, School takes their suggestions to design syllabus, time table and examination schedule.

A.27 Details of "beyond syllabus scholarly activities" of the department.

 Participation in various conferences, seminar and lectures.

A.28 Information about programme/ department accreditation/grading by other agencies? If yes, give details. **No**

A.29 Write up of highlight the contributions of the department in generating new knowledge, basic or applied.

Faculty is involved in publishing their research contributions to journals of repute. Faculty is also involved in giving special lectues in affiliated colleges of the university and other universities of India.

A.30 Write up of Future plans of the department.

proposed to start a new course in M.Sc.(Applied Statistics) to make the PG degree to application oriented to promote students in the statistics.

A.31 Record of any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

Strengths:

1. Stuents placement (National and International).

2. Renowed faculty.

3. Student participation in every work in the Department.

Weaknesses:

1.Shortage of opportunities in the area of statistical science.

2.Shortage of teaching faculty.

Challenges:

1.Many of the

affiliated colleges of the university are not having graduation programme in statistics.

2.Many of the near- by universities do not have statistics in their graduation program and hence get less number of students in the PG programme in statistics.

3.Attracting students to the discipline of statistics in competition to Engineering,Computer Sciences, Information Technology and Management.

A.32 Write up of efforts for Quality Sustenance and Assurance in the department

1.Feedback system from students has been adopted.

2.Lectures from eminent professors from different universities has been called.

3.To popularise this course more application oriented data analysis training are been organized in SPSS/SAS/STATSOFT.

4.Both the faculty members also work as Internal Quality Monitor in the School.

5. University has organized workshops on :

(i) Quality issues in paper setting and it's evaluation on 09-09-2012.

(ii)Quality in teaching-learning process 10-05-2013.

(iii) C.B.C.S. lecture by Ptof.Rege from Pune on 15-05-2013.

CRITERION I: Curriculum Design and Development

1.1.1   Academic Year of Revision, Curriculum of Each Course, Objective and Course plans of each paper taught in the course
Whether uploaded on website

Yes   ☐ ✓   No   ☐

www.dauniv.ac.in **(School of Statistics)**

1.1.1.A Eligibility for admission to each course: **Entrance examination and minimum 50% in graduation.**

1.1.1.B Whether reflects Vision and mission reflection

Yes   ☐ ✓   No   ☐

1.1.1C Write on reflection of vision and mission

The Current global trend amongst students seeking admission to graduation is tilt away from basic sciences to application oriented subjects for easy jobs with special effect in the Mathematical Streams. This very fact is touching the alarming levels in the education Scenario of Madhya Pradesh.This has resulted in decling number of students in the Post Graduate level courses in the Mathematical Sciences.

Statistics is having a very good demand in Central/ State Government, Multinationals,Industry,Research Organisations,Agriculture,Financial Institutions.

In many of the Universities in Madhya Pradesh , they do not have even graduation in Statistics.Hence the subject is with low popularity among the students.

This challenge can be met by popularizing this subject among students and making the Course more job oriented as required in the Industry.We therefore develop the skill in our Post Graduate Course in Statistics so that our students can take up any job related to Planning/Evaluation , where they use huse data for obtaining possible decisions.We also want to educate and prepare students to accept the national and global challenges and to serve the society through their knowledge of learning.

To develop competitive sprits,nurture individual thinking and groom the students in order to meet the requirement of the scientific and technological challenges of the global arena. We train our students in most of the aspects of Statistical Theories,Data Analysis aspects using different statistical softwares. Our Mission is also to provide good researches in the Statistics. In 2013-14 getting the vacant positions filled we would like to start some certificate/ diploma level courses for graduates with any discipline so that the students can get jobs very easily and this will in turn popularise this subject as a whole.

1.1.2   Details of process followed in last revision of Curriculum

A. Need Assessment : **Need Assessment was based on the Student feedback, advise of external experts and faculty member of department.**

B. Faculty involved in curriculum design (List of members)

1. Dr. Shakti Banerjee

2. Dr. Snigdha Banerjee

C. Records of Departmental Committees/Board approvals of the designed curriculum : **Yes**

D. Records of External Experts Opinion of the designed curriculum : **Yes**

File No.1.1.2 D

E. Records of External Experts Feedback of the designed curriculum : **Yes**

File No. 1.1.2 E

F. Records of Student Feedback opinion on the existing curriculum : **Yes**

File No.1.1.2 F

G. Records of Syllabi of National tests, Eligibility Tests and Examinations for example, GATE, NET, Service Commissions, National Councils, for the each curriculum, if any, : **Yes**

File No. 1.1.2 G

1.1.3   Detailed write up out each course in reference to

∗ Employability   **The Statistics subject is having a huse demand in Multinationals,Software companies,Banks,Insurance Sector,Central and State Govt. Teaching is also one very important area of employability of this subject.**

∗ Innovation **The theory papers which the School teaches in their M.Sc. contains 80% of the syllabus of Indian Statistical Service(I.S.S.) and suits the Multinationals.**

∗ Research   **In M.Sc. the III and IV semester students are encouraged to take up innovative projects to understand the subject from research point of view.**

1.1.4   Records of UGC/AICTE/National Council, Regulating bodies Guidelines for the development and restructuring the curriculum, if any, **(None.)**
Department Faculty members, if any, involved in leading any curricular reform which has created a national impact? **(None.)**

1.1.5   A. Record of Interactions, Opinions and Feedbacks for the designed curriculum with External Research Bodies **(None.)**

B. Records of Interactions, Opinions and Feedbacks for the designed   curriculum with Industrial Experts, particularly in case of Professional Courses **(None.)**

C. Records of Interactions, Opinions and Feedbacks for the designed curriculum   with Stake Holders, such as eminent personalities, Visitors to the departments, parents .

File No. 1.1.5 C

     D. Records of Alumni opinion on the existing curriculum

File No.1.1.5 D

1.1.6   List of Department Courses which are also introduced in University affiliated colleges also. List of colleges who introduced those courses **(None.)**

1.1.7   Details of additional skill-oriented programmes designed for the colleges, Employees, Faculty relevant to regional needs **(None.)**

1.2   Academic Flexibility

1.2.1   List of Courses taught in Department on campus **(None.)**

      * Overseas programmes offered on campus **(None.)**

      * Programmes available for colleges to choose from **(None.)**

1.2.2   Records on the following provisions with reference to academic flexibility

      a. List of Core/ Elective options **(given in the website of the school)**

      b. List of Enrichment courses **(COMPUTER and Statistical software applications)**

      c. List of Courses offered in modular form **(**ist of courses/papers with Credit accumulation and transfer facility . **Given in website www.stat.dauniv.ac.in.**

      d. Details of Lateral and vertical mobility within and across programmes, courses and disciplines **(None.)**

1.2.3   Records of International students **(None.)**

1.2.4   Records of Courses developed targeting international students, if any **(None.)**

1.2.5   Record of dual degree and twinning programmes **(None.)**

1.2.6   A. List of students, Admission Process, Fee structure of each programme

File No.1.2.6 A

     B. Record of Teacher qualification and salary parity and differences (if any) at par with the aided programmes **None**

1.2.7   Operational details of distance Education Course in the department (if applicable) **(None.)**

1.2.8   Details of Choice Based Credit System (CBCS) **(None.)**

1.2.9   Records of Departmental Academic Calendars of each semester

File No. 1.2.9

1.2.10   Records of Inter-disciplinary programmes, Name of interdisciplinary program and details of students undertaken those programmes.

SPSS Training and Research Methodology in M.Phil / Ph.d courses.

1.3   Curriculum Enrichment

1.3.1   A. Record of academic years in which each of the courses was revised .**2011, 2012**

B. Records of review, up-gradation, **File No. 1.3.1**

C. Records of social relevancy,

Courses on statistics is highly job oriented.Statisticians are needed in Govt., Industry and Business

D. Records of job orientation .

Record of the placements of the students of the school in the multinationals.File No.1.3.1(D)

E. Records of knowledge intensive nature of each course .**File No. 1.3.1(E)**

F. Records of meeting the emerging need of students .**File No. 1.3.1(F)**

G. Records of meeting the emerging need of stakeholders .**File No.1.3.1(G)**

1.3.2   Details of the last four years during which how many new programmes at UG and PG levels were introduced **(None.)**

 ∗ Inter-disciplinary **(None.)**

 ∗ programmes in emerging areas **(None.)**

1.3.3   A. Details of strategies adopted for the revision of the existing programmes

Interacting with Academic Peers in Universities and Syllabi of National level examination revisions are been made.

 B. Percentage of courses underwent a syllabus revision in last four years **(30%.)**

1.3.4   A. Details of Value-added courses offered **(None)**

B. Details of these courses access to students **(None)**

1.3.5   Details of higher order skill development programmes in consonance with the national requirements (for example, innovative M. Tech. /M.E. courses, CCNA, CCSP, ….) **(None)**

1.4   Feedback System

1.4.1   A. Copy of Feedback form to obtain feedback from students/student class representatives

regarding the curriculum

Analysis of Feedbacks is hosted on website of IQAC every semester.

File No.1.4.1 A

    B. Details of action and use of on feedback from students

File No.1.4.1 B

1.4.2   A. Method used for eliciting feedback on the curriculum from national and international faculty .

Academic Interaction and discussion.

    B. Conducting webinars.

Planned in 2013-2014 .

    C. Curriculum development Workshops.

Planned in 2013-2014.

    D. Curriculum development online discussions .

Planned in 2013-2014.

    E. Impact of Workshop and discussions .

Will be available by Sept. 2013.

1.4.3   Specify the mechanism through which affiliated institutions give feedback on curriculum enrichment and the extent to which it is made use of. **(None.)**

1.4.4   What are the quality sustenance and quality enhancement measures undertaken by the Department in ensuring the effective development of the curricula?

(i)University organized workshops on Quality in Teaching-Learning Processes on May 10,2013.

(ii)Both the faculties of the school are also member of Quality Sustenence and Assurance, maintaining in the school.

1.4.5 Any other information regarding Curricular Aspects which the UTD would like to include. (None.)

2.1   Student Enrolment and Profile

2.1.1   Copy of Advertisements and website info for ensuring publicity and transparency in the admission process : **File No.2.1.1**

2.1.2   A. Write up details of the process of admission put in place by the department : **(i)Common entrance test.(2012-13 session of the university.**

(ii) In 2013-14 session : School has conducted an entrance test followed by a brief interview of the candidates.

  B. List of the criteria for admission: (*e.g.*: (i) merit, (ii) merit with entrance test, **(iii) merit, entrance test and interview,** (iv) common entrance test conducted by state agencies and national agencies (v) other criteria followed :

Merit, entrance test and interview.

2.1.3   Details of admission process in the affiliated colleges if department is monitoring the same. **(None.)**

2.1.4   Student profile analysis .

2012-13 Year

Year	Course			Min. %		Max. %	
		M	F	M	F	M	F
	M.Sc.(stat)						
2012-13	I	05	04	47.03%	61.29%	61.61%	66.28%
	II	13	03	57.24%	62.03%	80.09%	73.79%

2.1.5   Strategies adopted to increase/improve access for students belonging to the following categories:

* SC/ST: **M.P. Government scholarship**
* OBC   : **M.P. Government scholarship**
* Women:**Wave off in tution fees**
* Persons with varied disabilities : **From Student Welfare Scholarship.**
* Economically weaker sections : **From Student Welfare Scholarship.**
* Outstanding achievers in sports and other extracurricular activities:

Given weight percentage in marks for determining merit in admission.

2.1.6   Number of students admitted in department in the last four academic years:

Categories	Year 1 2011-12		Year 2 2010-11		Year 3 2009-10		Year 4 2008-09	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	Nil	Nil	Nil	Nil	Nil	01	Nil	Nil
ST	02	Nil	01	Nil	Nil	Nil	Nil	Nil
OBC	07	01	03	04	01	01	Nil	01
General	06	03	04	05	06	07	Nil	03
Others	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

2.1.7   A. Record of demand ratio for the various programmes of the university departments. **2009-10,2010-11, 2011-12 ,2012-13**

Year		Number Of App.	Admitted	Ratio
2009-10	**M.Sc**	**20**	**08**	**20/30**
	M.Phil	**10**	**08**	**10/10**
2010-11	**M.Sc**	**25**	**19**	**25/30**
	M.Phil	**06**	**06**	**06/10**
2011-12	**M.Sc**	**33**	**20**	**33/30**
	M.Phil	**03**	**Nil**	
2012-13	**M.Sc**	**CET**	**09**	**-**
	Ph.D. (Course Work)	**10**	**02**	

   B. If yes then highlight the significant trends explaining the reasons for increase/decrease.

In 2012-13 the number of students decreased very sharply because of CET.Therefore in 2012-13 the School conducted workshops for graduate level students by NASA(New-Delhi) to popularize the course of Statistics so that the students get awared about the job prospects in Central and State Govt.,Multinationals,Insurance sectors,Financial Institutions.

2.1.8   A. Record of any programme discontinued/staggered in the last four years? **None**
         B. If yes, write-up of the reasons. **(None)**

2.1.9   Record of Admissions

Programmes	Total Number of admissions	Number of 1st division pass students in qualifying	Number of 2nd division pass students in qualifying	Entrance test Marks% (Min)
UG				
PG (2012)	09	05	04	Not Known as it was through university level common entrance test.
PG(2013)	26			55%
Integrated Masters				
M.Phil.				
Ph.D. (Course Work)	02	02		
Integrated Ph.D.				
Certificate				
Diploma				
PG Diploma				
Any other (please specify)				

2.2   Catering to Diverse Needs of Students

2.2.1   A. Record of organization of orientation/ induction programme for freshers

University level Induction Programme was held for the newly admitted students in July 2012.Students were taken Oath to study with full dedication and become responsible Citizen of India with maintaining environmental and social consciousness.

B. Details such as the duration, issues covered, experts involved and mechanism for using the feedback in subsequent years.

Planned in 2013-2014.

2.2.2   A. Record of analysis of the "differential requirements of the student population" after admission and before the commencement of classes .

Planned in 2013-2014.

   B. Record of key issues identified and addressed **(None)**

2.2.3   A. Record of bridge/remedial/ add-on courses .

Remedial courses planned in 2013-2014 for students who fail in class tests.

   B. Time table and details of the courses offered in the department-wise for all courses .

Hosted on website www.stat.dauniv.ac.in

2.2.4 A. Record of the academic growth of students from disadvantaged sections of society, economically disadvantaged, physically handicapped, slow learners, etc

Year	Pass % SC	Pass % ST
2009-2011	**None**	**None**
2010-12	**None**	**0%**
2012-2013	**Nil**	**50%**

   B. Main findings. **A very few % of SC/ST student choose the career of Statistics as Profession . It may be due to unawareness of the prospect in this field.**

2.2.5   Record of identification and responses to the learning needs of advanced learners
Planned for 2013-2014

2.3   Teaching-Learning Process

2.3.1   Records of Plan and organisation of the teaching, learning and evaluation schedules (teaching plan, evaluation schedules and methods, etc.)
   Copy of academic departmental calendar,syllabus, TT, Test&Exam schedule .File No.2.3.1

2.3.2   A. Record and website info of providing course outlines and course schedules prior to the commencement of the academic session

Website link www.stat.dauniv.ac.in

   B. Methods used for effective implementation

A Departmental Committee monitors for effective implementation. The members are

Dr.Shakti Banerjee(Head), Exam and IQAC Cordinator Dr.Snigdha Banerjee.

2.3.3   A. Record of difficulties in completing the curriculum within the stipulated time frame and calendar

None

   B. Write up of the challenges encountered and the departmental measures to

overcome these.

None

2.3.4   A. Record of student-centric learning activities

Assignments,Tutorials,Problems and Projects are given to the students.Students give seminars and their project presentations using ICT.

B. List of participatory learning activities which are adopted by the faculty that contributes to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.

Each student of a batch makes a group email ID for them and Faculties for academic interactions.

2.3.5   List, record with photographs of activities such as invited experts/people of eminence to deliver lectures and/or organize seminars for students

File No.2.3.5

2.3.6   Record of Encouragement to blended learning by using e-learning resources

Web resources , link for e-books and tutorial links are provided to the students for each paper taught.

2.3.7   Record   of   facilities   such   as   virtual   laboratories, e-learning, open educational resources and mobile education used by the faculty for effective teaching .

File No. 2.3.7

2.3.8   Record of activities of designated group among the faculty to monitor the trends and issues regarding developments in Open Source Community and integrate its benefits in the university's educational processes .

Interacting with every students.Group discussions and tutorials.

2.3.9   Record of steps taken to convert traditional classrooms into 24x7 learning places

Computer,Internet and Wi-Fi provided in one class room to make 24x7 learning places.

2.3.10   A. Record of actions taken to avail the services of counsellors/mentors/advisors for each class or group of students for academic, personal and psycho-social guidance.

Faculty work as a mentor for the academic and personal needs.Psycho-metric test planned in 2013-2014 for Psychological counseling.

B. Details of the process and the number of students who have benefited.

100%

2.3.11   A. Record of innovative teaching approaches/methods/practices adopted/put to use by the faculty during the last four years? **We teach application oriented topics in detail.Using licenced softwares the students do their data analysis.Relevent Computer**

teaching is been introduced in to their curriculum.The Students of the School uses e-books for their better understanding the topics been tought.

B. Write up of improvement in learning by innovative methods

The methods adopted for improvement in learning is through power point presentation. This is faster and enables more time for interactive discussion.

C. Record of recognition to the faculty due recognition for innovation in teaching

Faculty is given due recognition in effort by HOD and earns students respect and appreciation in departmental functions.

2.3.12   Record of actions for creating e a culture of instilling and nurturing creativity and scientific temper among the learners.

Student Projects on new problems.

2.3.13   A. Record of student projects (if mandatory in each of the learning programme)

File No. 2.3.13 A

B. Number of projects executed within the university

All   the projects executed within the university.

C. Names of external institutions associated with the University for Student Project Work

None

D. Role of faculty in facilitating such projects

Faculty suggests innovative problems,guide the line of the computation with proper references and presentation.

2.3.14 A. Record of shortfall in qualified faculty to meet the requirements of the curriculum

There are six regular posts in the department.

Four posts are lying vacant.(1 Prof.(open), 1 Reader and 2 Lecturers (Reserved))

B. Record of actions for shortfall supplementation

Presently five part-time visiting Faculty helps in teaching –learning processes in each academic calendar . In June 2013 university advertised for contractual positions in the department. 11 candidates applied but their qualifications does not match with the UGC eligibility criteria. All the four permanent full time faculty are expected to be appointed by the end of 2013.

2.3.15   Number of percentage of faculty enabled to prepare computer-aided teaching/ learning materials

100%

2.3.16   A. Record of Student feedback for evaluation of teachers by the students

File No.2.3.16 A

B. Record of Alumni feedback for evaluation of teachers by the students

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File No.2.3.16 B

    C. Methods used and Impact of the evaluation feedback used to improve the quality of the teaching-learning process

E.Mail and personal contacts

The suggestions given through feedback has been adopted time to time to strengthen the curriculum.

2.4   **Teacher Quality**

2.4.1   Record of how the plan and management of human resources was done to   meet the changing requirements of the curriculum

New topics and use of computers and various softwares in statistics is the major changing requirement of curriculum. Visiting faculty and help of experts met the requirement.

2.4.3   Diversity in its faculty recruitment

Department / School	% of faculty from the same university	% of faculty from other universities within the State	% of faculty from universities outside the State	% of faculty from other countries
School of Statistics	**100%**	**Nil**	**Nil**	**Nil**

2.4.4   A. List of qualified faculty appointed for new programmes/emerging areas of study (Bio-technology, Bio-informatics, Material Science, Nanotechnology, Comparative Media Studies, Information Technology, Diaspora Studies, Forensic Computing, Educational Leadership, etc.)? **None**

    B. Number of faculty members appointed to teach new programmes during the last four years **None**

2.4.5   List of academic recharge and rejuvenation of teachers **None**

    A. List of faculty availed and provided research grants by the University

University helps in provision of registration fee,travel for Conferences and seminars in India and abroad under UGC grants in a plan.

    B. List of faculty availed and on study leave **None**

    C. List of faculty nominated to national/international conferences/seminars, in-service training, organizing national/international conferences etc. **None**

2.4.7   List of faculty received awards / recognitions for excellence in teaching at the state, national and international level during the last four years **None**

2.4.8 List of faculty underwent staff development programmes during the last four years (add any other programme if necessary)?

Academic Staff Development Programmes	Number of faculty
Refresher courses	**None**
HRD programmes	**None**
Orientation programmes	**None**
Staff training conducted by the university	**None**
Staff training conducted by other institutions	**None**
Summer / Winter schools, workshops, etc.	**None**

2.4.9 Percentage of the faculty have

* been invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies = **100** %

* participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies = **50** %

* presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies = **100** %

teaching experience in other universities / national institutions and other institutions **= 0%**

* industrial engagement **= 0%**

* international experience in teaching = **0%**

2.4.10 List and details of organization of academic development programmes (*e.g.*: curriculum development, teaching-learning methods, examination reforms, content / knowledge management, etc.) for its faculty aimed at enriching the teaching-learning process

University organized three workshops in 2012-2013 as follows:-

(1)Quality Issues in Paper Setting and Evaluation, Sept 26,2012.

(2)Quality in Teaching – Learning Processes,May 10,2013.

(3)C.B.C.S. , May 15, 2013.

2.4.11 A. List of faculty encouraged

Mobility of faculty between universities for teaching **None**

Faculty exchange programmes with national and international bodies **None**

B. Record of schemes helping in enriching the quality of the faculty by such mobility and faculty exchanges .**None**

2.5 Evaluation Process and Reforms

2.5.3 A. Record of time taken by the department for declaration of examination results each semester

Test and result is hosted on website www.stat.dauniv.ac.in

B. Record of means adopted for the mode / media adopted for the publication of examination results (Website, SMS, email, etc.). **Website, www.stat.dauniv.ac.in**

2.5.4   A. Record of ensuring transparency in the evaluation process

Test and evaluation copies are shown to the students and they return it after signature.

Name of the External examiner in Comprehensive Viva-Voce is appointed by Vice Chancellor.

B. Measures taken to ensure confidentiality

The sealed question papers opened on the day half an hour before start of the examination in the examination hall.

C. Record of the Pre-examination processes – Examination Time table generation, student list generation, Invigilators, Attendance sheet,

Copy of the examination register is enclosed as File No.2.5.4 C

D. Results of students course wise and its analysis

The result is declared in due course of time. The ordinance 31 of the university is completely followed and the students are shown the answer sheets before declaring the result by every faculty member for each subject taught in the classes.

2.6.   Student Performance and Learning Outcomes

2.6.1   A. Write up of articulation of its Graduate Attributes of the department

Students after passing from the school are professionally competent in statistics and specialized in Operations Research,Design of Experiments,Stochastic Processes,Statistical Inference and in the usage of Statistical Softwares for data analysis. He/She is also socially and environmental conscious and likely to become as per vision of the School.

B. Record of facilitation of monitor the implementation and outcome

Notices of the seminar ,copy of the grade sheet of the CV with signature of the examiner is enclosed as File No.2.6.1 B

2.6.2   A. Record of learning outcomes for its academic programmes.

Year	% of Student Passed	% of A⁺	% of A	% of B⁺	% of B	% of C	% of D	Fail F
2012-2013	24	Nil	01	03	13	06	01	Nil
2011-2012	30	Nil	01	09	10	09	01	Nil

B. Record of making students and staff are made aware of these

Enclosure 2.6.2 A

2.6.3   Write up of department teaching, learning and assessment strategies structured to facilitate the achievement of the intended learning outcomes

School of Statistics strictly follow the academic calendar.In the stipulated time frame the teachers complete their syllabus.In each paper three tests are taken and out of which two best test scores are considered.In the third and fourth semester ,students do projects to know the application aspect of the subject and the content of the project is also evaluated in the comprehensive Viva-Voce examination by an External examiner.

2.6.4   Record of collection and analysis of data on student learning outcomes and use it to overcome the barriers to learning .**In M.Sc. Projects students collect data and use authenticated records for their studies.**

2.6.5   Write up of new technologies deployed by the department in enhancing student learning and evaluation and how does it seek to meet fresh/ future challenges **SPSS AND SYSTAT Software is purchased.**

2.6.6 Any other information regarding Teaching, Learning and Evaluation which the department would like to include.   None

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

III.1 Year-wises Publications in the department:

III.2 Number of papers published in peer reviewed journals (national / international)

School Nomenclature: School of				
Faculty Name:Dr. Snigdha Banerjee			Designation: Professor	
S. No.	Title of the published research paper Name of the Authors	Journal Name, Volume, and Page number	Publishing Company	Impact factor (Print 0.0 if no impact factor is documented by Journal.
1	"Joint Ordering and pricing policies for newsboyproblem with lead time and declining selling price". N Sanjib Meitei and **Snigdha Banerjee**	*International Journal of Science, Technology and Management*, **(2012),Vol I(1) Pp**	Society for Mathematical Developement	**0.0** ISSN no. 2250-0596

2	"Two-warehouse inventory model with ramp-type demand and partially backlogged shortages", Swati Agrawal and **Snigdha**	*Int. J. Systems Science*, **(2011)** Vol. 42, Nr. 7 (p. 1115-1126)	Taylor & Francis	**Impact Factor(2010) 0.948** ISSN 0020-7721 (Print), 1464-
3	**Snigdha Banerjee** and Ashish Sharma, "Inventory model for seasonal demand with option to change the market ", , ,	*Computers & Industrial Engineering,* Vol 59, Issue 4, Pages 807-818	Elsevier	**Impact factor (2009) 1.491** 1.589(2011) ISSN: 0360-8352
4	**Snigdha Banerjee** and Ashish Sharma "Optimal Procurement and Pricing Policies for Inventory Models with Price and Time Dependent Seasonal Demand"	*Mathematical and computer modeling*, Vol 51, Numbers 5-6, March,700-714 Elsevier Publication**(2010**)	Elsevier	*Impact Factor (2009*) **1.103,** *Impact Factor (2011*) 1.346 ISSN: 0895-7177
5	"Inventory Policy for a Product with Price and Time Dependent Seasonal Demand with an Alternative Market", **Snigdha Banerjee** and Ashish Sharma	IAPQR Transactions, Vol 34 Issue 1 Pp 71-96 **(2009)**	IAPQR Society	0.0 ISSN: 0970-0102.
6	Effect of declining selling price: profit analysis for a single period inventory model with stochastic demand and lead time" Snigdha Banerjee and N Sanjib Meitei	*Journal of the Operational Research Society* vol. 61, no. 4, Pp. 696- 704,**. (2010)**	Operational Research Society, UK PublisherPalgrave McMillan	*Impact Factor (2009)1.009* ISSN: 0160-5682
7	"A two-warehouse inventory model for items with three-parameter Weibull distribution deterioration, shortages and linear trend in demand",. Snigdha Banerjee and Swati Agrawal	*International Transactions In Operational Research* **(2008)** *Vol* **15 Pp755– 775, (Journal of** International	International Federation of Operational Research Societies Wiley	**Impact Factor** 0.648 Online ISSN: 1475-3995

9	Swati Agrawal and **Snigdha Banerjee** "A Two Warehouse Inventory Model For Items with Three parameter Weibull Distribution Deterioration",	*Acta Ciencia Indica Vol.XXXIV,No. 4, Pp 2121-2130(2008)*	Pragati Prakashan	0.0 ISSN -0970-0455
8	"Optimal Procurement and Pricing Policies for Inventory Models with Repeated Product Life Cycle Type Demand", **Snigdha Banerjee** and	*Acta Ciencia Indica*(2008) *Vol.XXXIV,* M, No.1 Pp 361- 370	Pragati Prakashan	0.0 ISSN -0970-0455
10	*"Interpretation Support for multistage MS: A mathematical method for theoretical generation of glycan fragments and calculation of their masses.",* N Sanjib Meitei and **Snigdha Banerjee**	*Proteomics* Volume 7(15) **2007**, Pp 2530 – 2540 Wiley- VCH Verlag,	Wiley_VCH-Verlag	*Impact factor (2007 5.47)* Online ISSN: 1615-9861 Print ISSN
11	**Snigdha Banerjee** and Ashish Sharma *(2007)* "An Inventory model for repeated product life cycle type demand with pricing and partial backlogging" in - *350*	*Decision Sciences and Technology for Globalisation Pp 343-350*	**Chapter** *33* Allied Publishers Eds.Sahay,B.S., Gupta,J.N.D.,	ISBN-81-8424-290-5

Faculty Name :Dr.Shakti Banerjee   **Designation : Professor**

12	A review of literature relating to Balance Incomplte Block designs With repeated Blocks Rashmi Awad and Shakti Banerjee	Research Journal of Mathematical and Statistical Sciences Vol.1(3),23-30, April (2013)	International Science Congress Association Available online at : www.isca.in	ISSN 2320-6047 Impact Factor-0
13	Some Construction Methods of Variance and Efficiency Balanced Block Designs with Repeated Blocks Rashmi Awad and Shakti Banerjee	Research Journal Of Recent Sciences Vol.1(9),18-22, September(2012)	Available online at : www.isca.in	ISSN 2277-2502 Impact Factor-0

14	A General family of dual to Ratio-cum-product estimator in sample surveys Singh,J.,Chauhan,P.,Sawan,N. and Singh,R. (2012)	Indian Journal of Statistical Association, 1(1),101-109
15	Improved Exponential Estimator for Population Variance using two Auxiliary variables Singh,R.,Chauhan,P.,Sawan,N. and Smarandache,F. (2011)	Italian Jour. Of Pure and Applied Math.,28,103-110
16	Improvement in estimating population Mean using two auxiliary variables in two Phase sampling. Singh,R.,Chauhan,P.,Sawan,N. and Smarandache,F.(2011)	Italian Journal of Pure and Applied Math.,28,137-144
16	Improvement in estimating the population mean using exponential estimator in simple random sampling. Singh,R.,Chauhan,P.,Sawan,N. and Smarandache,F.(2009)	International Journal of Stat. and Econ.(BSE),3,13-18.
17	Ratio estimators in simple random sampling using information on auxiliary attribute. Singh,R.,Chauhan,P.,Sawan,N. and Smarandache,F.(2008)	Pak. J.Stat.Oper.Res.,4,1,47-53.
18	On linear combination of Ratio-Product type exponential	Statistics in

	estimator for estimating finite population mean. Singh,R.,Chauhan,P. and Sawan,N. (2008)	Transition,9(1),105-115.
19	A General Family of Estimators for Estimating Population Variance using known. Singh,R.,Chauhan,P.,Sawan,N. and Smarandache,F.(2008)	Octogon Mathematical Journal,Vol. 16, No.1,160-165.
20	Almost Unbiased Ratio and Product Type estimator of finite population variance using knowledge of kurtosis of an Auxilliary variable in sample surveys. Singh,R.,Chauhan,P.,Sawan,N. and Smarandache,F.(2008)	Octogon Mathematical Journal,Vol. 16,No.1,123-130.
21	On the bias reduction in linear variety of alternative to ratio-cum-product estimator. Singh,R.,Chauhan,P. and Sawan,N. (2007)	Statistics in Transition,8(2),293-300.
22	Use of known correlation coefficient in construction of Ratio-Product estimator for estimating the finite population mean. Singh,R.,Chauhan,P. and Sawan,N. (2007)	Journal of Prob. Stat. Sci.,5(2),203-208.
23	Estimation of finite population mean utilizing known coefficient of Kurtosis. Singh,R.,Chauhan,P. and Sawan,N. (2007)	Jour.Emp.Res.in Soc. Sci.,1-2,1-9.
24	A general family of estimators for estimating population means using known value of some population parameter(s). Khoshnevisan,M.,Singh,R.,Chauhan,P.,Sawan,N. and Smarandache,F.(2007)	Far East Journal of Statistics,22(2),181-191.
25	A family of estimators for estimating population means using Known correlation coefficient in Two-Phase Sampling. Singh,R.,Chauhan,P. and Sawan,N. (2007)	Statistics in Transition8(1),89-96.

Chapters in Books **0**

Edited Books **0**

Books with ISBN with details of publishers.**0**

Number listed in International Database (For *e.g.* Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) **None**.

Citation Index – range / average

SNIP **None**.

SJR **None**.

Impact Factor – range / average

 0   - 5.47

h-index **None**

III.3 List and Records and Details of patents and income generated **None**.

III.4 List and Record of Areas of consultancy and income generated **None**

III.6 List and Record of Faculty selected nationally/internationally to visit other

laboratories in India and abroad **None**

III.6 List and Record of Faculty serving in

National committees b) International committees c) Editorial Boards d) any other (please specify)**None**

III.7   Research thrust area recognized by funding agencies for the department **None**

III.8 Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies and grants received project-wise. **None**

III.9 List and details of Inter-institutional collaborative projects and grants received

All India collaboration b) International **None**

III.10 List and details of Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, etc.; total grants received. **None**

III.11 List and Details of Research facility / centre with **(None.)**

- state recognition **(None.)**
- national recognition **(None.)**
- international recognition **(None.)**

III.12 List and details of Special research laboratories sponsored by / created by industry or corporate bodies **None**

3.1   Promotion of Research

3.1.1   A. Composition of Departmental Research Committee, List of members and minutes of its meeting . **Both the faculties of the department are the member of   the DRC. File No. 3.1.1**

B. Records of DRC regarding monitoring and addressing issues related to research
Will be discussed in the next DRC soon.

C. Record of DRC recommendations which have been implemented and their impact.
DRC recommended for four M.Sc. students for doing summer internship in NASA (ND).

3.1.2   Information of research centers in its affiliated / constituent colleges which are monitored by the DRC of the department
No research centres exist in the affiliated constituent colleges.

3.1.3   Details of **the**

* advanced funds for the sanctioned projects
* providing seed money
* Simplification of procedures related to sanctions / purchases to be made by the investigators
* Autonomy to the principal investigator/coordinator for utilizing overhead charges
* Timely release of grants
* Timely auditing
* Submitted utilization certificates to the funding authorities

     None

3.1.4   Record of interdisciplinary research promoted

* with other departments /schools of the university and
* collaboration with national/international institutes/industries

     None

3.1.5   Details of workshops/ training programmes/ sensitization programmes conducted by the department to promote a research culture on campus

(1) University organized a seminar on Forstering Exxcelence in Research in July, 2012.

(2)University has set a task force on 2012-13 to promomote researches in different Schools.

(3) School has conducted one day workshop in Applications of Statistics by NASA and NSSO in 8 Feb.2013.

3.1.6   A. Details of visits of researchers of eminence to visit the campus as adjunct professors

Prof. C.C.Gujrathi(Retired Prof.) visited the department in a UGC Scheme in 2011-12.

B. Impact of such efforts on the research activities of the university

This provides extra hands in Quality teaching and Research in the School .

3.1.7   A. Percentage of the total budget of the department which is earmarked for research **(None.)**

B. Details of heads of expenditure, financial allocation and actual utilization **(None.)**

UGC Plan support is there for Computers, Infrastructure and conference travel and registration fee.

3.1.8   A. Details of University funded research and awarded Post Doctoral Fellowships/Research Associateships **None**

B. List of students registered with record of source of funding by the university and other sources **None**

3.1.10   A. List and percentage of faculty which have utilized the sabbatical leave for pursuit of higher research in premier institutions within the country and abroad **(None.)**

B. Record of the output of these scholars **(None.)**

3.1.11 A. Details with photographs of national and international conferences organized

Photographs available in the website of www.stat.dauniv.ac.in

B. List highlighting the names of eminent scientists/scholars who participated in these events.

Available in the website of dauniv.ac.in

Event Name	Date	Eminent Scientist/Scholar
(1)One day Work shop on "Nation Building Role of	**05-03-2013**	**(1)Mr.Viswajeet Kumar,Deputy Director, NASA(New Delhi)**

Official Statistics in India: Creating Awareness about Career Opportunities"		(2)Dr.Praveen Srivastava,Deputy Director General,NSSO,Bhopal.
(2)National Seminar(UGC supported) on "Statistics and its Applications"	16-03-2012	Dr.Praveen Sriwastava,DDG,Ministry of Program Implementation(MOSPI),New Delhi and Mr.Sammarwal,DD,MOSPI.

3.2 Resource Mobilization for Research

3.2.1 Record of Financial provisions made in the university budget for supporting students' research projects

No provision

3.2.2 A. Record of special efforts to encourage its faculty to file for patents **None**

 B. List of registered and accepted patents. **None**

3.2.3 Details of ongoing research projects of faculty: **None**

	Year wise	Number	Name of the project	Name of the funding agency	Total grant received
A. University awarded projects					
Minor projects					
Major projects					
B. Other agencies - national and international (specify)					
Minor projects					
Major projects					

3.2.4 A. Record of projects sponsored by the industry/corporate houses **None**

 B. Details such as the name of the project, funding agency and grants received. **(None.)**

3.2.5   A. Details of Department recognition for their research activities by national / international agencies (UGC-SAP, CAS; Department with Potential for Excellence; DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and the quantum of assistance received **None**

B. Record of any two significant outcomes or breakthroughs achieved by this recognition. **(None.)**

3.2.6   List details of

     a. research projects completed and grants received (funded by National/International agencies). **None**

     b. Inter-institutional collaborative projects and grants received **None**
       i) All India collaboration
       ii) International

3.3   Research Facilities

3.3.1   A. Infrastructure in the department to facilitate research

14 Computers, Licenced Statistical softwares like SPSS and Stat Soft is available in the School.E-Journals are available in Central Library.

   B   Strategies have been evolved to meet the needs of researchers nemerging disciplines.**Recent topics are selected for research.Maximum use of the Central and Departmental Library and On-line Journals, ICT.**

3.3.2   A. Information and Resources catering to the needs of researchers of the department

Internate and INFLIBNET facilities are provided.

     B Details of the facility.**A computational Laboratory having 14 computers.Licenced SPSS software, Licenced Systat software,LCD projector-1.**

3.3.3   Record of University Science Instrumentation Centre (USIC) facilities been made available to research scholars

Not required

3.3.4 Record of provision of residential facilities (with computer and internet facilities) for research scholars, post-doctoral fellows, research associates, summer fellows of various academies and visiting scientists (national/international)

Provision of Guest House and Hostels is there.Wi-Fi Campus ensures Internet Connectivity.

3.3.5   Details of Uses of the Facilities of IUC, CAT, NRCS, IIT Indore and other specialized Research Centers for research

None

3.4   Research Publications and Awards

Research Publications in 2008-2013 ;   25

Awards : One Research Scholar awarded in M.P.Science Congress for best research article and presentation.

3.4.1   Research journal published, if any, from the department(s)? If yes, indicate the composition of the editorial board, editorial policies and state whether it/they is/are listed in any international database. **(None.)**

3.4.2   Details of publications by the faculty:

* Number of papers published in peer reviewed journals (national / international)

    25,   2009-2013

* Monographs **(None.)**

* Chapters in Books   **04**

* Books edited **(None.)**

* Books with ISBN with details of publishers **(None.)**

* Number listed in International Database (For *e.g*. Web of Science, Scopus, Humanities International Complete, EBSCO host, etc.) **(None.)**

* Citation Index – range / average

* SNIP **(NA.)**

* SJR **(NA.)**

* Impact Factor – range / average

    0- 5.47

* h-index **None**

3.4.3   Details of

* faculty serving on the editorial boards of national and international journals **None**

* faculty serving as members of steering committees of international conferences recognized by reputed organizations / societies **None**

3.4.4   Details of

* research awards received by the faculty and students **One student has got a prize in MP Young Scientist conference**

∗ national and international recognition received by the faculty from reputed professional bodies and agencies **None**

3.4.5 A. Number of successful M.Phil. and Ph.D. scholars guided per faculty during the last four years

B. University participate in *Shodhganga* by depositing the Ph.D. theses with INFLIBNET for electronic dissemination through open access **Yes**

Number of successful M.Phil. : 13

Number of successful Ph.D. : 02(Boys) + 03 (Girls)= 05

Number of Faculty: 02

3.4.6 A. Record of Promotion e interdisciplinary research **None**

B. Number of interdepartmental / interdisciplinary research projects undertaken **None**

C. Mention the number of departments involved in such endeavours **None**

3.4.8 List of University instituted research awards to the faculty of the Department **None**

3.4.9 Details of incentives given to the faculty for receiving state, national and international recognition for research contributions **None.**

3.5 Consultancy None

3.5.1 Important consultancies undertaken by the department during the last four years.**None**

3.5.2 A. Department participation in university-industry cell **None**

University has setup a Task Force for the same.

B. If yes, what is its scope and range of activities **(None.)**

3.5.3 Record of publicizing the expertise of the department for consultancy services

We endorsed expertise of the faculty members on the website to attract consultency .

3.6 Extension Activities and Institutional Social Responsibility (ISR)

3.6.1 A. Department records of sensitization of faculty and students on its Institutional Social Responsibilities

A plantation camp organized in the campus by the School students.

Students of the School participated in Cleaning Drive of the Campus.

B. List the social outreach programmes which have created an impact on students' campus experience during the last four years.

- Blood Donation Camp

- Khan River Cleaning Drive

- Campus Cleaning Drive

3.6.2   Promotion of neighborhood network and student engagement and holistic development of students and sustained community development? **(None.)**

3.6.3   Record of participation of the students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International programmes **(None.)**

3.6.4   Records of tracking the students' involvement in various social movements / activities which promote citizenship roles **(None.)**

3.6.6   Write up of the values inculcated and skills learnt during extension activities. **(None.)**

3.6.7   Department community in its outreach activities **(None.)**

3.6.8   Details of awards received by the institution for extension activities and/contributions to social/community development during the last four years **None**

3.7   Collaboration

A. MOU Copies and Record of collaboration with other agencies impacted the visibility, identity and diversity of activities on campus **None**

B. Record of benefits academically and financially because of collaborations **None**

3.7.2   Records of linkages resulted in

* Curriculum development **None**

* Internship **Yes**

* On-the-job training **None**

* Faculty exchange and development **None**

* development Research **Yes**

* Publication **Yes**

* **Consultancy None**

* Extension **None**

* Student placement **Yes**

* Any other (please specify)

3.7.3   A. Copy of MoUs with institutions of national/international importance/other universities/ industries/corporate houses etc.**None**

B. Record of enhanced the research and development activities **None**

3.7.4   Have the university-industry interactions resulted in the establishment / creation of highly

specialized laboratories / facilities? **None**

3.7.5 Any other information regarding Research, Consultancy and Extension, which the university would like to include.

(1) Prof.Dr. Shakti Banerjee has also functioned as Warden for 22 years(1989-2012) and as Chief Warden Since 2011 till date.

(2) There is general shortage of academically,professionally highly competent Faculty in the region.

(3)The research activity of the School has been affected by the shortage of Permanent Faculty. Last interviews were held in May,2009 but still positions could not been filled for want of insufficient applicationsin researved category and want of applications in Specialised fields of General Category.University is doing new effort in 2013-14 to rectify the situation.

(4) Task forces form in 2012 are as under to give thrust to Reasearch,Consultency and Extension.

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1   Physical Facilities

4.1.1   A. Details of Department physical infrastructure

HOD room- 01

Faculty rooms-03

Department Library-01

Class rooms-02

Computer Lab-01

Office-01

B. Maintenance of Laboratories for its optimal utilization

C. Maintenance of Computers for its optimal utilization **Yes**

D. Maintenance of UPSes, Power Supplies -**Yes**

E. Maintenance of support services, sanitation, first aid boxes **Yes**

F. Maintenance of building, garden, indoor games structure **University Engineering section and Physical Education Department of DAVV.**

4.1.2   Record of new initiatives for Infrastructure for promote a good teaching-learning environment- Internet, Wi-fi, Power Point Projectors, Video Equipment

Internet FacilityOne LCD,One projector.

4.1.3   Physical ambience for the faculty in terms of adequate research laboratories, computing facilities and allied services

Faculty is having all the facilities for Computing,ICT,a big garden with trees and large open space.

4.1.4   List of Facilities like office room, common room and separate rest rooms for women students and staff

Office-1,Class Room-2,,Lab-1,Library-1

4.1.5   List of the infrastructure facilities are disabled-friendly

- Facity of Internet for blind students is available at I.T.Centre.

-- Training facility provided for handicapped with Grants of NTPC at IT Centre.

4.1.8   Departmental special facilities are available on campus to promote students' interest in sports and cultural events/activities **University has excellent sports facilities and auditorium and any School can avai**l these facilities .

4.2   Library as a Learning Resource

4.2.1   Details of departmental library facilities: Book issued, Return all facilities

File No. 4.2.1

4.2.2   Provide details of the departmental library:

  * Total area of the library (in Sq. Mts.) -**25 Sq. Mts.**
  * Total seating capacity -**30 Students**
  * Working hours (on working days, on holidays, before examination, during examination, during vacation) – **7 hours**
  * Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources) **Reading Tables,Chairs**
  * Clear and prominent display of floor plan **Yes**
  * Adequate sign boards; **Yes**
  * Fire alarm; **N.A.**
  * Access to differently-abled users and **N.A.**

*   Mode of access to collection : **School has one regular librarian.**

Note : Central library is very near the School and easy access to the School students.

4.2.3   Departmental library holdings: **YES**

   a)   Print (books, back volumes and theses)**1072 Books, 8 Ph.d thesis and 120 M.Sc.Project Reports.**

   b) Average number of books added during the last three years -**186 Books**

   c)   Non Print (Audio Video, CDs, Downloaded Articles)**Nil**

   d)   Electronic (e-books, e-journals)**Univ. Central library provides links to e-journals**.

   e)   Special collections (e.g. text books, reference books, standards, patents)**)Yes**

4.2.4　Records of tools the library deploys to provide access to the collection

* OPAC –No **Available in Central Library**
* Electronic Resource Management package for e-journals **Available in Central Library**
* Federated searching tools to search articles in multiple databases **Available in Central Library**
* Library Website **Yes**
* In-house/remote access to e-publications **Through Internet Facility.**

4.2.5　Use of ICT deployed in the library

* Library automation　　　**YES**
* Total number of computers for public access **ONE**
* Total numbers of printers for public access **ONE**
* Internet band width speed　　□ 2mbps　□ 10 mbps　□ **1 GB**
* Institutional Repository　**Yes**
* Content management system for e-learning　**Central Library**
* Participation in resource sharing networks/consortia (like INFLIBNET) **Central Library**

4.2.6　Details (per year) with regard to

* Ratio of library books to students enrolled -**25, per Student 3 Books**
* Average number of books added during the last four years -**186 Books**
* Assistance in searching Databases -**Catalogue cards**

* INFLIBNET/IUC facilities **Yes**

Central library also has a large number of Statistics books.

4.2.8　Annual departmental library budget and the amount spent for purchasing new books and journals. **UGC provided 2 Lacs in XI Plan for department library.Amount Spent for purchasing new books 1.60 Lacs Rs. and Rs. 1 Crore for all departments in Central library.**

4.3　IT Infrastructure

4.3.1　Details of Department IT and ICT Infrastructure - **Yes**

4.3.2　Details of the computing facilities i.e., hardware and software. **Yes**

* Number of systems with individual configurations **18**
* Computer-student ratio Yes **– 13:25**

- Dedicated computing facilities **14 Computers**
- LAN facility **Available**
- Proprietary software You **SPSS and SYSTAT**
- Number of nodes/ computers with internet facility **Yes**
- Any other (please specify)**None.**

4.3.3   Plans and strategies for deploying and upgrading the IT infrastructure and associated facilities .

1.   **In the next plan we plan to purchase 10 new computers.**

2.   **SAS is a very popular software, which we would like to get next since experience with this software increase the job prospect of the students in the Multinationals/Industry. This will also help the School to start Applied Statistics Courses in the university which will help to train the students of the School as required by the Industry and enable us to take up consultancy.**

4.3.4   Details on access to on-line teaching and learning resources and other knowledge and information database/packages provided to the staff and students for quality teaching, learning and research.**Internet and Wi-Fi facility is available.**

4.3.5   IT facilities available to individual teachers for effective teaching and quality research **Available**

4.3.8   A. Details of ICT-enabled classrooms/learning spaces available **One**
        B. Record of utilization for enhancing the quality of teaching and learning **Yes**

4.3.9   Records of Faculty and computer- aided teaching-learning materials **Yes**

4.3.10 Department availing of of the National Knowledge Network connectivity **Yes**

4.3.12 Record of Availing of web resources such as Wikipedia, dictionary and other education enhancing resources

School will create Web resources for each paper taught and other education resources in 2013-2014.

4.3.13 Department budget for the update, deployment and maintenance of computers. **University or UGC** b**udget is available**.

4.3.14 Details of plans envisioned for the gradual transfer of teaching and learning from closed university information network to open environment . PPT and links of webresources for

each paper taught will be uploaded at website. Lecture of Faculty are planed to be uploaded with website in 2014.

4.4 Any other information regarding Infrastructure and Learning Resources which the university would like to include. None

CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Department system, structural and functional characteristics for student support and mentoring

Student Mentoring task is done by Faculty.The academic,social ,environmental and career councelling is provided by the university.

5.1.2 Record of 'apart from classroom interaction', the provisions available for academic mentoring **No official record is available**

5.1.3 Record of department students utilization of personal enhancement and development schemes such as career counseling, soft skill development, career-path-identification, and orientation to well-being for its students.

(1) Language laboratory is available .

(2)Facility for Minorities and SC/ST students coaching cell is also available,where they guide the students for various competitive exams of State and Central Govt..

(3)Career Councelling and opportunity cell assistance is available to the students.

5.1.4 Department publish its updated prospectus and handbook info annually on website and online access of course plans, syllabi and result **Yes, it is uploaded**

   in www.stat.dauniv.ac.in

 A. Records of the Timely dissipation of financial aid

(C) Tables for type and number of scholarships/free-ships given to the students during the last four years the following categories: UG/PG/M.Phil/Ph.D./Diploma/others

   State Government Scholarships,reimbursement of fees are given to SC/ST/OBC students.

5.1.5 Table of percentages of students receive financial assistance from state government, central government and other national agencies (Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.) **None**

5.1.7 Department use of International Student Cell, number and list of foreign students

A Task Force has now been set up in the university to look into this aspect.

5.1.8 Department support services available for

   ∗ Students participating in various competitions/conferences in India and abroad.**Yes.**

Physically challenged / differently-abled students.

Student Welfare Department help.

* SC/ST, OBC and economically weaker sections . **State Govt. Scholarships are available.**

  * Health centre, health insurance etc. **University is having a health centre for the students.**

  * Skill development (spoken English, computer literacy, etc.) **University Career Councelling and Opportunity Cell.**

  * performance enhancement for slow learners. **Planned for 2013-14.**

  * exposure of students to other institutions of higher learning/ corporates/business houses, etc. **Planned for 2013-14.**

  * publication of student magazines . **Planned for 2013-14.**

  * Record of student participation in sports and extracurricular activities .**Students of the School only participate in UTD level Sports.**

5.1.9 Placement Records **One placement interview by Premier Biosoft(India) was conducted on 11-03-2012. One Student Miss.Srishti Sharma selected. Miss.Srija Chaturvedi selected in Kotak Mahindra Bank,Mumbai 2013. Mr.Shashi Bhusan as Sr.Associate,WSN Global Services(Market Research)2011.**

5.1.10 Number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus during the last four years).**None**

5.1.11   A. Record of registered Alumni Association

A**lumni association online group interact regularly.**

B. Record of activities and contributions to the development of the department\

Alumni provide help and guidence to junior for their placements.

C. Record of alumni meets .**Planned for 2013-14.**

5.1.12 A. Committee members and record of student grievance redressal

Grivevances are addressed in students-teacher meeting,which take place regularly. **No grievance remains unresolved in the School. University has a separate Student Grievances Cell where no case has been registered so far from the School.**

B. Details of the nature of grievances reported and the redressal

No Grievances being received till date.

5.1.13 A. Record of anti-ragging committee -Anti ragging Squad. **Both the Faculty of the School are in the Anti Ragging Committee and Squad Members.**

 B. List of instances reported during the last four years and what action has been taken in

these cases. **None**

5.1.14 Details of the cooperation rendered by parents, industry and its stakeholders to ensure the overall development of its students

Such Meetings are planned for 2013-14..

5.1.18 A. List of participation of women students in intra- and inter-institutional sports competitions and cultural activities . **In the inter departments Cricket Tournament, TT and Badminton Women students participated in 2012-13.**

B. List of participation of women students in intra- and inter-institutional sports competitions and cultural activities

5.2   Student Progression

5.2.1   Analysis of progression and trends for the last four years.

Student Progression	%
UG to PG*	**None**
PG to M.Phil.*	**13**
PG to Ph.D.	**5**
Ph.D. to Post-Doctoral	Nil
Employed • Campus selection • Other than campus recruitment	**2** Almost 95%
Entrepreneurs	**2**

5.2.2   Programme-wise pass percentage during the time span stipulated

Year	% of Students Passed in the 4-Semesters
2012-13	**80%**
2011-12	**93.30%**
2010-11	**100%**
2009-10	**75%**

5.2.3   Records of Number and percentage of students who appeared/qualified in examinations like UGC-CSIR-NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central / State services, Defense, Civil Services, etc.

None

5.2.4   List category-wise with details egarding the number of Ph.D./D.Litt./D.Sc. theses

submitted/ accepted/ resubmitted/ rejected in the last four years

	Student Name	Guide	Year
1.	Mr. Pankaj Chauhan	Dr. Shakti Banerjee (Co-Guide)	2011
2.	Ms. Nirmala Savan	Dr. Shakti Banerjee (Co-Guide)	2012
3.	Ms. Swati Agrawal	Dr. Snigdha Banerjee	2012 Thesis Submitted
4.	Mr. Ashish Sharma	Dr. Snigdha Banerjee	2012 Thesis Submitted
5.	Mr. N. Sanjib Metei	Dr. Snigdha Banerjee	2012 Thesis Submitted

2009-None,2010-None,Reject-None,Resubmitted –None

5.3   Student Participation and Activities

5.3.1   A. List the range of sports, cultural and extracurricular activities available to students
           (1)University Sports Department has excellent infrastructure for sports.
           (2)University has excellent auditorium.
B. Sports and extracurricular calendar and details of students' participation**.**
School will prepare it for 2013-14.
5.3.2 Details of the achievements of department students in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. during the last four years.**Nil**
5.3.3   A. Gathered data and feedback from pass-out graduates
File No. 5.3.3 A
          B. Gathered data and feedback from employers **File No. 5.3.3 B**
          C. Use of the data for the growth and development of the department **Yes**
5.3.4   Department special drives / campaigns for its faculty and students to promote heritage consciousness . **(1)Visits to Ralamandal,Holker chhatris,Lal Bag Palace and Museum.(2)UTD Calender for 2012-13 as File No.5.3.4**
5.3.5   A. Records of Department involvement and encourage its students to publish   materials like catalogues, wall magazines, departmental magazine, and other material. **Planned for 2013-14**
          B. List the major publications/ materials brought out by the students during the last four academic sessions.
Students M.Sc.Project Reports (2009-2013) ,Total Number- 76

M.Phil dissertation 2009-2011, Total Number-13

Ph.D. Thesis , 2009-2013, Total Number-02

5.3.6   A. Departmental Student and Alumni association or or any other similar body

Form it in 2013-14

      B. Details on its constitution, activities and funding. **Form it in 2013-14**

5.3.7   Details of student representatives in Board of Studies, various academic and administrative bodies .

University Statute provides for student member in Board of Studies.

5.3.8 Any other information regarding Student Support and Progression which the university would like to include.

University has excellent infrastructure for ICT,Internet,Sports,Auditorium,Central Library,Hostels for Boys and Girls,Health Centre,Day Care Centre. State has S.C./S.T./OBC freeships and Scholarships for all.

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1   Institutional Vision and Leadership

6.1.1   State the vision and the mission of the department in line with the University

The Current global trend amongst students seeking admission to graduation is tilt away from basic sciences to application oriented subjects for easy jobs with special effect in the Mathematical Streams. This very fact is touching the alarming levels in the education Scenario of Madhya Pradesh.This has resulted in decling number of students in the Post Graduate level courses in the Mathematical Sciences.

Statistics is having a very good demand in Central/ State Government, Multinationals,Industry,Research Organisations,Agriculture,Financial Institutions.

In many of the Universities in Madhya Pradesh , they do not have even graduation in Statistics.Hence the subject is with low popularity among the students.

This challenge can be met by popularizing this subject among students and making the Course more job oriented as required in the Industry.We therefore develop the skill in our Post Graduate Course in Statistics so that our students can take up any job related to Planning/Evaluation , where they use huse data for obtaining possible decisions.We also want to educate and prepare students to accept the national and global challenges and to serve the society through their knowledge of learning.

6.1.2   Mission statement definition for the department's distinctive characteristics in terms of addressing the needs of   the society, the students it seeks to serve, the institution's tradition and value orientations, its vision for the future,

To develop competitive sprits,nurture individual thinking and groom the students in order to meet the requirement of the scientific and technological challenges of the global arena. We train our students in most of the aspects of Statistical Theories,Data Analysis aspects

using different statistical softwares. Our Mission is also to provide good researches in the Statistics. In 2013-14 getting the vacant positions filled we would like to start some certificate/ diploma level courses for graduates with any discipline so that the students can get jobs very easily and this will in turn popularise this subject as a whole.

6.1.3 Write-up of To educate and prepare students to accept the national and global challenges

∗ ensuring the organization's management system development, implementation and continuous improvement

A Management system is initiated by systematically distributing different work to the committees of the department for example Anti Ragging, Grievance committee and curriculum teaching learning process and program outcomes monitoing, continuous improvemrent is met.

∗ interacting with its stakeholders

Reinforcing a culture of excellence

Very frequently , we interact with our Stakeholders in e-mails and upgrade our needs in courses in different job fields and get help in absorbing our students in different jobs,trainings and required new areas of learning to the students.

*identifying organizational needs and striving to fulfill them

(1)Recruting the vacant UGC teaching positions.

(2)Financial support in getting Softwares, more new Computers.

6.1.4 Records of Departmental and other committees meetings

(1)Departmental Commiee meeting.

(2)Faculty-Student meets   are regular feature

6.1.6   Write-up of a culture of participative decisions in the department

The major decisions in the School are taken through departmental meeting and open discussion with the faculty members,Office Staff and students.

6.1.7 Record of Grooming leadership at various levels .

(1)Student representative in classes.

(2)Prof. incharge look after the examination,Anti-Raggings.

(3) Teachers participate in Board of Studies of the subject.

.

6.1.10 Record of knowledge management strategy .

C Ds are prepared for lectures and course material as a part of management strategy. Websites are also used for the knowledge management.

6.1.11 Write up on

* Contributing to national development **In the past decade it is evident that the world higher education is under pressure to change.It is growing fast and its contribution to economic success is seen as vital. The students at School of Statistics are imparted with knowledge to improve conceptual Statistics and their applications as well relevant to Multinational,Govt.Departments and Industry.For efficient growth in National Development the sound knowledge is always been an indicator**.

∗ Fostering global competencies among students **The students made aware of the global competition in every field of job,researches and the requirement of sound knowledge of the subject,new technologies to meet this requirement.**

∗ Inculcating a sound value system among students **A key issue in higher education is the value system that underlies the assessment criteria.The value are usually embedded in internal qualitu assurance mechanisms.It is deeply routed into the procedures, judgement of the coursework and its frame and utility prospects.At the School of Statistics,the academic staff exercise effectively with the help of academic autonomy.**

∗ Promoting use of technology **The School promote the students to use the technology in the form of newer softwares for data analysis, Sound subject knowledge using Internet,e-books,Interaction with senior pass outs of the School.**

∗ Quest for excellence **Any educational institute is known for its excellence in science decipline ; in terms of global indicator viz. the number of research publications among the peer reviewed and cited at international level and technical knowledge ,which helps the students to absorb in job faster. The School of Statistics has shown their concern in both these aspect by motivating the students in the school.**

6.2   Strategy Development and Deployment

6.2.1   Perspective plan for development and write-up of policies and strategies to work for Vision and for achieving the mission

∗ Enhancing Teaching and learning

In the line of Vision and Mission.

∗ Enhancing Research and development

Try to increase more research collaboration in 2013-14.

∗ Enhancing Community engagement

Students and Faculties of the school participate according to the Calander of the University.

∗ Enhancing Human resource planning and development.**N.A.**

* Enhancing Industry interaction **N.A.**
* Enhancing Internationalisation **Increasing International Collaboration in Research.**

Increasing International collaboration in research in 2013-14.

6.2.2   Departmental organizational structure and decision making processes and their effectiveness.

Departmental committee ensures this.

6.2.3   Write up of functioning independently and autonomously and ensure accountability

University has full academic autonomy.Evaluation of S.A.&PBA reports by each faculty by the end of every academic year.

6.2.5   Record of last four years, have there been any instances of court cases filed by and against the department, What were the critical issues and verdicts of the courts on these issues

No Court cases.

6.2.6   Performance audit of the department by external experts

Available with the University Administration.

6.3   Faculty Empowerment Strategies

6.3.1   Outcome of the reviews of self appraisal and PBAS and important decisions taken on that

Faculty is communicated any weakness found.

6.3.3   List of teachers availing welfare schemes available for teaching and non-teaching staff.

It is with the University Administration.

6.3.4   List and number of attracted and retained eminent faculty in last 4 years **None.**

6.3.5   Gender audit during the last four years of the department achievements and pass **percentages and its salient findings.**

Year	Awarded No. of Ph.Ds			
	M	F	M	F
2012-2013	02(Submitted)	01(Submitted)	18+02(ph.d)	07+01(ph.d)
2011-2012	None	01	21+02(ph.d)	13+01(ph.d)
2010-2011	01	None	11+02(ph.d)	16+02(ph.d)
2009-2010	None	None	05 + 03(ph.d)	13+02(ph.d)

6.4   Financial Management and Resource Mobilization

6.4.1   Statements of audited income and expenditure of academic and administrative activities of the last four years.

Available with the University Administration

6.4.5   Efforts taken by the department for resource mobilization.

School ot statistics obtained some fund to conduct seminar/workshops by the Ministry of statistics and programme implementationto popularize statistics. Enclosure 6.5.4

6.4.6   Record of endowment funds created **N.A.**

6.5   Internal Quality Assurance System

6.5.1   Details of department internal quality assurance and sustenance system, give details.

Departmental IQAC coordinator is made to suggest internal quality assurance.

6.5.2   Internal workshops to improve teaching, learning and evaluation

Yes, Faculty meetings are helpful to improve teaching,learning and evaluation.

6.5.3   Record of continuously review the teaching learning process **Yes**

6.5.4   Any other information regarding Governance, Leadership and Management which the university would like to include**. None**

CRITERIA VII: INNOVATIONS AND BEST PRACTICES

7.1   Environment Consciousness

7.1.1   Department Area Green Audit details

Floor Space with the School =   5000   sq.ft.

Opposite of the Vigyan Bhawan there is a very Big Garden.

7.1.2   Departmental initiative to make the campus eco-friendly?

* Energy conservation

  Use of CFL in place of bulb and tube lights, Instruction of keeping light and fan off when no one inside a room.

* Use of renewable energy

  Solar Thermal Power Plants are planned in the University in 2013-14.

* Water harvesting

  Borewells of the Campus are recharged harvesting Rain water .

* Check dam construction **None**

* Efforts for Carbon neutrality None

* Plantation   **School took part in plantation in the Campus.**

* Hazardous waste management   **None**

* e-waste management **Through I.E.T.**

* any other (please specify) **None**

7.2   Innovations

7.2.1   Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the department

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-Summer training of students in **NSSO and Department of Economic and Statistics ,M.P.Govt.**

-Expert Seminars are arranged.

-The students of the School use licenced softwares in their M.Sc. projects for data analysis.

7.3   **Best Practices**

7.3.1   Give details of any two best practices which have contributed to better academic and administrative functioning of the department.

1.**Expart seminars are arranged.**

2.**The students use licenced SPSS/STATSOFT software in the department for their project data analysis.**

Format for Record of Best Practices of the department

1.   Title of the Practice

      This title should capture the keywords that describe the practice.

2.   Objectives of the Practice

      What are the objectives / intended outcomes of this "best practice" and what are the underlying principles or concepts of this practice (in about 100 words)?

3.   **The Context**

      What were the contextual features or challenging issues that needed to be addressed in designing and implementing this practice (in about 150 words)?

4.   **The Practice**

      Describe the practice and its uniqueness in the context of India higher education. What were the constraints / limitations, if any, faced (in about 400 words)?

5.   **Evidence of Success**

      Provide evidence of success such as performance against targets and benchmarks, review results. What do these results indicate? Describe in about 200 words.

6.   **Problems Encountered and Resources Required**

      Please identify the problems encountered and resources required to implement the practice (in about 150 words).

7.   **Notes**

      Optional. Please add any other information that may be relevant for adopting/ implementing the Best Practice in other institutions (in about 150 words).