

## PG AND RESEARCH DEPARTMENT OF CHEMISTRY

Name of the Department : Chemistry  
Year of establishment : 1978 - 1979

### 1. Names of Programme / Courses offered (UG, PG, Ph.D., Integrated Masters; Integrated Ph.D., etc.)

S.No.	Name of the Programme	Subject	Year of affiliation	No. of sections	Sanctioned strength	Total Student strength (2018 - 2019)	Remarks
1.	B.Sc.	Chemistry Reg	1978 - 1979	I	48	I - 48 II - 43 III - 42	I, II & III Year (133)
2.	B.Sc.	Chemistry SF	2005 - 2006	II	40	I - Nil II - 10 III - 24	I, II & III Year (34)
3.	M.Sc.	Chemistry SF	1994 - 1995	I	20	I - 17 II - 17	I & II year (34)
4.	M.Sc.	Chemistry SF	2007 - 2008	II	16	--	--
5	Ph.D.	Chemistry	2013-2014	FT/PT	24	FT -13, PT -2	--

### 2. Inter-disciplinary courses and departments involved

In UG level, in Part IV inter-disciplinary Courses like

<b>Skill Based Elective</b>	-	<b>3 Papers</b>
<b>Non Major Elective</b>	-	<b>2 Papers</b>
<b>Value Education</b>	-	<b>1 Paper</b>
<b>Environmental Science</b>	-	<b>1 Paper</b>
<b>Gender Study</b>	-	<b>1 Paper</b>
<b>Soft Skills Development</b>	-	<b>1 Paper</b>

And in **Part IV**

**NSS, NCC, YRC and Physical Education** are offered as mandatory to all the students.

In PG level, in the final year **Elective Courses** are offered as mandatory to all the students.

Interdisciplinary courses		Departments involved
UG Level	Skill Based Elective <sup>3</sup> - Papers	Chemistry
	Non - Major Elective 2 - Papers	Energy Physics and Laser Physics - Handled by Physics Department
PG Level	Elective Courses	1. Analytical Chemistry 2. Polymer Chemistry 3. Selective Topics in Organic Chemistry 4. Industrial Chemistry 5. Chemistry of Nano Science and Nano Technology

### 3. Annual/Semester/Choice Based Credit System:

Semester pattern with Choice Based Credit System

### 4. Participation of the department in the courses offered by other departments:

Our department extending the research oriented Skills to Mathematics ,  
Physics, Botany and Zoology Students and Research Scholars

Handling Ancillary Chemistry to the Departments like  
Mathematics, Physics, Botany and Zoology

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

Post	Sanctioned	Filled	Vacant
Associate Professor	-	3	-
Assistant Professor	8	3	2
Guest Faculty	-	3	-

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

S.No.	Name & Qualification	Designation	Specialization	No. of Year's Experience	No. of Ph.D. students guided in the last 5 years
1	Dr. S.Kalyanasundharam, M.Sc., M.Phil., Ph.D.	Former Principal i/c Associate Professor and Head	Physical Organic Chemistry	33yrs , 06 months	9
2	Dr. S. Arivoli M.Sc., M.Phil., Ph.D.	Principal	Physical and Environmental Chemistry	26yrs	21
3	Dr. R. Kunjitham, M.Sc., B.Ed, M.Phil., Ph.D.	Associate Professor	General Chemistry	31 yrs, 11months	4
4	Mr. M. Palanisamy, M.Sc., M.Phil., PGDCA., M.A., (Eng)	Associate Professor	Physical Chemistry	31 yrs, 11 months	--
5	Mrs. K. Bharathi, M.Sc., M.Phil., B.Ed.,	Assistant Professor	Polymer Chemistry	09 yrs, 08 months	--
6	Dr. A. Uthaya, M.Sc., M.Phil., Ph.D.	Assistant Professor	Green Chemistry	02 yrs, 05 months	--
7	Dr. K. Ramesh, M.Sc., M.Phil., B.Ed., Ph.D.	Assistant Professor	Environmental Chemistry	02 yrs, 05 months	3

Self Finance Stream					
01	Mrs. K. Suridha, M.Sc., B.Ed.,	Guest Faculty	General Chemistry	07 yrs	--
02	Ms. K. Anitha, M.Sc., B.Ed.,	Guest Faculty	General Chemistry	06 yrs	--
03	Dr. T. Rajaraman ,M.Sc., Ph. D	Guest Faculty	General Chemistry	01yr	--

**7. Percentage of classes taken by temporary faculty-Programme-wise information**

S.No.	Programmes	Session
1.	UG	6
2.	PG	4

**8. Programme-wise Student Teacher Ratio**

S.No.	Name of the Programme	Student teacher ratio
1.	UG	
2.	PG	

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

S.No.	Staff	Sanctioned	Filled
1.	Lab Assistant	3	1
2.	Store Keeper	1	--

10. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Mention names of funding agencies and grants received project-wise.

**Completed Projects**

S. No.	Name of the Faculty	Project title	Name of the Project	Grant Agency	Amount Sanctioned (Rs.)
01	Dr. R. Kunjitham	Electro organic studies of Flavonoid Compounds	Minor	UGC - SRO	32,000
02	Mr. M. Natarajan	Synthesis and biological studies of some heterocycles	Minor	UGC - SRO	75,000

**On-Going Projects**

S. No	Name of the Faculty	Project title	Name of the Project	Grant Agency	Amount Sanctioned (Rs.)
		Nil			

**Accepted Projects**

S.No.	Name of the Faculty	Project title	Name of the Project	Grant Agency	Amount Sanctioned (Rs.)
		Nil			

11. Departmental projects funded by DST-FIST; DBT, ICSSR, etc.; total grants received:

Nil

## 12. Research facility / Centre with

### State recognition

- \* Three Staff members pursuing research by guiding Ph.D., scholars as the Department has got the recognition of Bharathidasan University, Thiruchirappalli, as an affiliated **“Research Centre”**.
- \* All the research supervisors of the department are members of Department Research Committee and members of Doctoral Committees of other affiliated research centers of the University.

### National and International recognition

- \* Staff members of the department are entrusted with academic responsibilities like re-viewer /referee /judgesin many reputed national and international journals as well as in Societies.
- \* Research supervisors of the department are in the Panel of Indian Evaluators of M.Phil., and Ph.D., thesis of Various Universities

\* Staff and Scholars of the department have presented research articles in many scientific forum of National and International Status and published research articles in well reputed Journals.

### 13. Publications

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

S. No.	Name of the staff	No. of papers published in reputed journals	No. of booksPublished	No. of papers presented in Seminars	Citation Index	h-index	i10-index	Invited Lectures
1	Dr. S.Kalyanasundharam	26	05	17				06
2	Dr. S. Arivoli	208	01	51	4257	34	107	07
3	Dr. R. Kunjitham	04	01	06				02
4	Mr. M. Palanisamy	03	--	--	--	--	--	03
5	Mrs. K. Bharathi,	04	--	--	01	--	--	--
6	Dr. A. Uthaya,	13	--	05	106	06	--	--
7	Dr. K. Ramesh	21	--	03	32	04	01	--

Self Finance Stream								
1.	Mrs. K. Suridha	--	--	--	--	--	--	--
2.	Ms. K. Anitha	--	--	--	--	--	--	--
3.	Dr. T. Rajaraman	03	--	--	--	--	--	--

\* **Author for correspondence for all the Research papers and Papers presented in Seminars**

- ✓ Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.):
- ✓ All the research papers are published during this assessment period were found in
  - ❖ Google Scholar
  - ❖ Research Gate
  - ❖ Scopus
  - ❖ Get cited
  - ❖ Web of Science

For instance, all the faculty names of our department are in almost all the scientific journals data base.

- ✓ Citation Index - range/ average:
  - \* The articles which are published from the department having Citation indices from **1 to 1000**
- ✓ SNIP and SJR:
  - \* The research articles were published from the department in various reputed journals are covered by Scopus and other data base along with their SNIP (Source normalized Impact per journal) and SJR (SCImagoJournal Rank).
- ✓ Impact factor-range /average:
  - \* All the papers with impact factor ranging from **0.5 to 3.5**
- ✓ h-index:
  - \* All the Research Supervisors and Scholar with publications do have individual **h-index** ranging between **1 and 15**.
- i10-index:
  - \* All the Research Supervisors and Scholar with publications do have individual **i10-index** ranging between **1 and 20**.

**14. Details of Patents and income generated -Nil**



**15. Areas of consultancy and income generated - Nil****16. Faculty recharging strategies :Orientation / Refresher and Training Programmes**

S.No.	Name of the faculty	Orientation / Refresher and Training Programmes Attended
1.	Dr. S.Kalyanasundharam	06
2.	Dr. S. Arivoli	06
3.	Dr. R. Kunjitham	04
4	Mr. M. Palanisamy	05
5.	Mrs. K. Bharathi,	04
6.	Dr. A. Uthaya,	02
7.	Dr. K. Ramesh	01

**17. Papers presented in Seminars**

S.No.	Name of the faculty	No. of Papers Presented		
		State	National	International
1.	Dr. S.Kalyanasundharam	-	16	01
2.	Dr. S. Arivoli	30	18	03
3.	Dr. R. Kunjitham	-	04	01
4.	Mr. M. Palanisamy	-	-	-
5.	Mrs. K. Bharathi,	-	-	-
6.	Dr. A. Uthaya,	-	-	-
7.	Dr. K. Ramesh			
Self Finance Stream				
1.	Mrs. K. Suridha	-	-	-
2.	Ms. K. Anitha	-	-	-
3.	Dr. T. Rajaraman	-	-	-

## 18. Students projects

### ✓ Percentage of students who have done in-house projects including inter-departmental

All the M.Sc., students are permitted to undertake a project work to gain extra-credit in the existing CBCS. They mostly make use of department of Chemistry to do their project as it is mandatory in curriculum.

Apart from the parent department, they do collaborative work with industries like Asian Paints (India) Limited Cuddalore, Indomer Coastal Hydraulics (P) Ltd Chennai, SKAN Research Lab (P) Ltd Puducherry, JS Scientific Chennai, IKOS Gaia Infra PVT Ltd Chennai, Strides Shasun Limited Cuddalore, Chennai Petroleum Corporation Limited (CPCL) Panangudi Nagapattinam.

### Name of the Student with placement and prize won

#### BHARATHIDASAN UNIVERSITY RANK HOLDERS

Degree	Name	Batch	University Rank
B.Sc., Chemistry	R. Sivasakthikumaran	2003 - 2006	2 <sup>nd</sup>
B.Sc., Chemistry	K. Suridha	2004 - 2007	14 <sup>th</sup>
B.Sc., Chemistry	N. Bhuvaneshwari	2005- 2008	5 <sup>th</sup>
B.Sc., Chemistry	C. Suganthi	2007- 2010	2 <sup>nd</sup>
B.Sc., Chemistry	P. Baguladevi	2010 - 2013	2 <sup>st</sup>
M. Sc., Chemistry	K. Suridha	2008 – 2010	8 <sup>th</sup>
M. Sc., Chemistry	A. Sheela	2008 – 2010	12 <sup>th</sup>
M. Sc., Chemistry	N. Divya	2011 - 2013	5 <sup>th</sup>

**Seminars / Conferences / Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.**

Workshops organized by

S. No.	Seminar	State / National/ International	Date	Grant from Agency	Organizing Secretary
1.	One day	State level	16 <sup>h</sup> March 2006	UGC	Dr. S.Kalyanasundharam
2.	One day	State level	23 <sup>th</sup> March 2010	UGC	Dr. S.Kalyanasundharam
3	Oneday	State level	27 <sup>th</sup> March 2012	UGC	Dr. S.Kalyanasundharam
4	One day	State level	29 <sup>th</sup> December 2014	UGC	Dr. S.Kalyanasundharam
5	One day	State level	23 <sup>tr</sup> October 2014	UGC	Dr. S.Kalyanasundharam

**19. Student profile course-wise**

Academic Year		No. of Students appeared	Pass %	% of first class	No. of Dist.	University Rank obtained	Students went for higher education (%)	Students went for Job (%)
April 2014	UG	46	87	58.7	1	-		
	PG	20	95	95	4	-		
April 2015	UG	43	55.8	37.2	--	-		
	PG	21	71.4	71.4	5	-		
April 2016	UG	43	53.5	48.8	1	-		
	PG	18	55.5	55.5	2	-		
April 2017	UG	42	54.8	45.2	--	-		
	PG	16	100	100	3	-		
April 2018	UG	41	51.2	46.3	1	-		
	PG	20	95	95	5	-		

20. (a) Admission Details

Academic Year		Total Admission	FC		BC		MBC		SC		ST	
			M	F	M	F	M	F	M	F	M	F
2014-2015	UG	48	-	-	01	03	10	07	19	08	-	-
	PG	18	-	-	01	02	08	05	02	-	-	-
2015-2016	UG	48	-	-	02	04	05	13	12	12	-	-
	PG	18	-	-	01	02	08	05	02	-	-	-
2016-2017	UG	48	-	-	01	04	10	08	18	07	-	-
	UG(SF)	40	-	-	01	01	-	-	07	17		
	PG	20	-	-	-	01	03	04	06	06	-	-
2017-2018	UG	48	-	-	01	05	03	11	22	06	-	-
	UG(SF)	11	-	-	-	-	-	-	-	11	-	-
	PG	17	-	-	-	-	01	05	05	06	-	-
2018-2019	UG	48	04	03	-	01	05	13	13	08	-	01
	PG	17	-	-	-	03	03	04	02	05	-	-

21 (b). UG Programmes

Year of study	Applications received	Selected		Total
		Male	Female	
2014-15	192	30	18	48
2015-16	144	19	29	48
2016-17	180	29	19	48
2017-18	131	26	22	48
2018-19	134	23	25	48

21 (c). PG Programmes

Year of study	Applications received	Selected	
		Male	Female
2014-15	38	11	07
2015-16	38	11	07
2016-17	32	09	11
2017-18	38	06	11
2018-19	32	05	12



**21 (d). Ph.D. Programmes**

Doing		Awarded before the assessment period		Awarded during the assessment period		Thesis Submitted
Male	Female	Male	Female	Male	Female	
08	07	--	---	01	--	02

**22. How many students have cleared Civil Services, Defense Services, NET, SLET, GATE and any other competitive examinations?**

S. No.	Name of the Examination	No. of Students
1.	SET/NET/GATE	02
2.	TNPSC	01
3	TET/TRB	01

## Student progression

Student progression	Percentage against enrolled
UG to PG	48%
PG to M.Phil.	-
PG to Ph.D.	-
Ph.D. to Post-Doctoral	-
Employed	10%
 Campus selection	32%
 Other than campus recruitment	
Entrepreneurs	10%

## 23. Diversity of staff

Percentage of faculty who are graduates	
Of the same parent university	33.33%
From other universities within the State	66.66%
From other universities from other States	NIL

## 24. Number of faculty who were awarded Ph.D., during the assessment period.

Year	Ph.D.,
2013 -2018	--

## 25. Present details about infrastructural facilities

- a) College Library: : For U.G and P.G. **843 books**  
Department: For U.G. **157, For P.G. 181 books**
- b) Internet facilities for staff and students: Nil
- c) Total number of class rooms : **03**
- d) Class rooms with ICT facility : **03**
- Video projection and latest ICT gadgets.
- e) Students laboratories : **02**
- All Major Practical equipments related to Practicals are available in two separate UG and PG laboratories.
- f) Research laboratories : **01**

Newly added Equipment's in the Research Laboratory are:

- ✓ 4 decimal digital balance
- ✓ 3 decimal digital balance
- ✓ Visible Double Beam Spectrometer
- ✓ Muffle furnace
- ✓ Deep freezer
- ✓ Digital pH meter Systronics
- ✓ High speed centrifuge
- ✓ Colorimeter
- ✓ Over head projector
- ✓ LCD projector
- ✓ Laptop & Printer
- ✓ Hot air oven
- ✓ Hot plate rectangle
- ✓ Photoelectric colorimeter
- ✓ Digital conductive meter - Systronics
- ✓ Digital potentiometer
- ✓ Digital stop watch
- ✓ Mechanical shaker
- ✓ Khejldhal apparatus
- ✓ All glass double distillation unit
- ✓ Magnetic stirrer with heater
- ✓ Rotary vacuum evaporator Buchi type

- ✓ VDRL shaker
- ✓ Micro wave oven IFB
- ✓ Soxhlet apparatus full set
- ✓ Heating mantle
- ✓ Vacuum dessicator
- ✓ Electric hot plate

**26. Number of students of the department getting financial assistance from College and Government.**

Year	Class	Govt. Scholarship			Student Project Scheme
		BC/MBC	SC/ST	Total	
2013 – 2014	I B.Sc., Chemistry	17	18	45	-
	II B.Sc., Chemistry	24	18	42	-
	III B.Sc., Chemistry	17	22	39	-
	I M.Sc., Chemistry	10	12	22	-
	II M.Sc., Chemistry	12	10	22	-
2014 – 2015	I B.Sc., Chemistry	20	23	43	-
	II B.Sc., Chemistry	17	27	44	-
	III B.Sc., Chemistry	23	18	41	-
	I M.Sc., Chemistry	16	02	18	-
	II M.Sc., Chemistry	10	12	22	-
2015 – 2016	I B.Sc., Chemistry	25	22	47	-
	II B.Sc., Chemistry	17	26	43	-
	III B.Sc., Chemistry	16	25	41	-
	I M.Sc., Chemistry	12	04	16	-
	II M.Sc., Chemistry	16	02	18	-
2016 – 2017	I B.Sc., Chemistry	16	21	37	-
	II B.Sc., Chemistry	22	22	44	-
	III B.Sc., Chemistry	18	22	40	-
	I B.Sc., Chemistry(SF)	02	24	26	-
	I M.Sc., Chemistry	08	12	20	-
	II M.Sc., Chemistry	12	04	16	-
2017- 2018	I B.Sc., Chemistry	15	23	38	-
	II B.Sc., Chemistry	17	32	49	-
	III B.Sc., Chemistry	22	21	43	-
	I B.Sc., Chemistry(SF)	--	11	11	-
	II B.Sc., Chemistry(SF)	02	22	24	-
	I M.Sc., Chemistry	06	11	17	-
	II M.Sc., Chemistry	08	12	20	-



**27. Was any need assessment exercise undertaken before the development of new program(s)? If so, give the methodology.**

- ✓ The basis for the importance for introducing a new Programme will be discussed in the departmental meeting along with the copies of UGC/CSIR/DST brochures/syllabi.

**28. Does the department obtain feedback from**

**a) Faculty on curriculum as well as teaching-learning -evaluation? If yes, how does the department utilize it?**

- ✓ Yes, the suggestions given by the Staff members directly involved in the new Programme or syllabi are always considered as an effective feedback. The merits and demerits posed by the teacher concerned will be discussed in the BOS meeting and subsequent changes are updated periodically.
- ✓ Faculty members from other institutions are also involved in feeding feed-back in regular basis during the Evaluation of practical examinations.

**b) Students on staff, curriculum as well as teaching – learning-evaluation and what is the response of the department to the same?**

- Students are free to make comments/suggestions upon the methodology of teaching process (class-room teaching as well as laboratory demonstrations) adapted by the individual teachers directly to the Head of the Department
- By the directions of the Principal and IQAC, the Head of the department meets all the classes to verify the completion of the syllabus, well in advance, before the last working day of each semester.
- Every semester, IQAC conducts Feedback evaluation of teachers, infrastructure, laboratory conditions, etc., of the department and subsequently there port is considered with due weight-age for further constructive and progressive implementation.

**c. Alumni and employers on the Programmes and what is the response of the department to the same?**

- 1) As per the suggestions by the alumni, necessary upgradation of the syllabus with required topics were made.
- 2) Necessary changes and additions were made in the practical syllabus.

**d. List the distinguished alumni of the department (maximum-05)**

<b>Name of the Alumini</b>	<b>Duration of study</b>	<b>Current occupation</b>
Dr. A. Arokiyaraj	1996 - 2001	Assistant Professor of Chemistry AVC College(Auto), Manmampandal, Mayiladuthurai - 609105
Dr. R. Natarajan	2003-2006	IICB-Culkata
Dr. S. Muralidharan	1983 - 1986	Scientist, CECRI Karaikudi.
Dr. R. Sivasakthikumar	2003 - 2006	Post Doctoral Fellow - IIT Chennai
Dr. Stalin	2003 - 2006	Assistant Professor, Department of Industrial Chemistry Alagappa University, Karaikudi.
Mr. A. Karthik	2004 - 2007	Inspector of Police Annamalai Nagar Poilce Station Chidambaram.

e. Give details of student enrichment Programmes (special lectures / workshops / seminar) with external experts.

Departmental seminars at UG, PG & Ph.D. levels are a routine Academic process in the department

S. No.	Title	State / National/ Special Lecture	Date	Grant from Agency	Resource Person
1	What chemistry R & D experts of chemistry students	One day Seminar Session I	23 <sup>rd</sup> March 2010	UGC	Dr. C.V. Srinivasan Sr. Vice President, Orchid Research Laboratories Ltd., Chennai.
2	Basic aspects of Nanotechnology and Recent Research	One day Seminar Session II	23 <sup>rd</sup> March 2010	UGC	Dr. R. Renganathann Professor of Chemistry, Bharathidasan University, Tiruchirappalli-620 024.
3	Life Oriented Education	Special Lecture	4 <sup>th</sup> March 2011	UGC	Sri T. M. Sekar Managing Director, SKN Organics (P) Ltd., Chennai.
4	Opportunity for Chemistry Students in Pharma Industry	One day Seminar Session I	14 <sup>th</sup> March 2011	UGC	Dr. M. Nappinnai General Manager, SKAN Research Laboratory (P) Ltd., Puducherry.
5	Chemical Safety	One day Seminar Session II	14 <sup>th</sup> March 2011	UGC	Mr. M. L. Gopalan Manager, SHEQ Henkal India Ltd, Karaikal.
6	Corrosion - Monitoring and Prevention	One day Seminar Session III	14 <sup>th</sup> March 2011	UGC	Dr. S. Muralidharan Scientist, CECRI, Karaikudi.
7	Employment Opportunities for chemistry students	One day Seminar	27 <sup>th</sup> March 2012	UGC	Mr. E. Prasannakumar Project Manager, SKN Organics (P) Ltd., Chennai.

8	National Eligibility Test (NET) Coaching Classes - Nine- steps to Emerge Triumphant	Special Lecture I	20 <sup>th</sup> March 2012	UGC	Dr. P. JeyasinghThanaraj Former Professor and Head Department of Chemistry, TBML College, Poraiyar.
9	National Eligibility Test (NET) Coaching Classes - NET - An overview	Special Lecture II	20 <sup>th</sup> March 2012	UGC	Dr. R. Sivakumar Assistant Professor of Zoology, Poompuhar College, Melaiyur 609 107.
10	Green- Micro Scale Techniques in Chemistry Experiments	Special Lecture I	29 <sup>th</sup> Dec 2012	UGC	Dr. S. Murugan Former Professor and Head Department of Chemistry, S.T. Hindu College, Nagerkoil.
11	Fabrication of Glass wares by Glass Blowing	Special Lecture II	29 <sup>th</sup> Dec 2012	UGC	Mr. B. Bhuvaneshwaran Scientific Glass Blower, Salem.
12	Application of Quantum Mechanics to Chemistry	Special Lecture I	13 <sup>th</sup> March 2012	UGC	Dr. C. Sebastian Asst. Prof. of Chemistry, R.V. Govt. Arts College,Chengalpet, Chennai.
13	Resonance Spectroscopy	Special Lecture II	13 <sup>th</sup> March 2012	UGC	Dr. G. Ramachandran Asst. Prof. of Chemistry, Dr. Amebdkar Govt. Arts College,Vyasarjadi, Chennai.
14	Nanotechnology and its Applications	Special Lecture I	26 <sup>th</sup> March 2012	UGC	Dr. G. Chandramohan Associate Professor of Chemistry, AVVM Sri Pushpam College,Poondi, Thanjavur.
15	Nanotechnology and its Applications	Special Lecture II	26 <sup>th</sup> March 2012	UGC	Dr. S. Kalyanasundharam Associate Professor of Chemistry, Poompuhar College. Melaiyur-609 107.

**f. List the teaching methods adopted by the faculty for different Programmes**

S. No.	Programme	Teaching Methods Adopted
1.	UG	Conventional Chalk and Talk method, questioning and answering approach, displaying of charts, exhibiting the proto-type models, usage of Slide projectors, Motion pictures, OHP presentations, assigning problems to solve independently, library hour, invited talks by external expertise, supply of well –prepared study materials and guidelines for Practical and up-dated theories behind practical’s well before the commencement of laboratory experimental Practical’s. Information from News Papers & magazines-Science & Technology.
2.	PG	Chalk and Talk method, Interaction with individuals, exhibiting e-contents, simulation of physical models, presentation of downloaded talks of NPTEL (National Program on Technology Enhanced Learning) relevant to PG Students, OHP, Guest Lectures, seminars, library hour allotment, visit to out-side laboratories and supply of study materials.

**29. How does the department ensure that Programme objectives are constantly met and learning outcomes monitored?**

- a) The system in curriculum facilitates to have a periodic and continuous assessment of the students through CIA and compulsory attendance.
- b) Inter-departmental analysis of both teachers and students in council of heads of the department level and departmental level after every semester ensures the status and directions of on-going trend in achieving the objectives of the Programmes.
- c) An effective and result-oriented monitoring mechanism is practiced by our Principle to review the results of students and performance of teachers, every

year.

- d) The interest and competition in selecting CHEMISTRY subject by the students in admission process is an indicator for the department to ascertain the fulfillment of the objectives of our well-designed Programmes.
- e) No. of students appearing and getting succeeded in Competitive examinations is closely watched in regular manner.
- f) Periodical checking mechanism supported by feedback from students (of both current and out-going) and alumni and reports of IQAC, help to take suitable remedial measures.

**30. Highlight the participation of students and faculty in extension activities.**

- ✚ Student's participation in Extension activities is made mandatory for all UG Programmes. The students of Chemistry do advised to participate in NSS, YRC and Sports etc.
- ✚ Students have been conducting awareness Programmes on "learning Science" and in particular, in Chemistry school children by deliberations and demonstration.
- ✚ The Staff's have conducted more than 5 one-day Programmes for the Higher Secondary School teachers who are handling Chemistry.



### 31.Participation of faculties in Various Extension Activities

S. No.	Name of the Faculty	Name of the Extension Activity Participated
01	Dr. S. Kalyanasundharam	<ul style="list-style-type: none"><li>- <b>NSS Programme Officer - Unit I from 01.06.1994 to 30.09.1999, Received Best NSS Programme Officer award of Bharatidasan University for the year 1999.</b> Conduct 10 days NSS special camps in the adopted villages in 1994, 1995, 1996, 1997, 1998.</li><li>- NSS-Seminar on Population Education on 12.09.1994.</li><li>- AIDS awareness and prevention camp 19-22, Dec 1994.</li><li>- World AIDS Day- AIDS awareness Seminar.</li><li>- AIDS awareness meeting on 27.12.1995.</li><li>- AIDS awareness campaign 28.03.1996.</li><li>- National Integration campaign 03-05 Sep 1996.</li><li>- National Polio Eradication Campaign 07.12.1996 &amp; 18.01.1997.</li><li>- NSS - Appreciation letter 27.01.1997</li><li>- NSS-UTA Peer Group Education Training 18, 19 Feb 1997.</li><li>- NSS-UTA Institutional level AIDS Awareness Campaign 21.02.1997- 26.02.1997.</li><li>- Golden Jubilee Independence Day Celebration 14, 15.08.1997.</li><li>- <b>Inaugural Function of NSS 4<sup>th</sup> Unit 12.10.1997.</b></li><li>- National Polio Eradication Campaign 07.12.1997 &amp; 18.01.1998.</li><li>- Eradication of untouchability - Campaign 26.01.1998.</li><li>- NSS - Youth cultural day celebrations 16, 17.02.1998.</li><li>- NSS - Dental camp 27.01.1998.</li><li>- NSS - Diabetics awareness campaign 31.01.1998.</li><li>- NSS - Blood donation awareness campaign 11.09.1998.</li><li>- NSS - Eye camp 12.11.1998</li><li>- National Polio Eradication Campaign 06.12.1998 &amp; 17.01.1999.</li><li>- Participated in Bird &amp; Wildlife Census in Point Calimere wildlife sanctuary at Kodiyakarai on 12 &amp; 13 Feb 2019.</li><li>- Consumer and Environmental awareness campaign 28.03.1999.</li><li>- NSS - Diabetics awareness campaign 26.09.1998</li><li>- NSS - Dental camp 27.09.1998.</li><li>- AIDS awareness campaign 03.10.1998.</li><li>- World population day Campaign 27.17.1999.</li><li>- <b>NSS Programme Officer 2<sup>nd</sup> time Unit I from 19.12.2003 to 31.05.2005.</b></li></ul>

**32. Give details of “beyond syllabus scholarly activities” of the Department.**

- ✓ Coaching to students for the preparation of UGC-CISR JRF cum Lecturer Test, SLET and other competitive examinations.
- ✓ Training the students to participate in Chemistry Quiz Programmes
- ✓ Training the students to inculcate the learning skills, inter-personal and intra-personal skill and career choosing skills (through workshops).

**33. State whether the Programme / department is accredited / graded by other agencies. Give details -Nil**

**34. Detail any five Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department**

**Strengths**

- Effective Support in the form of laboratory equipments from the Government for the introduction of any new and innovative Research Programme.
- Even with moderate research possibilities, the department is capable of pursuing research in par with University departments and many leading institutions.
- Good and conducive opportunities for students vertical progress up to Research Level
- Thirst towards adaptability towards the up-dating of academic Programmes according to the demand.
- Female staff members outnumber the male staff members and in student strength female students scenario where outnumber male students.

**Weaknesses**

- Substantial decrement in science learning due to the invasion of engineering studies and more over the Programmes in Chemistry are purely basic.
- Inability to network with other institutions (like other urban Colleges)



- Low profile of Teachers exposure towards advancement.
- Abolition of minor projects for college teachers and financial assistance to individual departments in the form of DST-FIST, has become unforeseen difficulty while progressing towards upwards.

### **Opportunities**

- Wide scope for learning job-oriented certificate, diploma and PG Diploma course concurrently during the course duration.
- Students have chance to appear confidently in competitive examinations as extra-coaching on specific skill is set made available.
- Special coaching classes for NET/SLET/UGC-CSIR pave way to the students to go further in their academic excellence.
- Each student could enrich his/her technical skills as the related opportunities do available in the department.
- The past history and positive trend which prevails in the department help each and every student to expand their knowledge in all aspects.

### **Challenges**

- Teaching Chemistry seems to be tough task and that to the first generation learners make more challengeable. The success rate of the department shows the success trend in meeting out such challenges in effective manner.
- Sudden transition from Tamil language to English in Undergraduate level students is a regular taunting task. However, training through Bridge courses and spoken English labs help to get rid of the challenges.
- Networking with other institutions is a major problem which lies in the department. Recent advancements in the campus improvement, through technological connectivity, we attempt to reduce the same.

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

- To set a Research Centre with the help of DST and UGC.
- To have more enriching programs for Staff and Students (like seminar, Symposia and Workshops).
- To get projects from UGC,CSIR and DST

### **Achievements of the Department**

- ✓ Since inception, the department has produced over 2000 graduates in Chemistry.
- ✓ One of the research departments in BharathidasanUniversity to pursue experimental research since 2013-2014. Ph. D., was award toMr. M. JeevanPrakash Part- Time Research Scholar of the Department of Chemistry on 14. 12. 2016.
- ✓ The department has grown with well-structured Programmes such as Undergraduate, Postgraduate and Research Programmewith t he job oriented Skill Based and Non Major Electives.

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