# SHRI MATA VAISHNO DEVI UNIVERSITY SUB POST OFFICE - 182320, J \& K <br> Faculty of Sciences <br> School of Mathematics 

## MINUTES OF THE FIFTH MEETING OF BOARD OF STUDIES OF SCHOOL OF MATHEMATICS, HELD ON $27^{\text {TH }}$ OF MAY, 2014 IN ROOM NO. D 108

## PRESENT

1. Prof. V. K. Bhat Director, School of Mathematics \& Dean, Faculty of Sciences.
2. Prof. R. K. Sharma, Professor, Department of Mathematics, IIT Delhi.
3. Prof. D. S. Jamwal, Professor and Head, Department of Mathematics, University of Jammu
4. Suparn Sharma

Director, SOB
SMVD University
5. Dr. Ajay K. Sharma Assistant Professor, SOM
6. Dr. Kuldip Raj Member

Assistant Professor, SOM
7. Dr. Sandeep Bhougal
Assistant Professor, SOM
8. Dr. Rakesh Kumar Member Assistant Professor, SOM
9. Dr. Sandeep Sharma Member
Assistant Professor, SOM M

Chairman

Member Expert

Member Expert

Member Expert(Internal)

Member Secretary

Member

Dr. A. K. Das, Assistant Professor, SOM and Mr. Surender Singh, Assistant Professor SOM could not attend the meeting.

### 5.1 Welcome and Introduction

The Chairman of the Board introduced all faculty members of the school to the member experts. He welcomed all the members to the fifth meeting of Board of Studies and thanked Prof. R. K. Sharma \& Prof. D. S. Jamwal for visiting the University in spite of their busy schedule to attend the meeting.

### 5.2 Confirmation of the minutes of the $4^{\text {th }}$ BOS meeting

 February, 2012.
### 5.3 Review of Academic Activities

Dr Ajay K. Sharma, Member Secretary, BOS gave a presentation about the academic activities of the school. A brief review is given as under:

## (a) Admission:

## Details of new Admissions (2013)

| S.No. | Programme | Year | No. of students <br> Admitted |
| :--- | :--- | :--- | :--- |
| 1 | M. Sc. Mathematics | 2013 | 20 |
| 2 | Ph. D | 2013 | 03 |

## (b) Teaching:

School of Mathematics offers courses in Applied Mathematics to different streams of B.Tech (Computer Science \& Engineering, Electronics \& Communication Engineering, Mechanical Engineering, \& Industrial Biotechnology) and has a two year full time M.Sc (Mathematics) Program. The courses in M. Sc.(Maths.) are interdisciplinary in nature. In addition to courses from pure Mathematics, the program includes courses from Theoretical Computer Science, Operational Research, Economics. This year student opted Financial Mathematics as an elective paper. Every $3^{\text {rd }}$ semester student of M.Sc. (Mathematics) submits a report of a minor project under the supervision of a faculty member. This structure was appreciated by the Expert Members for its being interdisciplinary and application oriented.
Apart from teaching to B.Tech. \& M.Sc. students, the School offers ten different papers for Ph.D. course work.

The School has a library and computer lab. The library of the school is supported by NBHM (National Board for Higher Mathematics). The Computer Lab. of the school is used by M.Sc. students and research scholars.

## (c) Research



Apart from regular teaching all faculty members of the school are actively involved in research work. Faculty members published research papers in National \& International Journals of repute. Faculty members also regularly attend conferences, seminars, research schools and workshops at National \& International level.

## Thrust areas of teaching and research

(i) Abstract and applied Algebra
(ii) Analysis (Real, Complex, Functional)
(iii) Topology
(iv) Applied Mathematics (Geometry, Information theory)
(v) Operations research and Statistics

## Some Silent features of the school are

(i) $\quad$ Number of publications $=256$
(ii) Number of books published $=05$
(iii) Number of Ph. D. students enrolled $=07$
(iv) Number of Ph. D. awarded $=06$
(v) Number of Ph. D. submitted $=04$
(vi) Number of Conferences/workshops attended by faculty $=110$
(vii) Number of Foreign visits by faculty $=07$.

## (d) Research Projects

Number of research projects completed by the faculty members of School of Mathematics $=04$.
5.4 Details of progress of research scholars is as under:

| S. <br> $\mathbf{N}$ <br> $\mathbf{0}$ | Name | Entry No | Date of <br> Registratio <br> n | Full <br> Time/ <br> Part <br> Time | Name <br> of <br> Supervi <br> sor | No. of <br> Publication | Status |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  | Nati <br> onal <br> jour <br> nal | Inter <br> natio <br> nal <br> Jour <br> nal |  |  |  |
| $\mathbf{1}$ | 07PHDSP <br> M03 | Neetu <br> Kumari | 24.08 .2007 | Part <br> Time | Prof. V. <br> K. Bhat |  | 06 | Thesis <br> submitted |


|  | $\begin{aligned} & \text { 10PHDSO } \\ & \text { M03 } \end{aligned}$ | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { Sumeet } \\ \text { Kumar } \\ \text { Sharma } \end{array} \\ \hline \end{array}$ | 30-12-2010 | Full time | Dr. Rakesh Kumar | 06 | $\begin{aligned} & \hline \text { Thesis } \\ & \text { submitted } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| 4 | 10PHDSO |  |  |  |  |  |  |
|  | M04 | PratibaBhat | 03-01-2011 | Part |  | 00 |  |
| 5 | 10PHDSO | KiranChib |  | Time |  |  | Progress |
|  | M08 | Elina | 07-02-2011 | $\begin{array}{\|l} \hline \begin{array}{l} \text { Full } \\ \text { time } \end{array} \\ \hline \end{array}$ | Prof. V. <br> K. Bhat | 03 | Thesis submitted |
| 6 | M01 | Subhadarsini | 30.12.2011 | $\begin{aligned} & \text { Full } \\ & \text { time } \end{aligned}$ | Dr <br> Ajay K | 00 | In <br> Progress |
| 7 | 11PHDSO | Seema |  |  | sharma |  |  |
|  | M03 | Jamwal | 02-01-2012 | Full time | Dr. <br> Kuldip | 05 | $\begin{array}{\|l\|} \hline \text { In } \\ \text { Progress } \end{array}$ |
| 8 | 11PHDSO | Meeru Abrol |  |  | Raj |  |  |
|  |  | Suruchi | 03-01-20 | Full time | Prof. V. <br> K. Bhat | 00 | In Progress |
| 9 | M01 | Pandoh | 11-02-2013 | Full time | Dr. Kuldip | 02 | In <br> Progress |
| 10 | 12PHDSO | Ram Krishan | 08-02-2013 |  |  |  |  |
|  | M02 | Ram Krishan | 08-02-2013 | $\begin{aligned} & \text { Full } \\ & \text { tie } \end{aligned}$ | Dr. <br> Ajay K. | 00 | In Progress |
| 11 | 13PHDSO |  |  |  | Sharma |  |  |
|  | M14 | Sharma | 02.01.2014 | Full time | Dr. Kuldip | 00 | In Progress |
|  |  |  |  |  | Kuldip <br> Raj |  |  |

### 5.5 Agenda items:

### 5.5.1 Course structure and detailed curriculum of $\mathbf{5}$ Year Integrated M.Sc. Program in Mathematics at SMVDU (Annexure-5A).

The course structure and detailed curriculum of 5 Year Integrated M.Sc. Program in Mathematics was discussed in detail. All members including external members expressed their views regarding the introduction of the said program. All the members were unanimously of the view that the said program was designed as per need of the hour. It includes components from various disciplines (like Phy. Chem. Bio Tech., Huminities, Management, Languages) and makes it interdisciplinary.
Prof. R. K. Sharma suggested inclusion of certain books as references.The references have been included. Dr. Suparn suggested that a course on marketing research could be included as an elective for 5 year integrated program in Mathematics. It was unanimously agreed and Dr. Suparn was requested to design the said course for inclusion.

5 Year Integrated M.Sc. Program in Mathematics was unanimously approved keeping in view the fact that the program is interdisciplinary and students get well trained in five years of continuous teaching.

### 5.5.2. Review of Courses of study of existing M.Sc.(Mathematics) program as well as course content of all courses and change of courses of M.Sc. Mathematics, Mathematics courses offered in B.Tech. and PhD. (Annexure-5B1-5B4)

Courses of study of existing M. Sc. Program was reviewed. It was unanimously ágreed that open elective component to be introduced in the structure is a well taken step as it makes the program more interdisciplinary and job orientated.
The inclusion of open electives in structure was unanimously approved.
5.5.3. Restructuring of courses to be offered in different semesters so as to align with all other 5 Year Integrated Dual Degree Programs in Physics, Chemistry, Economics, Management etc.

The structure has been designed in line with other integrated dual degree program in Physics, Chemistry, Economics, Management etc. and discussed in details at 5.5.1.

### 5.5.4. Open electives (contents) (Annexure-5C)

Detailed course contents of the following open electives of 2 credits each
(i) Complex dynamics
(ii) Introductory Operation research
(iii) Modeling in Science, Engineering and Mangement
(iv) Statistical techniques
(v) Techniques in numerical analysis
(vi) Tensor Calculus
were discussed and approved.

### 5.5.5. Introduction of course entitled 'Geometry of Manifolds' for Ph. D. Course work.

The course entitled 'Geometry of Manifolds' (proposed by Dr. S. Sharma) for Ph. D. Course work was discussed and approved unanimously.
5.5.6. Introduction of course entitled 'Research Methodology for Mathematical Sciences' for Ph. D. Course work.

## The course entitled 'Research Methodology for Mathematical Sciences' (proposed by

 Mr. S. Singh) for Ph. D. Course work was discussed and approved unanimously.The Meeting ended with a vote of thanks to the Chair.


No: SMVDU/SOM/2014/ 3270
Dated: 03.06 .2014
To
Dean, Faculty of Sciences, CC:

- Registrar, for information \& needful please.
- PS to VC for kind information of the Hon'ble Vice Chancellor.
- All members.
- Concerned File.

