

## EVALUATIVE REPORT-13

### DEPARTMENT OF MATHEMATICS

1. Name of the Department - **Mathematics**
2. Year of Establishment - **B.Sc.(1949),M.Sc.1978)**
3. Names of Programs / Courses offered - **B.Sc.(MCS, MCP, (UG, PG, M. Phil, Ph.D., Integrated Masters; Integrated Ph.D., etc.) - MSP,PCM,PCS) & Ph.D.**
4. Names of Interdisciplinary courses and the departments/units involved - **NIL**
5. Annual/ semester/choice based credit system (program wise) - **NIL**
6. Participation of the department in the courses offered by other departments - **Chemistry**
7. Courses in collaboration with other Universities Industries, Foreign Institutions, etc. **NIL**
8. Details of courses/programs discontinued (if any) with reasons **NIL**
9. Number of Teaching posts -

|                      | Sanctioned | Filled |
|----------------------|------------|--------|
| Professors           | -          | -      |
| Associate Professors | -          | 02     |
| Asst. Professors     | 04         | -      |
| Mandey Lecturer      | -          | 01     |
| Part Time            | -          | 01     |

10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D./M. Phil, etc.,) As on 31/10/2015

| Name              | Qualification         | Designation        | Specialization | No. of Years of Experience | No. of PhD Students Guided for the last 4 Years |
|-------------------|-----------------------|--------------------|----------------|----------------------------|---|
| Dr. Arun Kumar    | M.Sc., M.Phil, Ph.D.  | Associate Prof.    | Vaidik Ganit   | 37 Years                   | -   |
| Dr.Sudhir Kumar   | M.Sc., M. Phil, Ph.D. | Associate Prof.    | Fluid Dynamics | 17 Years                   | 05  |
| Dr. Rimple Pundir | M.Sc., M.Phil., Ph.D. | Lecturer on Mandey | Fluid Dynamics | 13 Years                   | -   |

|                           |       |                       |   |   |   |
|---------------------------|-------|-----------------------|---|---|---|
| Ms.<br>Chinmay<br>Kaushik | M.Sc. | Part time<br>Lecturer | - | - | - |
|---------------------------|-------|-----------------------|---|---|---|

11. List of senior visiting faculty **-NIL**
12. Percentage of lectures delivered and practical classes handled (program wise) by temporary faculty **B.Sc. M.Sc. 60% 50%**
13. Student – Teacher Ratio (Programmer wise) **B.Sc. M.Sc. 130:1 30:1**
14. Number of academic support staff (technical) and administrative staff; sanctioned and filled **- NIL**
15. Qualifications of teaching faculty with D.Sc./D..Lit./Ph.D./M.Phil./P.G.
16. Number of faculty with ongoing projects from
  - a) National **-NIL**
  - b) International funding agencies and grants received **- NIL**
17. Departmental projects funded by DST –FIST; UGC, DBT, ICSSR, etc. and total grants received **- NIL**
18. Research Centre / facility recognized by the University - **NIL**
19. Publications

- Publication per faculty

**DETAILS OF PUBLICATIONS BY FACULTY MEMBERS**

| Name                    | Title  | Name of Co-author | Name of Journal  | Volume No. | Page No. | Month | Year | ISSN/ ISBN No. |
|-------------------------|--|-------------------|--|------------|----------|-------|------|----------------|
| Dr. Sudhir Kumar Pundir | Hydro magnetic Instability of Rivlin-Erickson Fluid in Porous Medium |                   | International Journal of Stability and Fluid Mechanism     | 1          |          | Jan   | 2010 | ISSN-0975-8399 |
|                         | Thermal Convection in a Walter's elastic-viscous and rotation        |                   | International Journal of Applied Mechanics and Engineering | 15         |          |       | 2010 | ISSN-1425-1655 |
|                         | On a couple stress hydro magnetic                                    |                   | Applications and applied mathematics, USA                  | 5          |          |       | 2010 | ISSN-1932-9466 |

|   |  |                       |                   |   |  |      |                |
|---|--|-----------------------|-------------------|---|--|------|----------------|
| cs  |  |                       |                   |   |  |      |                |
| Radiation effect on Natural Convection over a vertical cylinder embedded in porous media  |  | Bull. Cal. Math. Soc. | 96                |   |  | 2004 |                |
| Thermal Instability of a continuously stratified visco-elastic (Oldroyd in) fluid in porous medium  |  | Acta Cincia, Indica   | X<br>XI<br>X      | 3 |  | 2003 | ISSN-0970-0455 |
| Thermal Instability of a continuously stratified visco-elastic (Oldroydian) fluid in porous medium in the presence of horizontal magnetic field |  | Acta Cincia, Indica   | X<br>XI<br>X      | 3 |  | 2003 | ISSN-0970-0455 |
| Stability of stratified visco-elastic   |  | Acta Cincia, Indica   | X<br>X<br>XI<br>M | 3 |  | 2005 | ISS-0970-0455  |

|  |  |  |                         |          |  |      |                        |
|--|--|--|-------------------------|----------|--|------|------------------------|
| walter's<br>(Model<br>B')<br>Dusty<br>fluid in<br>porous<br>medium   |  |  |                         |          |  |      |                        |
| Thermal<br>Instabili<br>ty of<br>couple<br>stress<br>fluid in<br>the<br>presence<br>of<br>variable<br>Gravity<br>field and<br>rotation           |  | Reflection<br>Dess Era   |                         |          |  | 2006 | ISSN-<br>0973-<br>4597 |
| Hydrom<br>agnetic<br>Instabili<br>ty of<br>Stratifie<br>d Visco-<br>Elastic<br>Walter's<br>(Model<br>B')<br>Dusty<br>Fluid I<br>Porous<br>Medium |  | Acta<br>Cincia,<br>Indica  | X<br>X<br>XI<br>II<br>M | 219<br>5 |  | 2007 | ISSN-<br>0973-<br>0455 |
| Thermo<br>solutal<br>Instabili<br>ty of<br>couple<br>Stress<br>rotating<br>fluid in<br>the<br>presence<br>of<br>magneti<br>c field               |  | Internation<br>al<br>Transactio<br>n in<br>Mathemati<br>cal Science<br>and<br>computer |                         |          |  | 2009 | ISSN-<br>0974-<br>7273 |
| Thermal<br>Convect<br>ive<br>Stability<br>of   |  | Acta<br>Cincia,<br>Indica  | X<br>X<br>X<br>VI<br>IM |          |  | 2011 | ISSN-<br>0970-<br>0455 |

|   |  |   |   |  |      |      |                |
|---|--|---|---|--|------|------|----------------|
| Rivlin-Erickson Flow through a Porous Medium  |  |   |   |  |      |      |                |
| Hydrodynamic Instability of Rivlin-Erickson Compressible Fluid in Porous Medium, International Research Today |  | Mathematics and Computer                                  | 1 |  | June | 2013 | ISSN-2321-5356 |
| Thermal Instability of Stratified Visco-elastic(Maxwell) Fluid in Porous Medium                               |  | International Transaction in Applied Science              |   |  |      | 2009 | ISSN-0974-7273 |
| Rayleigh-Taylor Instability of ... Through Porous Medium  |  | International Trans. In Mathematical Science and Computer | 1 |  |      | 2010 | ISSN-0974-5068 |

- Number of papers published in peer reviewed journals (national / international) by faculty and students
- Number of publications listed in International Database (For E.g. Web of Science, Scopus, Humanities International Complete, Dare Database – International Social Sciences Directory, EBSCO host, etc.) **-15**
- Monographs **NIL**
- Chapter in Books **NIL**
- Books Edited **NIL**
- Books with ISBN/ISSN numbers with details of publishers **100**  
 (1. Pragati Prakashan, Asian Books (Pvt)Ltd., New Delhi  
 2. Krishna Publication, Meerut,

3. Kalyani Publishers, New Delhi
4. CBS Publishers, New Delhi
5. Hyveminds(Ptu)Ltd., Geenwavorly, Melborne Australia)

- Citation Index
  - SNIP **2.9**
  - SJR **NO**
  - Impact factor **NO**
  - h-index **NO**
20. Areas of consultancy and income generated **NIL**
  21. Faculty as members in
    - a) National committees **NIL**
    - b) International Committees **NIL**
    - c) Editorial Boards... **NIL**
  22. Student Projects
    - a) Percentage of students who have done in- house projects including inter departmental/program
    - b) Percentages of students placed for projects in organizations outside the institution i.e., in Research Laboratories/Industry/Other agencies **NIL**
  23. Awards / Recognitions received by faculty and students **NIL**
  24. List of eminent academicians and scientists/visitors to the department **NIL**
  25. Seminars/ Conferences/ Workshops organized & the source of funding
    - a) National **NIL**
    - b) International **NIL**
  26. Student profile program/ course wise

| Name of the Course/program<br>(Refer question no.4) | Class | Applications Received | Selected   | Pass %    |
|---|-------|-----------------------|------------|-----------|
| <b>B.Sc.(MCS, MCP, MSP, PCS, PCM)</b>               |       | <b>2799</b>           | <b>180</b> | <b>80</b> |
| <b>M.Sc.</b>  |       | <b>244</b>            | <b>60</b>  | <b>95</b> |

27. Diversity of Students

| Name of the Course | % of students from the same state | % of students from other states | % of students from abroad |
|--------------------|-----------------------------------|---------------------------------|---------------------------|
| <b>B.Sc.</b>       | <b>100</b>                        | <b>NIL</b>                      | <b>NIL</b>                |
| <b>M.Sc.</b>       | <b>95</b>                         | <b>5%</b>                       | <b>NIL</b>                |

28. How many students have cleared national and state competitive examinations Such as NET, SLET, GATE, Civil services, Defense services, etc. ?
29. Student progression –

| Student Progression              | Against % enrolled   |
|----------------------------------|----------------------|
| UG to PG                         | <b>25%</b>           |
| PG to M.Phil                     | <b>Not Available</b> |
| PG to Ph.D.                      | <b>Not Available</b> |
| Ph.D. to Post-Doctoral           | <b>Not Available</b> |
| Employed                         | <b>Not Available</b> |
| • Campus selection               | <b>Not Available</b> |
| • Other than campus recruitment  | <b>Not Available</b> |
| Entrepreneurship/Self-employment | <b>Not Available</b> |

30. Details of Infrastructural facilities
- a) Library - **NO**
- b) Internet facilities for Staff & Students - **NO**
- c) Class rooms with ICT facility **NO**
- d) Laboratories **NO**
31. Number of students receiving financial assistance from College, University, Government or other agencies **NIL**
32. Details on student enrichment programs (special lectures/ Workshops/ seminar) with external experts **NIL**
33. Teaching methods adopted to improve student learning **NIL**
34. Participation in Institutional Social Responsibility (ISR) and Extension activities - Students participate in ISR through **N.S.S., N.C.C. and Rovers /Rangers**
35. SWOC analysis of the Department and Future plans-
- S (Strength) -**  
Well qualified staff
- W (Weakness) –**  
Lack of teaching staff according to admitted students.
- O (Opportunities) –**  
As far as career options for students are concerned, Mathematics offers a versatile platform for futuristic education like-
- Challenges) –**  
In-spite of rural background of students we are providing them quality education.
- Future Plan –**  
To establish PG library, rich in books and to start certificate courses in department.

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