





# Chemistry

Govt. Maharani Laxmi Bai Girls P.G. College  
Fort, Indore(MP)



Year of establishment

1982

# Name of Programs/Course offered

UG

PG

Ph.D.

Annual/semester/choice based credit  
system

B.Sc. Semester system

M.Sc. Semester system

# Number of teaching post

Designation	Sanctioned	Filled
Professor	01	01
Asst. professor	03	02
Teaching faculty (Janbhagidari)	01	01

# FACULTY PROFILE

<b>Name</b>	<b>Qualification</b>	<b>Designation</b>	<b>Specialization</b>	<b>No. of years experience</b>	<b>No. of Ph.D. students guided</b>
<b>Dr. R.K. Pathak</b>	M.Sc., Ph.D.	Professor	Physical chemistry	19 Years	08
<b>Dr. M. Kavishwar</b>	M.Sc., Ph.D.	Asst. Professor	Inorganic chemistry	34 Year	-
<b>Dr. Neelu Malviya</b>	M.Sc., Ph.D.	Asst. Professor	Organic chemistry	08 Years	-
<b>Ms Reena Goad</b>	M.Sc., M.Phil.,	Guest faculty	Pure chemistry	-	-

# LIST OF SENIOR VISITING FACULTY

Dr. A.G. Fadnis - Indore

Dr. R. K. Khambate – Retired principal, Indore

Dr. Rushina Natu – Professor, Indore

Dr. R .Prasad – Professor and head of Chemistry UTD, Indore.

Dr. R. K. Srivastava – Professor, Bhopal

# NUMBER OF ACADEMIC SUPPORT STAFF (TECHNICAL) AND ADMINISTRATIVE STAFF

Name	Technical/Administrative	Sanctioned	Filled
Shalini Add	Lab technician	02	01
Raj Bhuriya	Lab Attendant	01	01



# SPONSORED PROJECTS UNDERTAKEN

Sponsoring Agency	Title of project	Amount of grant	Period
UGC BHOPAL	Preparation and Characterization of Nanoparticles materials.	Rs.50,000	April 2006-march 2008
MP CST	Preparation and Characterization of Nanoparticles materials.	Rs.2,50,000	April 2001-March 2004
UGC Bhopal	Thin Films Preparation and Characterization.	Rs.25,000	April 2001-March 2003
UGC Bhopal	Electro synthesis & Characterization of Co & Ni doped ZnSe Semiconducting Photo electrodes.	Rs.24,000	April 1998-March 2000

# RESEARCH CENTRE/ FACILITIES RECOGNIZED BY THE UNIVERSITY

Research Centre for Ph.D. work



# PUBLICATIONS

**DR. R.K. PATHAK**

S. No.	Title of research paper	Name of the journal/Vol./ISSN/ISBN/Page No.	Remark
01	Potentiostatic electrochemical preparation and characterization of Al containing Nickel selenide.	Oriental J. chem. 29(4) 2013.	International
02	Potentiostatic electrochemical preparation and characterization of cobalt containing iron molybdenum thin film.	Ultra chem.9(3) 333 (2013).	International
03	Electrochemical preparation and characterization of Fe-Cu alloy on anodized alumina templates.	J. chem. & Chem. Sci. 3(4) 251(2013).	International

04	The analysis of water and locked soil quality using physic- chemical parameters in Sangwi reservoir.	I J P C B S 3(4) 1126 (2013).	International
05	The potentiostatic electrodeposition of indium doped aluminium selenide thin films.	Oriental j. Chem. 3(29) 1047 (2013).	International
06	Potentostatic electrochemical preparation and characterization of ZnCdSe.	J. Ind. St. Res. 3(9) 2013.	International
07	Physico-chemical analysis of water and locked soil of sadli reservoir.	<i>Int. Re .J.Env. sci.</i>	International
08	Electrosynthesis and Characterization of CdSeHgTl thin films.	Res.J.chem.sci.3(4)44(2013)	International

09	Ananalysis of water Quality using physico-chemical parameters, Satak reservoir.	Int. Res. J. Env. Sci. 2(1) 2013.	International
10	Analysis and physico-chemical parameters of Sarvar Devla Sugar Mill studies of effluents.	Current word Env. 7(2) 313 (2012).	International
11	Electrochemical preparation and characterization of Ni deposition on Aluminium surface	J. Mat Sc. Res. Ind. 7, 267 (2010)	International
12	Synthesis and characterization of Gallium selenide nanostructures on porous aluminium oxide templets by high frequency alternating current electrolysis	J. Applied Surface Sc. 256, 2097 (2010).	International

13	Potentiostatic electrosynthesis and characterization of Te containing CdSe Thin films. J. Mat .Sc. Res.Ind.6 (1) 219(2009)	J. Mat .Sc. Res.Ind.6 (1) 219(2009)	International
14	Study of Electrosynthesis and characterization of In doped ZnSe.	J. Mat. Sc.res.5(2) 477(2008).	International
15	Galvanostatic deposition and corrosion studies of Te containing CuSe thin films.	JERAD. 3(1)122 (2008)	International

## Dr. Neelu Malviya

S.No.	Title of research paper	Name of the journal/Vol./ISSN/ISBN/Page No.	Remark
01	Phytochemical screening of some trees of college campus,	journal of environmental science, Vol 2(11), 13-17 pp, Nov(2013)	International

# PAPERS IN CONFERENCE PROCEEDINGS/ SEMINARS

- 1).National conferencr on Emerging Trends in Human Computer interaction in Engineering Education. 5 oct.2013, JIT Borawan(MP).
- 2)International conference on Chemistry and materials Prospectus and Perspectives-2012. Lucknow, 14-16 Dec 12.
- 3) Training workshop on Environmental Conservation and Management. Bhopal, 5-6 Dec 12.
- 4) 5th International Congress of Chemistry and Environment, Malaysia,27-29 May 2011.



## CONTINUE..

5) Workshop on Improving Skills in Pharmaceutical Practices, Indore 11-12 Dec 2010.

6) 2<sup>nd</sup> bhartiya vigyan sammelan, DAVV, Indore  
27 Nov 03 Dec 2009

7) National Conference of Santi Swarup Bhatnagar Awardees. Davv, Indore 2009

8) International Congress of Environmental Research. BITS, Pilani, Goa. 18-20 Dec. 2008.

# FACULTY AS MEMBER

Name of Faculty	Name of the Body	Status of Membership
Dr. R. K. Pathak	Journal of Indian Chemical Society, Kolkata	Life
	Indian Association of Nuclear Chemists & Allied Scientists, Mumbai	Life
	Association of Indian Universities, New Delhi.	Life
	Indian Association of Science Congress	Annual
Dr. Neelu Malviya	International Science Congress Association	Life

# STUDENT PROJECT

a) Percentage of students placed for projects in organization outside the institution.

Research laborites	10%
Industries	30%
Other agencies	40%

b) Percentage of students who have done in-house project

M. Sc. - 20%

**Some students working on following topics :**

1. Water analysis and different parameters.
2. Electroplating
3. Spectrophotometer



Students Deepa sharma and Teena Parihar working on project Electroplating .

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Students Anu Kadam and Teena Gurjar working on photo spectrophotometer.

# AWARD /RECOGNITIONS RECEIVED BY FACULTY AND STUDENTS

## Dr. R.K. Pathak

- JRF DNES New Delhi,
- SRF DNES New Delhi,
- Research Associateship, CSIR, New Delhi,
- Excellent work in teaching and research award,  
District administration, Indore (MP) India

## Rochlani Award(2013)

- Meenu Joshi
- Anita Baretha
- Aafreen Mansuri

# SEMINAR/CONFERENCES/WORKSHOP ORGANIZED

## Workshop

### “Quality education in science”2013





# STUDENT PROFILE COURSE WISE (2012-2013 )

Name of the course	No. Of Students	Pass %
B.Sc. 1 <sup>st</sup> Year	125	84%
B.Sc.2 <sup>nd</sup> Year	54	91%
B.Sc.3 <sup>rd</sup> Year	56	98%
M.Sc.previous	19	96%
M.Sc.final	24	100%

## (2011-2012)

<b>S.No.</b>	<b>Class</b>	<b>No. of student</b>	<b>Pass%</b>
<b>1</b>	B.Sc. 1 <sup>st</sup> Year	<b>147</b>	<b>60%</b>
<b>2</b>	B.Sc.2 <sup>nd</sup> Year	<b>48</b>	<b>72%</b>
<b>3</b>	B.Sc.3 <sup>rd</sup> Year	<b>50</b>	<b>96%</b>
<b>4</b>	M.Sc. previous	<b>19</b>	<b>95%</b>
<b>5</b>	M.Sc. final	<b>23</b>	<b>100%</b>

## (2010-2011)

S.No.	Class	No. of student	Pass%
1	B.Sc. 1 <sup>st</sup> Year	113	54%
2	B.Sc.2 <sup>nd</sup> Year	61	80%
3	B.Sc.3 <sup>rd</sup> Year	49	100%
4	M.Sc.previous	25	88%
5	M.Sc. final	16	100%

How many students have cleared national and state competitive examination such as NET, SLET, GATE, Civil services, Defense services.

- **Somya Gadhwal – UCO Bank**
- **Neelam Gehlot – SBI**
- **Reena Suryawanshi – MP Police**

# Ph.D. Awarded

1. Mrs. Anita Rathore
2. Mrs. Neelam Raja Jain
3. Mrs. Sarika Upadhya
4. Mr. Alok Agarwal
5. Mrs. Alka Shukla
6. Mrs. Nitika Kakani
7. Mrs. Asha Gayakwad
8. Mrs. Sharmila Bhaghel
9. Mr. Janeshwar Yadav
10. Mrs. Kavita Sharma
11. Mrs. Anupama Tiwari
12. Mrs. Nina (Sohani) Sharma
13. Mrs. Rachana Dubey



# DETAILS OF INFRASTRUCTURE

## Library

### Reference Books

S.No.	Name of books	Name of author
1	Physical chemistry	A. J. Mee
2	Principals of physical chemistry	B.R. Puri
3	Advanced physical chemistry	Gurdeep R.chatwal
4	Organic reaction mechanism	P.S.Kalsi
5	Spectroscopy of organic compound	P.S. Kalsi
6	Confermation mechanism	P.S. Kalsi
7	Text book of quantitative inorganic analysis	J. Basset
8	Bioorganic , bioinorganic & supramolecular chemistry	P.S.Kalsi

# CONTINUE..

9	Advanced practical physical chemistry	J.B.yadav
10	Vogal book of quantitative chemical analysis	J.mendhan e.l.
11	Analytical chemistry	S.M.khopker
12	Solid state chemistry &it's application	Antony west
13	Advanced practical chemistry	Gurdeep raj
14	Environmental chemistry	A.R.de
15	Inorganic chemistry	Chatwal
16	Analytical chemistry	Garyde christian
17	Biochemistry	C.B.Powar & gurdeep chatwal
18	Spectroscopy	Dr.H.Kour
19	Environmsetal chemistry	B.K.Sharma &H.Kour
20	Computers for chemist	Pundir &bawl

# CONTINUE..

21	Advanced organic chemistry	Michal smith
22	Advanced organic chemistry	Jerry march
23	Mathematics for chemist	B.whitmore
2	Environmental pollution,monitoring control	S.M. Khopker
25	Photo chemistry	Alka gupta
26	Fandamentals of photochemistry	K.K.Rohtgi mukharjee
27	Spectroscopy	B.K.Sharma
28	Group theory &it's chemical applications	P.K.Bhattacharya
29	Inorganic chemistry	J.E.Huheey
30	Advanced physical chemistry	Gurdeep raj
31	Bioinorganic,bioorganic &supramolecular chemistry	B.K.Bhagi
32	Bioorganic chemistry	Springer
33	Medicinal chemistry,lecture on drug design & synthetic drug	M.L.Gagwal
34	Essentials of physical chemistry	B.S.Bahel
35	Application of absorption spectroscopy of organic compound	J.N.Dyer



# CONTINUE..

36	Synthetic drug	Gurdeep chatwal
37	Medicinal chemistry	Asutosh kar
38	Chemical application of group theory	F.A.Cotten
39	Physicals methods in chemistry	R.S.Drago
40	Organomettalic chemistry	Gurdeep chatwal
41	Group theory & it's application	R.V.Raman



# RESEARCH JOURNALS

➤ N-List for accessing research journals.

➤ Journal of chemical science.

➤ Research journal of chemistry.

➤ Current science.

➤ Every men's science.



# SOME IMPORTANT LABORATORY EQUIPMENT

- ❖ Digital potentiometer-04
- ❖ Distillation assembly-01`
- ❖ Colorimeter-01
- ❖ Digital conductivity meter-06
- ❖ LCD projector-01
- ❖ Melting point apparatus -06



- ❖ Magnetic stirrer -01
- ❖ Muffle furnace -01
- ❖ Hot air oven -02
- ❖ Overhead projector -01
- ❖ pH meter -06
- ❖ Polari meter -02
- ❖ Refractometer -06



- ❖ Spectrophotometer -01
- ❖ Vacuum pump -01
- ❖ Electric water bath -02
- ❖ UV - Visible Spectrophotometer-01
- ❖ Water analyzer-01
- ❖ Multi Meter-03
- ❖ Digital single pan balance-01



# Class rooms with ICT facility



# Teaching method adopted to improve student learning

❖ Overhead projector (OHP)

❖ LCD Projector

❖ Poster presentation

❖ Quiz

❖ Group discussion

❖ Seminar

# SWOC ANALYSIS

## Strength

- ❖ Qualified Teaching staff
- ❖ Departmental Library
- ❖ N-List for accessing many more research journals
- ❖ Computer with Net connectivity



# Weakness

- ❖ Insufficient number of teaching staff
- ❖ Lack of modern equipment's
- ❖ Lack of space for laboratory

# *Opportunities*

The employment possibilities for chemistry graduates are as numerous as they are varied. Chemists are employed in many industries and chemists role could be concern with

- ❖ Fine and Heavy Chemical Manufacturing
- ❖ Food and Beverage Production
- ❖ Mining and Metallurgy
- ❖ Petroleum
- ❖ Pharmaceuticals/Drugs
- ❖ Plastics
- ❖ Pulp and Paper
- ❖ Manufacturing Process Control
- ❖ Quality Control

- ❖ Research and Development
- ❖ Technical Sales and Service
- ❖ Chemists are also hired by federal, provincial and municipal government agencies in the areas of :
  - ❖ Education
  - ❖ Forensic Investigation
  - ❖ Mineral Analysis
  - ❖ Public Health
  - ❖ Research and Development Support for Resource Industries
  - ❖ Technical and Analytical Information Development
  - ❖ Waste Management
  - ❖ Water and Air Quality Management

## Challenges

- ❖ To develop the students interest in chemistry.

## Future Plan

- ❖ To develop a good research laboratory in the department.
- ❖ To frequent visit of students in different lab as well as industries.

# PHOTO GALLERY



The background features several vibrant pink orchid flowers in the upper right and lower right corners. The rest of the background is a soft, light pink gradient with numerous out-of-focus circular bokeh lights of varying sizes, creating a dreamy and elegant atmosphere.

***THANK YOU***

**THANK YOU FOR JOINING US TODAY.....**