

## **Departmental Report**

### **Preliminary information**

#### **I Department profile**

1. Dr. P.Shetty, Head of Dept
2. Dr. S.Murthy
3. Ms. T.Asha
4. Ms. L.Jeysus
5. Sr. R.Khandagale
6. Ms. A. Menon
7. Dr. Neha Choudhary
8. Ms. Shabana Shaikh
9. Ms. Payal Manna

#### **Junior College:**

1. Ms. B. Gonsalves
2. Ms. S. Rathod
3. Ms. B.Shaikh

### **II Courses/Papers taught**

#### **Undergraduate**

##### **FYBSc**

Chemistry Paper I

Chemistry Paper II

Chemistry Practical

##### **SYBSc**

Chemistry Paper I -Physical and Analytical Chemistry

Chemistry Paper II-Inorganic and Applied Inorganic Chemistry

Chemistry Paper III-Organic and Applied Organic Chemistry

Chemistry Practical

##### **TYBSc**

Chemistry Paper I -Physical Chemistry

Chemistry Paper II-Inorganic Chemistry

Chemistry Paper III-Organic Chemistry

Chemistry Paper IV- Analytical Chemistry

Applied Component- Drugs and Dyes

Chemistry Practical

Applied Component Practical

### **Post Graduate**

#### **MSc Part I**

Physical Chemistry

Inorganic Chemistry

Organic Chemistry

Analytical Chemistry

Physical Chemistry Practical

Inorganic Chemistry Practical

Organic Chemistry Practical

Analytical Chemistry Practical

#### **MSc Part II**

Quality in Analytical Chemistry

Advanced Instrumental Techniques

Bioanalytical Chemistry and Food Analysis

Environmental & Pharmaceutical Chemistry and Industrially Important Materials

Quality in Analytical Chemistry Practical

Advanced Instrumental Techniques Practical

Bioanalytical Chemistry and Food Analysis Practical

Environmental & Pharmaceutical Chemistry and Industrially Important Materials Practical

### **III BOS composition**

Name	Designation
Dr. Prabha Shetty	Head, Department of Chemistry
Dr. P. Sirisha Murthy	Faculty Member
Ms. Tanaz Asha	Faculty Member
Ms. Lynelle Jeysus	Co-opted Member

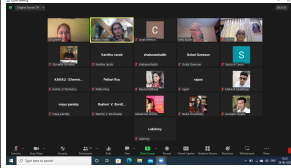
Sr. Rajani Khandagale	Co-opted Member
Dr. Jyoti Patil	Vice-Chancellor's Nominee
Dr. R.M. Patil	Subject Expert, The Institute of science, Dr. Homi Bhabha State University
Prof. N.N. Namboothri	Subject Expert, IIT Mumbai
Dr. Rajiv Kothurkar	Industry Expert
Ms. Ankita Yadav	Illustrious Alumni

#### IV Dates of BOS meetings

12<sup>th</sup> October 2022

#### Report

#### 1. Activities Conducted by the department:

Name of activity	Date	Number of students	Guest Speaker	Description	Proof
International Workshop Using POGIL online: Empowering Chemistry Teachers	28 <sup>th</sup> and 29 <sup>th</sup> June 22	35	Dr. Kelly Butler	-	Registration Sheet <a href="https://docs.google.com/spreadsheets/d/1z-TI4QbSE1AOXC SgVLMg4kbRcFLn44JS2gSF0eE7xgA/e/dit?usp=sharing">https://docs.google.com/spreadsheets/d/1z-TI4QbSE1AOXC SgVLMg4kbRcFLn44JS2gSF0eE7xgA/e/dit?usp=sharing</a> Flyer: <a href="https://drive.google.com/file/d/1uQ_ZppVmpzYdfrtGwet_bMFwZcRcQr5z/view?usp=share_link">https://drive.google.com/file/d/1uQ_ZppVmpzYdfrtGwet_bMFwZcRcQr5z/view?usp=share_link</a> Pictures 

CHEMQUEE N-Intra collegiate Quiz	15/07/2022	41	NA	<p>“Chemqueen” an intra-collegiate quiz competition held on 15th July 2022 was organised by the MSc Part II students for the SYBSc and TYBSc students of Sophia College</p>	<a href="https://drive.google.com/file/d/1w3mNR8j2_gb31x1OutSo-oV0xPiJ0MaV/view?usp=sharing">https://drive.google.com/file/d/1w3mNR8j2_gb31x1OutSo-oV0xPiJ0MaV/view?usp=sharing</a> <a href="https://drive.google.com/file/d/1cn4d96Ob4JS_levZODjBbxxBdxvbJ6Fg/view?usp=sharing">https://drive.google.com/file/d/1cn4d96Ob4JS_levZODjBbxxBdxvbJ6Fg/view?usp=sharing</a> <a href="https://drive.google.com/file/d/1XDuR48iAGJd5v7PGQFTgY_kqDHdYW-iU/view?usp=sharing">https://drive.google.com/file/d/1XDuR48iAGJd5v7PGQFTgY_kqDHdYW-iU/view?usp=sharing</a> <a href="https://docs.google.com/document/d/1XU_Ssk_QFIPxumv3zZPqabXtRALCRqf0rFY9FxsSZG10/edit?usp=sharing">https://docs.google.com/document/d/1XU_Ssk_QFIPxumv3zZPqabXtRALCRqf0rFY9FxsSZG10/edit?usp=sharing</a>
From Laboratory Chemistry to Device Fabrication	12/08/2022	42	Prof. Ruchi Anand IWSA	Awareness of the trends in field	<a href="https://docs.google.com/document/d/1W-aT8RTe5tVAr7k_NkX3jX2NAivUYMEMcGPauU7CLT9o/edit?usp=share_link">https://docs.google.com/document/d/1W-aT8RTe5tVAr7k_NkX3jX2NAivUYMEMcGPauU7CLT9o/edit?usp=share_link</a>
CRSI lecture series	24/8/22	139	Chemical Research Society of India (CRSI)	Awareness of the trends in field	<a href="https://docs.google.com/document/d/1Gu-OrR8ZwEoHwBdCRafuXDVpl4e9XRrW5Y8TtGZSeCc/edit?usp=share_link">https://docs.google.com/document/d/1Gu-OrR8ZwEoHwBdCRafuXDVpl4e9XRrW5Y8TtGZSeCc/edit?usp=share_link</a>
Career Opportunities in Basic Sciences	26/08/2022	203	Department of Atomic Energy (DAE)	Inter departmental activity	<a href="https://docs.google.com/document/d/1f74crn62pwigA0HcO9NkiPUqolfbAoE5Su_kq1vLjho/edit?usp=sharing">https://docs.google.com/document/d/1f74crn62pwigA0HcO9NkiPUqolfbAoE5Su_kq1vLjho/edit?usp=sharing</a>

POSITIVE HEALTH: "EMPOWERING WOMEN"	11/11/2022	71	Dr. Mukesh Gupta, Le Nest	Awareness of health and hygiene	<a href="https://docs.google.com/document/d/12HwNMEfzJv-Lf1CuMd_hHHGOe3dTaUQavB4AfWbaOE/edit?usp=sharing">https://docs.google.com/document/d/12HwNMEfzJv-Lf1CuMd_hHHGOe3dTaUQavB4AfWbaOE/edit?usp=sharing</a>
Snapping Molecules Together	3/2/2023	43	Dr Suvarn Kulkarni -IIT-B	Nobel Oration	<a href="https://docs.google.com/document/d/1dRDjgtWGnttMoZRWpXqXAc-WHJEToRrtGeYfdEJOq5k/edit?usp=sharing">https://docs.google.com/document/d/1dRDjgtWGnttMoZRWpXqXAc-WHJEToRrtGeYfdEJOq5k/edit?usp=sharing</a>
Food Fest Zaika	11/02/2023	42	-	Ananya Event	<a href="https://docs.google.com/document/d/12IEAi-1TzLk2JpuphlqcvIns4DaCSQrlpAPHv9HuNM8/edit?usp=sharing">https://docs.google.com/document/d/12IEAi-1TzLk2JpuphlqcvIns4DaCSQrlpAPHv9HuNM8/edit?usp=sharing</a>
Chemscope	28/01/2023	91 Participants + 56 student organizers/volunteers	-	Intercollegiate event	<a href="https://docs.google.com/document/d/1lsQChX85qhn2RGB7U0rEqj6v11TYoxl94glmjbW8uPI/edit?usp=share_link">https://docs.google.com/document/d/1lsQChX85qhn2RGB7U0rEqj6v11TYoxl94glmjbW8uPI/edit?usp=share_link</a>
Credit course on 'Positive Health in Women'	3 <sup>rd</sup> to 13 <sup>th</sup> January 2023	30	Dr. Mukesh Gupta		<a href="https://drive.google.com/file/d/1hkVy6mV1V1rUISheEclHfr5GrusWdBum/view?usp=drive_link">https://drive.google.com/file/d/1hkVy6mV1V1rUISheEclHfr5GrusWdBum/view?usp=drive_link</a>
Credit Course on 'Innovations in Natural Dyeing and Entrepreneurship Opportunities'	25th August-5th September 2022	36		In Collaboration with Lovely Professional University	<a href="https://drive.google.com/file/d/1e7mxM5DvIzrP_n0VUXj2UUHzEc1HiLj/view?usp=drive_link">https://drive.google.com/file/d/1e7mxM5DvIzrP_n0VUXj2UUHzEc1HiLj/view?usp=drive_link</a>

2. Field trips done by the department, should include:

i) Place: Parle G Pvt Ltd and Bombay Rayon at Silvassa

→ Date: 6th-7th Jan 2023

→ Number of staff members involved: 04

→ Number of students involved: 47

→ Photographs

[https://drive.google.com/file/d/1U760phzkd-psatRQspy\\_h0J\\_E\\_WV0uwg/view?usp=share\\_link](https://drive.google.com/file/d/1U760phzkd-psatRQspy_h0J_E_WV0uwg/view?usp=share_link)

[https://drive.google.com/file/d/1f5Nj7tqUGReAMHLGxKoGw56LCT5X9rq0/view?usp=share\\_link](https://drive.google.com/file/d/1f5Nj7tqUGReAMHLGxKoGw56LCT5X9rq0/view?usp=share_link)

[https://drive.google.com/file/d/1LBKLIRcxgOjGCOOa\\_uSTMs9IFdcgnoRX/view?usp=share\\_link](https://drive.google.com/file/d/1LBKLIRcxgOjGCOOa_uSTMs9IFdcgnoRX/view?usp=share_link)

[https://drive.google.com/file/d/1FWwVqwHwOgRyGVJJTiSRYSYLf8nMkX27/view?usp=share\\_link](https://drive.google.com/file/d/1FWwVqwHwOgRyGVJJTiSRYSYLf8nMkX27/view?usp=share_link)

ii) Place: Cipla Patalganga

→ Date: 11th March 2023

→ Number of staff members involved: 02

→ Number of students involved: 19

→ Photographs:

[https://drive.google.com/file/d/1n85CstzVxLJGR9RR\\_idxSICYfxhhHiV4/view?usp=share\\_link](https://drive.google.com/file/d/1n85CstzVxLJGR9RR_idxSICYfxhhHiV4/view?usp=share_link)

[https://drive.google.com/file/d/1PIYgfPjFfhnEDn8tJ5216il9kRyZuXyL/view?usp=share\\_link](https://drive.google.com/file/d/1PIYgfPjFfhnEDn8tJ5216il9kRyZuXyL/view?usp=share_link)

### 3. Special pedagogical tools used, other than the lecture method

**I] Teaching Aids used:** In order to make the study of chemistry simple and interesting, a variety of teaching aids are used by the staff. These include:

i. **Ball and stick, molecular models, solid state models, chemistry molecular model kit:** Molecular models give a 3-D view of the molecule and thus help students to visualize the molecule and understand the molecular structure better. These were used for topics like:

- Neighbouring group participation in TYBSc class-LJ
- Stereochemistry in TYBSc class-SM
- Hybridization and Stereochemistry in FYBSc class-LJ
- Students were divided in groups and assigned to make molecular models using clay which helped them learn the geometry of molecules in FYBSc class-LJ
- Students were assigned to make models to help understand the stereochemistry of the molecules in TYBSc-SM
- Working model of Sample thief in TYBSc class-PS

ii. **Use of Apparatus/instruments:**

- Viscometers and stalagmometer were taken to FYBSc class for better understanding and working of the instruments.-TA

- HPTLC demonstration of separation test dyes was shown to the class to enable them to compare TLC vs HPTLC.-PS

### iii. Use of PowerPoint presentations by staff:

- Types of Fibres, Dye Fibre Attachment, structural determination of citral and nicotine for TYBSc class-LJ
- Optical Activity for FYBSc-LJ
- Contact process for preparation of sulfuric acid, nanomaterial, liquid dinitrogen tetroxide, solid state chemistry, superconductivity for TYBSc class-TA
- Spectral Methods-II for MSc class-TA
- Interactive PPTs for Statistical treatment of data and sampling, chromatography, Chemical calculations and solvent extraction for TYBSc class- PS
- Molecular Spectroscopy & Surface Chemistry for TYBSc class-RK
- Stereochemistry II and Aromatic Hydrocarbons for FYBSc class. -LJ
- Dyes used in food and cosmetics for TYBSc class. -LJ
- Polarography in TYBSc, molecular-TA
- Spectroscopy in FYBSc. -TA
- Spectral Methods for MSc II-TA
- Spectrometry, Radioanalytical Methods and electroanalytical methods for MSc I-TA
- UV-Vis spectroscopy and photometric titrations, types of instrumental methods of analysis and Corrosion and its prevention for SYBSc class. -PS
- Water quality parameters-TS, BOD, COD and DO and Effluent treatment plant. Principles of metallurgy- pyrometallurgy of copper,hydrometallurgy of silver, electrometallurgy of aluminum for SYBSc class. –PS
- Quantum Mechanics, Polymers for TYBSc class-RK
- Industrial organic Chemistry for SYBSc class-RK
- Qualitative Analysis, Acid Base theory, bonding for FYBSc class-RK

### iv. Creative activities/methodologies used for teaching chemistry:

- Bridge practicals were conducted for students of all classes as they had not attended practicals due to online classes. PS, SM, TA, LJ, RK
- Recapitulation of basic concepts in chemistry were conducted to bridge the gap in knowledge of students.
  - Six pillars of Organic Chemistry.-SM
  - Calculation of lone pair of electrons and formal charge-LJ
  - Basics of stereochemistry -LJ
- Relevant videos on various topics were shown during lectures and shared on the Google classrooms. -TA, PS, SM, TA, RK, LJ and AM.
- Applications like pubchem, chemtube were used to show the 3D structures of molecules for better understanding-LJ and RK
- Literature review on green principle violations-RK
- Research review on bio-adsorbants-RK

- Creating illustration/ infographic/ timelines of discoveries using suitable app: -
  - Atomic structure for FYBSc class-RK
  - Life and discoveries of nobel Laureate for FYBSc class -RK
  - Enantiomers for FYBSc class -LJ
- Interactive illustrations were shared of nitrogen and carbon cycles-PS
- Demonstrated how to use % composition calculator, concentration calculator app, molecular generator. -PS
- Simulations were used to explain 'Rotational, Vibrational spectroscopy' and few topics on pollution-PS and RK.
- Flipped classroom: videos and/or PDF's were sent in advance and then the topic was discussed in the class:
  - Basics of mechanisms in organic chemistry for TYBSc class-LJ
  - Natural products for TYBSc class-LJ
  - Recrystallization for TYBSc class-LJ
  - Liquid states for FYBSc class-TA
  - Nomenclature for TYBSc class-SM
  - Green Chemistry for SYBSc class-RK
  - Atomic structure for FYBSc class -RK
  - Main group elements for FYBSc class -RK
  - Mechanism of SN reactions for TYBSc class-LJ
  - Numerical on polarography for TYBSc class-TA
  - Ionic equilibria, Classification of electrolytes and Ostwald dilution law pH concept and buffers for FYBSc class-TA
    - Atomic structure Comparative chemistry of main group elements for FYBSc class-RK
- Use of comic strip for brainstorming-PS
- Conducted pre and post lab sessions for a few practical sessions for FYBSc and SYBSc-LJ, RK.
- Peer teaching was conducted for the following topics:
  - Semi-micro qualitative analysis for SYBSc students.SM and LJ
  - Qualitative analysis of organic compounds for TYBSc students-LJ
  - Mechanism of nucleophilic substitution for SYBSc class-SM
  - Catalyst and reagents as a group activity for TYBSc class –SM
  - Case studies of impact of festivals on the environment for MSc Class-LJ
  - Carbohydrates, amino acids, proteins and nucleic acids for TYBSc class- LJ
  - Nomenclature of aromatic compounds, Haloarenes, Phenols, Aromatic Carboxylic acids, Aromatic Sulfonic acids Aromatic nitro, amino,aldehydes and ketones for SYBSc class-SM
  - Synthesis of drugs for TYBSc class-SM
  - Inquiry on preparation of a dye/pigment or estimation of dye, checking for adulterants, etc. performing the experiment in the laboratory and presenting the results to their peers for TYBSc class-LJ
- Inquiry based learning:
  - Unit processes for preparation of dyes for TYBSc class -LJ
  - Investigation of reaction mechanisms for SYBSc class.-SM
  - Polymers for TYBSc class- SM



- Simulations (for theory and practical topics) -PS, RK
- Shared Interactive PDF from various sites, shared e-books and important links of reference material and videos, interactive illustrations, video recording of lectures (powerpoint screen recorder and Screencast O'Matic)-PS.
- The following applications were used for administering the quizzes: testmoz, quizizz G-form. -PS, LJ and RK.
- Poster presentation for analytical chemistry TYBSc class-TA,PS
- Group activity on sampling of solids, liquids and gases-PS
- Creation of videos on gas laws for FYBSc class-TA
- Infographic/PPT on the application of gas law in daily life for FYBSc class. -TA
- Collaborative learning on topics like
  - Spectroscopy for TYBSc class-SM
  - TLC application for TYBSc class-PS
- Applet was used to show relation between HETP and number of theoretical plates on resolution of sample in gas chromatography for TY and for MSc I classes- PS
- Report Writing for MSc students about Industrial Visits.-PS and TA
- Applications like chemtube3D.com were used to show the 3D structures of molecules for better understanding of spectroscopy and molecules- RK
- Simulations were used to explain Water Quality Parameters, TLC, pH metry graphs, uv-visible spectrophotometry -PS
- Shared Infographic for revision on pollution, Interactive PDF from various sites, shared e-books and important links of reference material and videos, video recording of lectures (powerpoint screen recorder and Screencast O'Matic)
- A combination of Flipped classroom and mind map was done for the topic catalysis in FYBSc class- TA
- Case studies
- Experiential learning:
  - Students were divided into groups and they had to make working models of molecules using clay and toothpicks and predict the stereochemistry of the product formed during TYBSc class. -LJ
  - The students were divided into groups and they were given different metal ion solutions and derivatizing agents. They were asked to use the whatman filter paper to prove the best derivatizing agent for the given metal ions during TYBSc class-PS
- Pre and post laboratory sessions for few practicals of FYBSc SYBSc and TYBSc classes.-LJ, RK
- Open book test on:
  - Chemistry of Biomolecules for TYBSc students. -LJ
  - Electroanalytical Techniques for TYBSc students-TA
- The following applications were used for administering the quizzes: Kahoot, Socrative. LJ
- Case studies on calamities caused by heavy metal contamination/ Nuclear disasters for MSc students-LJ

- Case studies on petrochemicals, mining, dyes its impact on environment for SYBSc class-RK
- Creating Infographics on different chromatographic techniques for MSc Part II-PS

#### v. Other teaching strategies

##### Worksheets were provided to students on topics like:

- IUPAC and R/S/E/Z descriptors for FYBSc class.-LJ
- Chemical calculation to FYBSc class-TA
- Nomenclature for TYBSc class-SM
- NGP reactions and Natural products for TYBSc class-LJ
- Catalysts and Reagent for TYBSc class -SM
- 2.5d, 4d and Q test, Null hypothesis: T-test and F-test, Graphical representation of data: Method of averages, method of least squares, Confidence limit, confidence interval, normality, molarity, ppm, interconversion of concentration units, empirical formula, mole fraction and percentage composition, single step, multistep extraction and percentage extraction, distribution of solute in counter current extraction for TYBSc class-PS
- Types and sources of errors, mean, median, standard deviation, range, variance, deviation, relative average deviation, error: absolute error and relative error, significant figures for SYBSc class-PS
- Spectroscopy and Raman spectroscopy - RK
- Aromatic Hydrocarbons and Stereochemistry II for FYBSc class-LJ
- Chemistry of Aliphatic Hydrocarbons for FYBSc class-LJ
- Oxidation and reduction chemistry, Lewis dot structures, VESPER, solubility and solubility product for FYBSc class - RK
- Carbohydrate Chemistry for TYBSc class -LJ
- Interconversions of Haworth and Fischer projections for TYBSc class-LJ
- Numerical on precipitation and redox titrations for TYBSc class- PS
- Numericals on Quantum mechanics and polymers for TYBSc class - RK
- Numericals on GC were given for practice for MSc Part I.-PS

##### II] Teaching learning in the laboratory (Star College Experiments) :

- Estimation Vitamin C from citrus fruits, juices, tablets for TYBSc class-PS
- Dyeing of cotton and silk fabric using different modes of application mordant, basic, direct and azo dyes-LJ
- Spectrophotometric measurement of absorbance for TYBSc class-RK
- Determined pH of water samples from different sources for TYBSc class-RK
- Estimation of paracetamol in commercial drug samples.-LJ
- Separation of plant pigments extracted from spinach leaves using TLC technique. -LJ and RK
- RBPT Project on Dyeing of Fabric using natural dyes viz. beetroot, turmeric and marigold petals, and checking the washing fastness of the dyes with hot and cold water.-LJ and RK
- Estimation of hardness of water from water samples from different sources for SYBSc class-PS, SM, LJ and AS

- Inquiry on preparation of a dye/pigment or estimation of dye, checking for adulterants, etc. performing the experiment in the laboratory and presenting the results to their peers for TYBSc class-LJ
- Determination of mixed melting point for TYBSc class-TA
- Construction of electrochemical cell using different half cells and determining the emf for TYBSc class –TA
- Determination of pesticide in fruits and vegetable for FYBSc class-TA, RK
- Determination of pH of various samples from kitchen and garden for FYBSc class-TA, RK
- Determination of optically active substances-PS
- Marmalade Preparation and analysis of sucrose content in marmalade and saline water by polarimetry for TYBSc class-RK, PS
- pH metry and conductometric titration of a weak acid and hence to determine suitable indicator for TYBSc class -PS
- Synthesis of iron nanoparticles from scrap for TYBSc class –PS
- Determination of  $\lambda_{\max}$  and  $10Dq$  of prepared samples for TYBSc class –RK
- Preparation of lipsticks/lipbalm from organic sources for TYBSc class.-RK

**4. Any special programs conducted for either /both slow learners and advanced learners. NA**

**5. Mentor Mentee programs conducted by the department. NA**

**6. Research Papers Presented NA**

**7.. Research Grants Received NA**

**8. Research Guide for PhD students NA**

**9. National or International awards/fellowships received.** Awarded Indian Academy of Sciences `Summer Research Fellowship-2023". The research work will be carried out under the guidance of Dr. K. Krishnamoorthy from Polymer division, NCL, Pune.-PS

**10. Department/ lecturers having research projects funded by Government (include RUSA), Non-Government agencies, college during the year.**

- 2<sup>nd</sup> year of RUSA outreach project: Completed 7 th standard experiments by the study group, control group and post quiz assignment with St. Teresa Girls High School, Haregaon.-PS
- Completed sixth standard experiments by the study group students and the post quiz-PS
- Assignment at Shri Ram Welfare Society's school, Andheri. -PS
- Completed science teachers training for seventh experiments at Shri Ram Welfare Society's school, Andheri.-PS

**11. Workshops/seminars/ Conferences conducted during the year.**

International Workshop on 'Using POGIL online: Empowering Chemistry Teachers' by Dr Kelly Butler on 28<sup>th</sup> and 29<sup>th</sup> June 22

**12. Workshops/seminars/ Conferences conducted on Intellectual Property Rights (IPR), during the year. NA**

**13. Workshops/seminars/ Conferences conducted on Gender related issues (IPR), during the year.**

- POSITIVE HEALTH: "EMPOWERING WOMEN" on 11/11/2022 by Dr. Mukesh Gupta
- Conducted DBT star college status supported One Credit course on 'Positive Health in Women' from 3<sup>rd</sup> to 13<sup>th</sup> January 2023

**14. Extension activities carried out in the neighborhood sensitizing students to social issues for their holistic development**

Students of SYBSc and TYBSc volunteered for conducting chemistry related experiments and activities for school students visiting College Campus hosted by Sophia College, as an initiative by DBT star "Science ADDA" on 28<sup>th</sup> February 2022.

**15. E-content development.**

Video on 'red cabbage juice as an indicator to determine pH' on you tube and OER commons-TA

<https://oercommons.org/courseware/lesson/101792>

**16. Capacity Development and Skill Enhancement activities organised for improving students' capabilities; like Soft Skills, Language and Communication Skills, Life Skills (Yoga, Physical fitness, Health and Hygiene) & Awareness of Trends in Technology.**

Name of activity	Date	Number of students	Guest Speaker	Description	Proof
CHEMQUEEN-Intra collegiate Quiz	15/07/2022	41	NA	"Chemqueen" an intra-collegiate quiz competition held on 15th July 2022 was organised by	<a href="https://drive.google.com/file/d/1w3mNR8j2_gb31x1OutSo-oV0xPiJ0MaV/view?usp=sharing">https://drive.google.com/file/d/1w3mNR8j2_gb31x1OutSo-oV0xPiJ0MaV/view?usp=sharing</a> <a href="https://drive.google.com/file/d/1cn4d96Ob4JS_levZODjBbxxB">https://drive.google.com/file/d/1cn4d96Ob4JS_levZODjBbxxB</a>

				the MSc Part II students for the SYBSc and TYBSc students of Sophia College	<a href="https://drive.google.com/file/d/1XDUR48iAGJd5v7PGQFTgY_kqDHdYW-iU/view?usp=sharing">https://drive.google.com/file/d/1XDUR48iAGJd5v7PGQFTgY_kqDHdYW-iU/view?usp=sharing</a> <a href="https://docs.google.com/document/d/1XUSsk_QFIPxumv3zZPqabXtRALCRqf0rFY9FxsSZG10/edit?usp=sharing">https://docs.google.com/document/d/1XUSsk_QFIPxumv3zZPqabXtRALCRqf0rFY9FxsSZG10/edit?usp=sharing</a>
From Laboratory Chemistry to Device Fabrication	12 /08/2022	42	Prof. Ruchi Anand IWSA	Awareness of the trends in field	<a href="https://docs.google.com/document/d/1W-aT8RTe5tVAr7k_NkX3jX2NAivUYMEMcGPauU7CLT9o/edit?usp=share_link">https://docs.google.com/document/d/1W-aT8RTe5tVAr7k_NkX3jX2NAivUYMEMcGPauU7CLT9o/edit?usp=share_link</a>
CRSI lecture series	24/8/22	139	CRSI	Awareness of the trends in field	<a href="https://docs.google.com/document/d/1Gu-OrR8ZwEoHwBdCRafuXDVpl4e9XRrW5Y8TtGZSeCc/edit?usp=share_link">https://docs.google.com/document/d/1Gu-OrR8ZwEoHwBdCRafuXDVpl4e9XRrW5Y8TtGZSeCc/edit?usp=share_link</a>
Career Opportunities in Basic Sciences	26/08/2022	203	DAE	Inter departmental activity	<a href="https://docs.google.com/document/d/1f74crn62pwigA0HcO9NkiPUqolfbAoE5Su_kq1vLjho/edit?usp=sharing">https://docs.google.com/document/d/1f74crn62pwigA0HcO9NkiPUqolfbAoE5Su_kq1vLjho/edit?usp=sharing</a>
POSITIVE HEALTH: "EMPOWERING WOMEN"	11/11/2022	71	Dr. Mukesh Gupta, Le Nest	Awareness of health and hygiene	<a href="https://docs.google.com/document/d/12HwNMEfzJv-Lf1CuMd_hHHGOe3dTaUQavB4AfWbaOE/edit?usp=sharing">https://docs.google.com/document/d/12HwNMEfzJv-Lf1CuMd_hHHGOe3dTaUQavB4AfWbaOE/edit?usp=sharing</a>
Snapping Molecules Together	3/2/2023	43	Dr Suvarn Kulkarni -IIT-B	Nobel Oration	<a href="https://docs.google.com/document/d/1dRDjgtWGnttMoZRWp">https://docs.google.com/document/d/1dRDjgtWGnttMoZRWp</a>

					<a href="https://docs.google.com/document/d/12IEAi-1TzLk2JpuphlqcvIns4DaCSQrlpAPHv9HuNM8/edit?usp=sharing">XqXAc-WHJEToRrtGeYfdEJOq5k/edit?usp=sharing</a>
Food Fest Zaika	11/02/2023	42	-	Ananya Event	<a href="https://docs.google.com/document/d/12IEAi-1TzLk2JpuphlqcvIns4DaCSQrlpAPHv9HuNM8/edit?usp=sharing">https://docs.google.com/document/d/12IEAi-1TzLk2JpuphlqcvIns4DaCSQrlpAPHv9HuNM8/edit?usp=sharing</a>
Chemscope	28/01/2023	91 Participants + 56 student organizers/volunteers	-	Intercollegiate event	<a href="https://docs.google.com/document/d/1IsQChX85qhn2RGB7U0rEqj6vI1TYoxl94glmjBw8uPI/edit?usp=share_link">https://docs.google.com/document/d/1IsQChX85qhn2RGB7U0rEqj6vI1TYoxl94glmjBw8uPI/edit?usp=share_link</a>
Credit course on 'Positive Health in Women'	3 <sup>rd</sup> to 13 <sup>th</sup> January 2023	30	Dr. Mukesh Gupta		<a href="https://drive.google.com/file/d/1hkVy6mV1V1rUISheEclHfr5GrusWdBum/view?usp=drive_link">https://drive.google.com/file/d/1hkVy6mV1V1rUISheEclHfr5GrusWdBum/view?usp=drive_link</a>
Credit Course on 'Innovations in Natural Dyeing and Entrepreneurship Opportunities'	25th August- 5th September 2022	36		In Collaboration with Lovely Professional University	<a href="https://drive.google.com/file/d/1e7mxM5DvlzrP_n0VUXj2UUHzEc1HiLj/view?usp=drive_link">https://drive.google.com/file/d/1e7mxM5DvlzrP_n0VUXj2UUHzEc1HiLj/view?usp=drive_link</a>

**17. Guidance/coaching for competitive examinations and career counseling offered to students. NA**



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Date: 30//04/2023

