



**"Faculty Development Programme in
Chemistry for UG Teachers:
A Re-orientation to the Restructured
CBCS Curriculum"
13th -18th, December 2018**

REPORT



**Organized by
Department of Chemistry, OU @ Lecture Hall-I
Under the guidance of UGC-HRDC
(Academic Staff College) OU**



Department of Chemistry, University College of Science
Osmania University
"Faculty Development Programme in Chemistry for UG Teachers:
A Re-orientation to the Restructured CBCS Curriculum"

13th-18th, December 2018

Sponsored by



@Lecture Hall-I, Department of Chemistry, OU

Registration Form

Designation : _____
Name of the Institution : _____
Address for Correspondence : _____
Mobile No. : _____ Fax No. : _____
E-mail : _____

Signature of the Participant

*"It is the supreme art of the teacher to awaken joy
in creative expression and knowledge"*

- Albert Einstein



Osmania University

University with Potential for Excellence (UPE)

Accredited by NAAC with A⁺ Grade

**Faculty Development Programme in Chemistry for UG Teachers:
A Re-orientation to the Restructured CBCS Curriculum**

13th-18th, December 2018

Sponsored by



@Lecture Hall-I, Department of Chemistry, OU



Organized by

Department of Chemistry,
University College of Science, Osmania University
Contact No. 040-2768 2361 / 94406 21313
e-mail: fdpchemou2k18@gmail.com
Website: www.osmania.ac.in/chemistry

About the Programme

Reforms in higher education today are oriented in the interest of the learners to make it more viable, flexible and student friendly. Thus, the curricula implemented are learner centric in nature with a vision of creating more skill based, knowledge enhancing and employable youth who emerge as graduates through these curricula. Choice Based Credit System (CBCS) was introduced by University Grants Commission, India which offers a learner centric curriculum that provides a platform to the knowledge seekers the flexibility to choose the course of their interest from a list of prescribed core, elective and soft skill courses. The Telangana State Council of Higher Education (TSCHE) in coordination with the various universities of Telangana including Osmania University has devised a curriculum that best fits into the model curriculum issued by UGC in 2015.

The curriculum and the respective syllabi of various courses under CBCS pattern as recommended by TSCHE are further pruned by Osmania University with emphasis on skill enhancement, core elective and generic elective courses and implemented for the students of under graduation admitted in the year 2016 and onwards. The syllabus pertaining to chemistry was also revised accordingly and is approved in various statutory academic bodies, Osmania University. In this context, the Department of Chemistry has taken an initiative to readress and re-orient the faculty from various affiliated Colleges of OU and other State Universities through this Faculty Development Programme entitled "A Re-orientation to the Restructured CBCS Curriculum" to be held from 13th-18th December 2018 at the Dept. of Chemistry, OU.

The workshop is intended to cover topics ranging from a key note lecture on "CBCS: An overview" to lectures on core topics such as Stereochemistry, Coordination Chemistry, Quantum Chemistry etc., and newly introduced skill enhancement topics viz., Materials and their applications, Chemistry of Cosmetics and Food Processing. The generic electives and discipline centric electives introduced viz., Pharmaceutical, Medicinal Chemistry, Agricultural and Fuel Chemistry etc., shall also be addressed. Separate sessions will be dedicated exclusively to the practical demonstration of laboratory course experiments such as Qualitative and Spectral Analysis of Organic Compounds, Instrumental Methods of Analysis. The experts and academicians across the state and reputed institutions and universities are invited to address the sessions along with the senior faculty members of the Department of Chemistry, OU.

Who can attend?

The programme is aimed as a faculty development programme for the chemistry teachers of all the constituent and affiliated colleges of various universities in Telangana State. It is intended to provide a reorientation and an insight into the restructured curriculum and syllabi of the CBCS UG Courses. The sessions and lectures are thus framed accordingly and the participants shall be provided with the soft copy of the lecture notes of the newly introduced SEC, GE and DSE courses at the end of the programme.

Department of Chemistry, OU at a glance:

The Department of Chemistry, one of the oldest and biggest departments of Osmania University has a glorious history of 100 years. It was founded in the year 1918 as an undergraduate (B.Sc) teaching institution. From 1928 onwards, the department started

offering M.Sc. in Chemistry along with Chemistry as one of the optional subject at B.Sc level. Since then, the Department has grown with time by introducing specializations in Inorganic, Organic, Physical, Physical organic, Analytical, Pharmaceutical, Pharmacoinformatics in addition to the undergraduate B.Sc. teaching programme with combinations: MFC, BZC, BIC, BIZC. In 2000, the department was recognized as a nodal centre for M.Sc Forensic Science. Currently Osmania University has three constituent colleges, one PG Centre at Mirzapur (Medak District), two more centers at Jogipet and Narasapur, about 120 private and Government affiliated colleges offering M.Sc. Chemistry and 450 degree colleges offering B.Sc. courses with Chemistry. Students enrolled in this department are mostly from the rural areas and courses offered are in the core subjects that form the baseline for rural development through extension and research activities.

Registration Details:

UG teachers of various constituent and affiliated colleges of Telangana State Universities should register on or before 28th November 2018.

Registration Fee: Rs. 2,500 per head

The fee may be paid by DD in favour of "The Head, Department of Chemistry, Osmania University".

The registration fee includes the kit, lecture notes material and working lunch (without accommodation).

A maximum of three members from the same college can attend the workshop.

For correspondence:

Prof. P. Leelavathi, Convener; Contact No. 9440621313
Prof. P. Vijay Kumar, Co-Convener Contact No. 9912770303
Dr. G. Vijaya Charan, Organizing Secretary Contact No. 9010558545
Dr. A. Hari Padmasri, Organizing Secretary Contact No. 9441788898
e-mail: fdpchemou2k18@gmail.com

Organizing Committee of the Seminar

Chief Patron : Prof. C Ramachandram, Vice-Chancellor, Osmania University
Patrons : Prof. Ch Gopal Reddy, Registrar, Osmania University
Prof. Shivaraj, Dean, UGC Affairs, OU
Prof. Ch. Venkata Ramana Devi, Dean, Faculty of Science, OU
Prof. Pratap Reddy, Principal, University College of Science
Prof. Ch. Sarala Devi, Head, Department of Chemistry, OU
Director : Prof. Ch. Abraham Lincoln, Chairperson, BoS, Dept. of Chemistry
Convener : Prof. P. Leelavathi, Dept. of Chemistry, OU
Co-Convener : Prof. P. Vijaya Kumar, Dept. of Chemistry, OU
Organizing Secretaries : Dr. G. Vijaya Charan, Assoc. Professor, Dept. of Chemistry, OU
Dr. A. Hari Padmasri, Assist. Professor, Dept. of Chemistry, OU
Organizing Committee : Faculty, Dept. of Chemistry, UCS, OU



Invitation

"Faculty Development Programme in Chemistry for 'UG Teachers:
A Re-orientation to the Restructured CBCS Curriculum"

13th - 18th, December 2018

Organized by

Department of Chemistry, OU @ Lecture Hall-I
Under the guidance of UGC-HRDC (Academic Staff College) OU

The Head, Director, Convener & the Organizing Committee,
Dept. of Chemistry, OU

Cordially invite you to the Inauguration of the workshop on
13th December, 2018 @ 9:30 a.m

INAUGURATION

- Chief Guest** : **Prof. C. Ramachandram**
Hon'ble Vice-Chancellor, Osmania University
- Guest of Honour** : **Dr. Ch. Mohan Rao**
Former Director, CSIR-CCMB
& Founder President Telangana Academy of Sciences
- Key Note Speaker** : **Prof. B. Sathyanarayana,**
President, OUTA
- Special Guests** : **Sri. A. Bhaskar Reddy** **Prof A. Balakishan**
Former Commissioner, IT Director, UGC-HRDC
Vice-President, OUCF Osmania University
- Prof. K. Pratap Reddy**
Principal, UCS, OU shall preside

Prof. Ch. Sarala Devi
Head, Dept. of Chemistry
Osmania University

Prof. Ch. Abraham Lincoln
Director & Chairman, BOS
Dept. of Chemistry, OU

Prof. P. Leelavathi
Convener

Prof. P. Vijay Kumar
Co-Convener



Invitation

"Faculty Development Programme in Chemistry for 'UG Teachers:
A Re-orientation to the Restructured CBCS Curriculum"

13th - 18th, December 2018

Organized by

Department of Chemistry, OU @ Lecture Hall-I
Under the guidance of UGC-HRDC (Academic Staff College) OU

The Head, Director, Convener & the Organizing Committee,
Dept. of Chemistry, OU

Cordially invite you to the Valedictory of the workshop on
18th December, 2018 @ 4:00 p.m

VALEDICTORY

- Chief Guest** : **Prof. Ch. Gopal Reddy**
Registrar, Osmania University
- Guest of Honour** : **Prof. R. Limbadri**
Vice-Chairman,
Telangana State Council for Higher Education
- Special Guests** : **Prof. Shivaraj** **Prof. Ch. Ganesh**
Dean, Development Director, CDE
& UGC Affairs Osmania University
- Prof. Ch. Venkataramana Devi**
Dean, Faculty of Science, OU shall preside

Prof. Ch. Sarala Devi
Head, Dept. of Chemistry
Osmania University

Prof. Ch. Abraham Lincoln
Director & Chairman, BOS
Dept. of Chemistry, OU

Prof. P. Leelavathi
Convener

Prof. P. Vijay Kumar
Co-Convener



**"Faculty Development Programme in Chemistry for UG Teachers:
A Re-orientation to the Restructured CBCS Curriculum"**

13th-18th, December 2018

Organized by

Department of Chemistry, OU@ Lecture Hall-I

Under the guidance of UGC-HRDC (Academic Staff College) OU

Programme Schedule

DAY-1: 13th December 2018

Session	Title of the Talk	Speaker	Time
DAY-1: Faculty Development Programme: "A Re-orientation to the Restructured CBCS Curriculum"			
Inauguration		Chief Guest: Prof SRamachandram, Vice-Chancellor, OU Guest of Honour: Dr Ch Mohan Rao, Former Director CSIR-CCMB	9:30 - 10:30 a.m.
-----TEA BREAK-----			10:30 -10:45 a.m.
Session-I	"CBCS Curriculum: An Overview"	Key note Speaker: Prof B Sathyanarayana, Senior Professor in Inorganic Chemistry & President OUTA, OU	10:45 - 11:45a.m.
	"Role of Applied Research in Enabling Teaching and Learning Process"	Invited Lecture-1: Dr Sankhar Ganesh, Associate Professor & Head, Department of Biological Sciences, BITS, Hyderabad	11:45 -12:45 p.m.
	"Importance of Teaching Tools"	Invited Lecture-2: Prof B K Naidu, Retd. Prof. in Physics, OU	12:45 -1:45 p.m.
-----LUNCH BREAK-----			1:45 -2:30 p.m.
Session-II Parallel Session	<u>Group-A</u> Physical Chemistry Practicals – Lab demonstrations & Presentations Special Address by Prof P Veerasomaiah, Senior Professor, Dept. of Chemistry, OU Sessionsconducted by Dr A HariPadmasri& Dr P Someshwar	<u>Group-BParticipants</u> Organic Chemistry Practicals – Lab demonstrations & Presentations "Analysis of Spectroscopic Data of Organic Compounds" Invited Lecture-3:Prof P Leelavathi, Convener of the Programme, Dept. of Chemistry, OU Special Address by Prof M Vijjulatha Conducted by Prof J Ramchander, Dr NJP Subhashini& Dr RajuJannapureddy	2:30-5:30 p.m.
-----TEA-----			

AY-2: 14th December 2018

Session	Title of the Talk	Speaker	Time
AY-2: Faculty Development Programme: "A Re-orientation to the Restructured CBCS Curriculum"			
Session-III	"Stereochemistry"	Invited Lecture-4: Prof D Ashok, Director RDCC, OU	9:30 - 10:30 a.m.
-----TEA BREAK-----			10:30 -11:00 a.m.
Session-IV	"Materials"	Invited Lecture-5: Prof M Vithal, UGC-BSR Fellow, Dept. of Chemistry, OU	11:00 -12:00 p.m.
	"Rotational &Vibrational Spectroscopy"	Invited Lecture-6: Prof P Veerasomaiah, Coordinator, UGC-SAP,Dept. of Chemistry, OU	12:00 -1:00 p.m.
-----LUNCH BREAK-----			1:00 -2:00 p.m.
Session-V	"Chromatography & its Applications"	Invited Lecture-7: Prof P V Rao, Professor, Dept. of Chemistry, OU	2:00-3:00 p.m.
	"Elementary Quantum Chemistry"	Invited Lecture-8: Prof N Swarnalakshmi, Retd. Professor, Dept. of Chemistry, OU	3:00-4:00 p.m.
	"Cosmetics & Perfumes"	Invited Lecture-9: Ms.ShikaChander, Lecturer, Dept. of Chemistry, St.Francis College for Women, Begumpet, Hyderabad	4:00-5:00 p.m.
-----TEA-----			

AY-3: 15th December 2018

Session	Title of the Talk	Speaker	Time
AY-3: Faculty Development Programme: "A Re-orientation to the Restructured CBCS Curriculum"			
Session-VI	"Inspiring UG Students towards Research"	Invited Lecture-10: Dr VijayaBhaskar Reddy, Merck, USA	9:30 - 10:30 a.m.
-----TEA BREAK-----			10:30 -11:00 a.m.
Session-VII	"Remedial Methods for Pollutions"	Invited Lecture-11: Prof S Srihari, Department of Chemistry, RGUKT, Basar	11:00 -12:00 p.m.
	"Coordination Compounds"	Invited Lecture-12: Prof B Sathyanarayana, President, OUTA, OU	12:00 -1:00 p.m.
-----LUNCH BREAK-----			1:00 -2:00 p.m.
Session-VIII	<u>Group-A Participants</u> Inorganic Chemistry Practicals – Lab demonstrations & Presentations Special Address by Prof ChSarala Devi, Head, Dept. of Chemistry, OU Conducted by Prof K Bhaskar, Dr P V Ananthalakshmi, Ms Y.LakshmiMadhuri	<u>Group-B Participants</u> Physical Chemistry Practicals – Lab demonstrations & Presentations Special Address by Prof M AnandRao Retd. Professor, Dept. of Chemistry, OU Sessionsconducted byDr TVD Prasad, Dr D A Padmavathi	2:00-5:00 p.m.
-----TEA-----			

AY-4: 16th December 2018

Session	Title of the Talk	Speaker	Time
AY-4: Faculty Development Programme: "A Re-orientation to the Restructured CBCS Curriculum"			
Session-IX	"Key Aspects of Thermodynamics"	Invited Lecture-13: Prof ChAnjaneyulu, Prof. in Chemistry, CVR College of Engineering & Retd. Prof., Dept of Chemistry, OU	9:30 - 10:30 a.m.
-----TEA BREAK-----			10:30 - 11:00 a.m.
Session-X	"NMR Spectroscopy"	Invited Lecture-14: Prof Shivaraj, Dean, Development & UGC Affairs, OU	11:00 - 12:00 p.m.
	"Sustainable chemistry"	Invited Lecture-15: Dr. D.S. Sharada, Associate Professor, IITH	12:00 - 1:00 p.m.
-----LUNCH BREAK-----			1:00 - 2:00 p.m.
Session-XI	<i>Group-A Participants</i> "Analysis of Spectroscopic Data of Organic Compounds" Invited Lecture-16: Prof AKD Bhavani, Dept. of Chemistry, OU <i>Organic Chemistry Practicals – Lab demonstrations & Presentations</i> Special Address by Dr NJP Subhashini Conducted by Prof P Vijay Kumar, Prof A KD Bhavani & Dr K Shivakumar	<i>Group-B Participants</i> <i>Inorganic Chemistry Practicals – Lab demonstrations & Presentations</i> Special Address by Prof Abraham Lincoln, Chairman, BOS, Dept. of Chemistry, OU Conducted by Prof PV Rao, Dr Vijaya Charan, Ms Y Lakshmi Madhuri	2:00 - 5:00 p.m.
	-----TEA-----		

AY-5: 17th December 2018

Session	Title of the Talk	Speaker	Time
AY-5: Faculty Development Programme: "A Re-orientation to the Restructured CBCS Curriculum"			
Session-XII	"Nano Materials"	Invited Lecture-17: Dr Tata Narasing Rao, Scientist, ARCI, Hyderabad	10:00 - 11:00 a.m.
-----TEA BREAK-----			11:00 - 11:30 a.m.
		ARCI Tour	11:30 am - 1:00 p.m.
-----LUNCH at ARCI-----			1:00 - 2:00 p.m.
Field Trip		Visit to ARCI Labs	2:00 - 5:00 p.m.
-----TEA-----			

AY-6: 18th December 2018

Session	Title of the Talk	Speaker	Time
DAY-6: Faculty Development Programme: "A Re-orientation to the Restructured CBCS Curriculum"			
Session-XIII	"Bio-Inorganic Chemistry"	Invited Lecture-18: Prof M Devadas <i>Retd. Professor, Dept. of Chemistry, Osmania University</i>	9:30 - 10:30 a.m.
-----TEA BREAK-----			10:30 - 11:00 a.m.
Session-XIV	"Electroanalytical Methods"	Invited Lecture-19: Prof Panasa Reddy, <i>Head, Dept. of Chemistry, OU College of Engineering</i>	11:00 - 12:00 p.m.
	"Pharmaceuticals"	Invited Lecture-20: Prof A Ravindranath, <i>Dean of Technology, College of Technology, OU</i>	12:00 - 1:00 p.m.
-----LUNCH BREAK-----			1:00 - 2:00 p.m.
Session-XV	"Laboratory Safety & Measures" "Medicinal Chemistry"	Invited Lecture-21: Dr BabuRao, <i>Retd. Scientist, CSIR-IICT</i>	2:00-3:00 p.m.
		Invited Lecture-22: Prof P Vijay Kumar, <i>Co-Convener of the Programme, Dept. of Chemistry, OU</i>	3:00-4:00 p.m.
Valedictory Session		Chief Guest: Prof ChGopal Reddy, <i>Registrar, Osmania University</i> Guest of Honour: Prof Ch Ganesh, <i>CDE, OU</i> Guest of Honour: Prof ChVenkatarmana Devi, <i>Dean, Faculty of Science, OU</i>	4:00-5:00 p.m.
-----TEA-----			

Telangana State Council for Higher Education (TSCHE) has taken up measures to enhance the quality of higher education by implementation of CBCS curriculum as per UGC guidelines in all the colleges under various State Universities of Telangana. The curriculum with the respective syllabi of various courses under CBCS pattern as recommended by TSCHE are further pruned by Osmania University with respect to skill enhancement, core elective and generic elective courses and implemented for the students of undergraduation admitted in the year 2016 and onwards.

In this regard, Department of Chemistry, Osmania University has taken up the initiative in organizing the workshop entitled “Faculty Development Programme in Chemistry for UG Teachers: A Re-orientation to the Restructured CBCS Curriculum” from 13-18 th December 2018 sponsored by TSCHE and RUSA (MHRD). The experts and academicians across the state and reputed institutions and universities are invited to address the sessions along with the senior faculty members of the Department of Chemistry, OU.

The Programme started with a formal enrolment of the pre-registered teacher participants from various Degree Colleges under the Universities of Telangana State. About 90 participants from Colleges of twin cities, Siddipet, Adilabad, Mahbubnagar, Khammam, Warangal, Nalgonda, RR District, Nizambad, Karimnagar affiliated to Osmania, Kakatiya, Mahatma Gandhi, Telangana, Sathavahana, Palamur, RGUKT and GITAMS Universities have attended the one week Faculty Development Programme.

A formal inaugural function was held which started with an auspicious lightening of the lamp symbolic of invocation of positivity and knowledge seeking followed by National song “Vandemataram”. The inaugural was graced by Prof S Ramachandram, Vice-Chancellor, Osmania University as the Chief Guest. Dr Ch Mohan Rao, Former Director of CSIR-CCMB and Prof B Satyanarayana, President, OUTA were the guests of honour. Prof K Pratap Reddy, Principal, University College of Science, OU presided over the function. Prof Ch Abraham Lincoln, the Director of the programme and Chairman, Board of Studies, Dept. of Chemistry welcomed the guests and Prof ChSarala Devi, Head, Department of Chemistry gave a brief account of activities of the Department. Prof P Leelavathi, the convener of the workshop introduced the theme of the workshop and reminded the teachers of the famous of quote of Albert Einstein that Education should not be a mere learning of facts but should be training of the mind to think.

Prof A Balakishan, Director, UGC-HRDC, OU who was the special guest appreciated the department to have taken up the initiative of conducting the workshop for the UG Teachers. This programme was organized under the guidance of the UGC-HRDC, OU. Sri A

Bhaskar Reddy, the executive member of OU Chemistry Foundation, An Alumni Association of the department briefed up the activities the Alumni has been doing in collaboration with the department and assured that Alumni shall support several other activities of the department for the benefit of the faculty and students to maintain the pride of the department which is regarded as the jewel of this premier institution, Osmania University. The OUCF happens to be one of the sponsor of the event.

Prof B Satyanarayana emphasized that the teachers need to update their knowledge through various refresher and training programmes. Dr Ch Mohan Rao motivated the participants that teachers should maintain quality of education and appreciated the quote by Prof Leelavathi. He advocated that teachers should inculcate research interest by giving project work and guide the students. Prof S Ramachandram, the Hon'ble Vice-Chancellor extended his appreciation to the department for conducting the faculty development programme for the UG Teachers and said that the quality of research and education should further be improved for the students to compete globally with the standards of esteemed universities of the world. He inculcated that the faculty and department should take steps in this regard and advised the UG Teacher participants to do quality research and encourage students also to take up to research to strengthen the standards of educational institutions. The dignitaries formally released the BSc Chemistry Practical manual prepared by the faculty of the department in this regard and distributed to the participants. The session ended with a formal vote of thanks by Prof P Vijay Kumar, the Co-Convener of the workshop.

The Post inaugural session started by the Key note lecture by Prof B Sathyanarayana who spoke on **“CBCS Curriculum: An Overview”** where he explained the various aspects of CBCS including the various courses, papers, electives, credits offered, grading, evaluation mode etc. He further clarified the various doubts and queries of the teacher participants during their interaction after the lecture. The first invited lecture then was by Prof Shankar Ganesh from BITS, Hyderabad who talked on the **“Role of Applied Research in Enabling Teaching and Learning Process”**. Prof Ganesh highlighted the need to reform the teaching and learning methodologies and improvise by taking up research based methods. The second lecture was then by Prof B.K. Naidu, a ret'd. Professor from Osmania University who talked on the ICT based teaching emphasizing the role of teaching tools with simple examples. The Practicals session began after the lunch where the participants were made into two groups and one group was given demonstration in both the previously existing experiments along with the new ones added in the revised syllabi of Physical chemistry lab experiments after a briefing by Prof P Veerasomaiah, a senior faculty member of physical chemistry of the

department. The second group had a lecture by Prof P Leelavathi on the “**Analysis of Spectroscopic Data of Organic Compounds**” which was then followed by demonstration of experiments in organic chemistry lab that were introduced newly in the syllabus along with the experiments in the previously existing syllabus with a briefing by Prof M Vijjulatha and other faculty members.

Day-2 had three lectures in the pre-lunch session and three in the post lunch session. First lecture was delivered by Prof D Ashok, the Director, RDCC, OU on “**Stereochemistry**” followed by lecture on “**Materials**” by a senior professor and an UGC-BSR fellow, Prof M Vithal. Materials topic was the newly introduced one in the BSc Chemistry syllabus both as discipline centric elective as well as Generic Elective for the non-chemistry UG students as well. The third lecture was by Prof P VeeraSomaiah on “**Rotational & Vibrational Spectroscopy**”. Post Lunch session started with the lecture on “**Chromatography & its applications**” by Prof P V Rao, a senior professor of Inorganic Chemistry. The second talk in the session was by Prof N Swarnalakshmi, a Retd. Professor in Chemistry, OU on “**Elementary Quantum Chemistry**” who explained it in a very simplified manner demonstrating how the topic can be introduced to the non-maths based students in an interesting way. The next topic of the day was “Cosmetic Chemistry” by Ms.ShikhaChander, a senior teacher from St. Francis College for Women, Begumpet where this topic has been introduced more than 8 years ago as a skill enhancement course. Ms Shikha explained the syllabus that can be covered under this topic and interacted with participant teachers addressing their queries with regard to Cosmetic chemistry introduced as SEC course in the present CBCS curriculum of BSc Chemistry.

Day-3 had three lectures in the morning session and Practical sessions were followed after lunch for the two groups. First lecture was a special lecture by an elite alumni of the department Dr Vijay Reddy from Merck,USA who spoke on “**Inspiring UG Students towards Research**” and clearly explained the possibilities and ways in which the teachers can inspire the students towards research by taking up small research projects and involving them and guiding them. CBCS curriculum has a provision for the students to carry out research project worth 6 credits and in this regard his talk has thrown a new light on this area. Second lecture on “**Remedial Methods for Pollutions**” was by Prof K Srihari from RGUKT and his immense experience reflected in the lecture through the subtle and convincing manner in which he discussed the significance ozone depletion, global warming and environmental protection. The third lecture of the day was by Prof B Satyanarayana on “**Coordination Compounds**”. The afternoon session after the lunch started with Physical

Chemistry Lab experiments briefing by Prof M AnandRao, Retd. Professor in Physical Chemistry, OU who is presently the faculty member of VJIT college of engineering, Ghatkesar for one group. After the briefing the participants had a proper demonstration of experiments in the physical chemistry lab by the faculty members of Physical chemistry of the department. The second group of participants had a briefing on the Inorganic Chemistry practical experiments by Prof ChSarala Devi followed by demonstration of experiments in food chemistry and cosmetic chemistry by the faculty members of Inorganic chemistry of the department who were assisted by the faculty members of food Science and Cosmetic Chemistry from University college for women and St. Francis College for Women respectively.

Day 4 started with a lecture on **“Key Aspects of Thermodynamics”** by Prof ChAnjaneyulu, *Prof. in Chemistry, CVR College of Engineering & Retd. Prof., Dept of Chemistry, OU* followed by a lecture on **NMR Spectroscopy”** by Prof Shivaraj, Dean, Development & UGC Affairs, OU. The next lecture was on “Sustainable Chemistry” by Dr D S Sharada, Associate Professro from IIT, Hyderabad and an Alumni of the Department. Post lunch session started with the parallel sessions in practical demonstration of the experiments. One group had

a briefing on the Inorganic Chemistry practical experiments by Prof ChSarala Devi followed by demonstration of experiments in food chemistry and cosmetic chemistry by the faculty members of Inorganic chemistry of the department. The second group had a lecture on **“Analysis of Spectroscopic Data of Organic Compounds”** by Prof AKD Bhavani, Senior professor of organic chemistry which was then followed by demonstration of experiments in organic chemistry lab that were introduced newly in the syllabus along with the previously existing experiments in the syllabus with a briefing by Dr NJP Subhashini and other faculty members.

Day 5 started as a visit to ARCI which firstly covered a lecture by Dr Tata NarasingRao, Scientist, ARCI on “Nanomaterials”. Then the participants were divided into two groups and the group one visited the Centre for Ceramics and Centre for Materials Characterization & Testing first and group two to Centre for Carbon Materials, Centre for Solar Energy and Centre for Nanomaterials and Centre for Sol-Gel Coatings. Later the groups visited the centres vice-versa. The lunch for the day was sponsored by ARCI at the Canteen of ARCI for all the participants and the accompanying faculty members and organizers of the department under the supervision of Dr Tata NarasingRao.

Day 6 started with a lecture by Prof M Devadas, Retd. Prof. in Inorganic Chemistry of the department on **“Bio-Inorganic Chemistry”** followed by the lecture on **“Electroanalytical Methods”** by Prof Panasa Reddy, Head, Dept. of Chemistry, OU College of Engineering. The third lecture was by Prof A Ravindranth, Dean, Faculty of Technology, OU on **“Pharmaceuticals”** which is discipline centric elective topic introduced in the revised CBCS Curriculum. The post lunch session had two lectures one being the SEC course topic viz., **“Laboratory Safety & Measures”** by Dr BabuRao, Retd. Scientist, CSIR-IICT and the other one being **“Medicinal Chemistry”** which is discipline centric electric topic by Prof P Vijaykumar, the Co-convener of the workshop.

Day 6 was the final day of the workshop which ended with the valedictory session. Prof ChGopal Reddy, Registrar, OU graced the occasion as the Chief Guest while Prof S Limbadri, Vice-Chairman, TSCHE was invited as the Guest of honour who couldnot make it to the function being pre-occupied with his schedule. Prof Shivaraj, Dean, Development & UGC Affairs and Prof Ch Ganesh, Director, CDE visited as special guests. The session was presided by Prof ChVenkataramana Devi, Dean, Faculty of Science, OU. Prof ChSarala Devi, The Head dept. of Chemistry welcomed the guests and expressed her views for the improvisation of conditions with respect to the faculty members and the infrastructure at the various under graduate colleges and requested the authorities of University to act in this regard. Director of the programme, Prof Ch Abraham Lincoln appreciated the participation of the UG Teachers in the workshop. There was much appreciation and content expressed by some of the participants during the feedback session and some of them suggested that more such workshops with lectures and sessions on the newer aspects in chemistry be conducted regularly in future as well. The Co-convener of the workshop, Prof P Vijaykumar read out a brief report of the events of the workshop. Prof Ch Ganesh expressed his appreciation to the organizers for having conceived such a program and advocated that all the disciplines of the University should regularly take up such programmes for teachers and advised that teacher should continuously update their knowledge. Prof Shivaraj emphasized that the teachers should dedicatedly and sincerely work in inspiring the students to take up higher education and a career in chemistry research. Prof ChGopal Reddy, the Chief Guest also expressed his content with the activities of the department and appreciated both the organizers and the participants for their mutual contribution for the success of the faculty development programme. The dignitaries presented the certificates and CDs containing the lecture notes

material to all the participant teachers. The workshop came to an end with a formal vote of thanks by Prof P Leelavathi, Convener of the workshop followed by the National Anthem.

