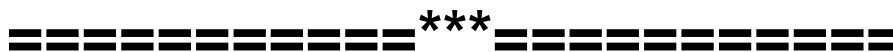


# DEPARTMENT OF CHEMISTRY



## DEPARTMENT AT A GLANCE

### MISSION

"Transforming the hopes and dreams of diverse individuals into reality by providing value added quality education, exposing students to advances in Chemical Sciences, offering guidance in acquiring theoretical and practical skills and creating an exceptional learning environment that would groom total personality".

### VISSION

"To be a torchbearer in the arena of higher education by empowering the youth through quality education that would develop intellectually alive, ethically upright and socially responsible citizens, inclined to meet the global challenges of the ever-changing, technology - oriented world."

The Department of Chemistry was established in 2008 at UG level with an objective of providing quality education in the conventional areas of science and recently PG programme and institutional level Value Added Course is introduced in 2021. Since its inception, the department has crossed several milestones. The Department offers undergraduate courses – B.Sc. (with Chemistry), postgraduate course - M.Sc. (Chemistry with Organic, Inorganic and Physical Chemistry as elective) and value added course on "Physicochemical and biological analysis of drinking and effluent water".

With one regular and one adhoc faculty, the department presently caters about 300 UG and 11 PG student. The department has one laboratory possessing necessary chemicals, reagents, glassware, labware's and basic instruments for performing experiments in physical, inorganic, organic and analytical chemistry. Faculty members are active in educational sphere across the state and contribute to academic and research fields in various capacities. Department has got research project of 5 lacs from Chhattisgarh Council of Science and Technology (CCOST) in 2015. Department has produced good number of publications in reputed national and international journals.

The journey from a small department, teaching 60 undergraduate students in 2008 to 300 UG, 11 PG student, CCOST research project supported department in 2021 is a result of coordinated effort of dedicated faculty. The department has contributed immensely in the college being accredited B grade by NAAC. Department has actively contributed in organizing National Seminar on "Rashtra Vikas Ke Vividh Ayam" during 2018 and National Seminar on "Recent Trends in Yoga: Socioeconomic, Scientific and Global Perspective" at the college as Organising Secretary. The department strives to achieve its prime objective - to produce and

train technical and scientific personnel of the highest order of excellence having scientific aptitude. We are proud that our collective enthusiasm is continuously generating a good number of bright students.

## COURSES

S, No.	Course Name	Seats	Duration	Eligibility	Syllabus	Course Outcome
1.	M. Sc.	20	Four Semester	B.Sc. with Minimum 50 % marks in aggregate or equivalent with Chemistry as one subject from recognized university/institution.	Link	Link
2.	B. Sc.	110	Three Years	10+2 level with Math/Bio from any recognized boards or equivalent	Link	Link
3.	Value Added Certificate Course	40	30 Hours	Regular Science student of the college	Link	Link

## RESEARCH

S. No.	Title of the Project	Duration	Funding Agency	Amount	Status	Ref. No.
1.	“Ion Conducting Hot Pressed Polymer Electrolytes: Synthesis, Characterization and Application”.	3 Years	Chhattisgarh Council of Science and Technology (CCOST)	5,00,000/-	Completed	2742/CCOST/ MRP/15, Raipur, Dated 24.03.2015
2.	“Investigations of Luminol Based Chemiluminescence System in the Presence of	3 Years	Rashtriya Uchchar Shiksha Abhiyan (RUSA), MHRD,	10,00,000/-	Applied (2016)	-

	Some Metal Nanoparticles”		Deptt. of Higher Education, Govt. of India.			
3.	“Investigations of Luminol Based Chemiluminescence System in the Presence of Some Metal Nanoparticles”	3 Years	UGC, Regional Centre, Bhopal (M. P.)	10.00.000/-	Applied (2018)	

### CONFERENCE /TRAINING PROGRAMME ORGANIZED

- ✚ Active contribution as Organising Secretary (NAAC Coordinator) in National Seminar on “Rashtra Vikas ke Vividh Ayam” Organized by IQAC and NAAC Committee of the college on February 2, 2018
- ✚ Active contribution as Organising Secretary (IQAC Coordinator) in National Seminar on “Recent Trends in Yoga: Socioeconomic, Scientific and Global Perspective” Organized by IQAC Committee of the college on February 11, 2020.

### STAFF



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### **EMINENT ACADEMICIANS AND SCIENTISTS /VISITORS TO THE DEPARTMENT**

✎ Guest lectures are given by following eminent scholars:-

- ✓ *Dr. G. K. Patra – Professor (Dean, Physical Sciences), Dept. Of Chemistry, Guru Ghasidas Central University, Bilaspur (C. G.)*
- ✓ *Dr. K. C. Dewangan - Dept. Of Chemistry , Indira Gandhi National Tribal Central University, Amarkantak (M .P)*
- ✓ *Dr. S. S. Thakur- Dept. Of Chemistry, Guru Ghasidas Central University, Bilaspur (C. G.)*
- ✓ *Dr. A. K. Tripathi- Principal, Govt. Mahamaya College, Ratanpur (C. G.)*

### **DEPARTMENTAL STUDENT PROFILE:**

<i>Courses</i>	<i>Session</i>	<i>Application received</i>	<i>Selected (admitted)</i>		<i>Pass percentage</i>	
			<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
<i>B. Sc. Part – I</i>	<i>2011 - 12</i>	<i>61</i>	<i>26</i>	<i>19</i>	<i>19.23%</i>	<i>21.05%</i>
	<i>2012 - 13</i>	<i>79</i>	<i>33</i>	<i>26</i>	<i>36.36%</i>	<i>61.53%</i>
	<i>2013 - 14</i>	<i>68</i>	<i>38</i>	<i>22</i>	<i>44.73%</i>	<i>90%</i>
	<i>2014 - 15</i>	<i>139</i>	<i>44</i>	<i>26</i>	<i>95%</i>	<i>100%</i>
	<i>2015-16</i>	<i>157</i>	<i>43</i>	<i>36</i>		
	<i>2016-17</i>	<i>154</i>	<i>80</i>		<i>55%</i>	
	<i>2017-18</i>	<i>261</i>	<i>79</i>		<i>54.43%</i>	
	<i>2018-19</i>	<i>365</i>	<i>87</i>		<i>79%</i>	

	<b>2019-20</b>	<i>168</i>	<i>95</i>			
	<b>2020-21</b>					
<b>B. Sc. Part - II</b>	<b>2011 - 12</b>	<i>14</i>	<i>11</i>	<i>03</i>	<i>90%</i>	<i>100%</i>
	<b>2012 - 13</b>	<i>17</i>	<i>08</i>	<i>09</i>	<i>75%</i>	<i>90%</i>
	<b>2013 - 14</b>	<i>43</i>	<i>17</i>	<i>20</i>	<i>88.23%</i>	<i>85%</i>
	<b>2014 - 15</b>	<i>37</i>	<i>19</i>	<i>16</i>	<i>52.63%</i>	<i>87.5%</i>
	<b>2015-16</b>	<i>49</i>	<i>19</i>	<i>30</i>		
	<b>2016-17</b>	<i>51</i>	<i>51</i>		<i>96%</i>	
	<b>2017-18</b>	<i>59</i>	<i>59</i>		<i>86.44%</i>	
	<b>2018-19</b>	<i>70</i>	<i>62</i>		<i>95%</i>	
	<b>2019-20</b>	<i>68</i>	<i>68</i>			
	<b>2020-21</b>					
<b>B. Sc. Part - III</b>	<b>2011 - 12</b>	<i>11</i>	<i>7</i>	<i>4</i>	<i>71.42%</i>	<i>75%</i>
	<b>2012 - 13</b>	<i>21</i>	<i>13</i>	<i>03</i>	<i>92%</i>	<i>100%</i>
	<b>2013 - 14</b>	<i>17</i>	<i>08</i>	<i>04</i>	<i>62.5%</i>	<i>75%</i>
	<b>2014 - 15</b>	<i>26</i>	<i>11</i>	<i>15</i>	<i>100%</i>	<i>93%</i>
	<b>2015-16</b>	<i>33</i>	<i>19</i>	<i>34</i>		
	<b>2016-17</b>	<i>50</i>	<i>50</i>		<i>94%</i>	
	<b>2017-18</b>	<i>61</i>	<i>61</i>		<i>95.08%</i>	
	<b>2018-19</b>	<i>78</i>	<i>64</i>		<i>95%</i>	
	<b>2019-20</b>	<i>68</i>	<i>68</i>			
	<b>2020-21</b>					

## **INFRASTRUCTURAL FACILITIES:**

- a) *Library- A general library is for all students. Department has taken initiative to run departmental library on donation basis.*
- b) *Internet facilities for staff and students: 02 computers are available in the department with internet access for staff and students*
- c) *Total number of classrooms: 02*
- d) *Classrooms with ICT facility: Total two classrooms are available with ICT facility in the college.*
- e) *Student's laboratories: 01*

## **SWOC Analysis**

### **➤ Strengths**

1. *Highly qualified and experienced faculty member and energetic and encommiastic supporting staff.*
2. *High demand ratio of the institute.*
3. *Most of the equipment available in laboratory at UG level.*
3. *Enriched Library.*
4. *Computers with internet accessibility for students and faculty.*
5. *All sanctioned posts are filled.*

### **➤ Weakness**

1. *Teacher Student ratio is very high.*
2. *Lack of proper classroom for classes.*
3. *Lack of separate and sufficient laboratories for UG and PG students.*
4. *Students are from socio, economically and geographically backward region.*
5. *Lack of sophisticated instruments in for PG and research lab.*

### **➤ Opportunities**

- 1. Confidence building through seminars and group discussions and personality development through interactive sessions.*
- 2. Students are motivated and guided by able faculty member to get higher degree and appear in NET, SLET and other competitive exams.*
- 3. Department assist students to apply for Summer Fellowship sponsored by Indian Academy of Science.*
- 4. Department gives platform to the students to show their potential and knowledge by mentoring through mentor-mentee activities, science club, intercollege model competition, conducting seminars and giving projects etc.*

### **➤ Challenges**

- 1. To cope-up with the students from rural background.*
- 2. Student-teacher ratio is unexpectedly high at the UG level.*
- 3. To teach and conduct practical classes of the students with poor foundation and background.*
- 4. Scarcity of funds for chemicals.*
- 5. Insufficient infrastructural facility.*

### **Future plans of the department.**

- 1. Recognition of department as research centre.*
- 2. To organize national level conference/workshop/seminar in the field of chemical science.*
- 3. To improve the infrastructural facility of the department which include laboratory at PG level, development of departmental library, departmental smart class, more computer facility and development of research lab.*

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