

**1. Details of the Teacher/ Academic:**

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| <b>Name</b>  | <b>: Prof. Lalita S Kumar</b>                |
| <b>Date of Birth</b>                                       | <b>: 29.09.1961</b>                          |
| <b>Date of Joining in IGNOU</b>                            | <b>: 18.01.1989</b>                          |
| <b>Current Designation</b>                                 | <b>: Professor</b>                           |
| <b>Pay Scale as on date</b>                                | <b>: 199600/</b>                             |
| <b>Highest Educational Qualifications &amp; Discipline</b> | <b>: Ph.D. (Chemistry), 1987; MADE, 2000</b> |

**2. Honour/Award/Fellowship/membership of Professional body/ Statutory body (internal/ external) received by the Teacher/ Academic:**

| <b>Name of the recipient</b>                                     | <b>Honour /Award/ Fellowship name/ membership of Professional body/ Statutory body</b> | <b>Agency name /Name of statutory body/ institution/ Apex body</b>   | <b>Period</b>                         |
|--|--|--|---------------------------------------|
| Raunaq, Lalita S Kumar, S. V. Arya, Neera Singh and Shashi Singh | Best Poster in National Symposia   | Indian Agricultural Research Institute, Delhi                        | 2015                                  |
| Lalita S Kumar and Sanjiv Kumar                                  | Gold medal for Innovation in Open and Distance learning” in sharing                    | IGNOU, in the 22 <sup>nd</sup> Convocation                           | 2011                                  |
| B.I. Fozdar and Lalita S Kumar                                   | “Gold medal for the Best Research Paper award”   | IGNOU, in the 19 <sup>th</sup> Convocation                           | 2008                                  |
| Lalita S Kumar   | Member   | Academic Council (IGNOU)   | 2001-2003                             |
| Lalita Nayal (Unmarried status)                                  | Junior Research Fellowship, NET exam   | CSIR, UGC for NET exam   | 1984-1986                             |
| Lalita Nayal (Unmarried status)                                  | Senior Research Fellowship   | CSIR, UGC for NET exam   | 1987-1988                             |
| Lalita S Kumar   | Member   | School Board (School of Tourism and Hospitality Services Management) | 2016-2018                             |
| Lalita S Kumar   | Member   | School Board (School of Agriculture)                                 | 2013-2015                             |
| Lalita S Kumar   | Member   | School Board (School of Engineering and Technology)                  | 2012-2014                             |
| Lalita S Kumar   | Member   | School Board (School of Sciences)                                    | 2006-2008, 2010-2012, 2016- till date |
| Lalita S Kumar   | Member   | School Board (School of Agriculture)                                 | September, 2023                       |
| Lalita S Kumar   | Member   | School Board (SOITS)   | October, 2024                         |
| Lalita S Kumar   | Life Member  | Indian Society of Analytical Scientists                              | 2000-till date                        |
| Lalita S Kumar   | Life Member  | National Magnetic Resonance Society                                  | 2000-till date                        |

### 3. Books/Book Chapter:

- Co-author/co-editor if any, title, place of publication, publisher, Year, page (no) s, ISBN No

| S. No. | Name of Author1 / Editor 1, & Co-author (s) / Co-editor (s) (if any) | Title of chapter/book   | Place of publication | Publisher              | Year | Total Pages                    | ISBN No.   |
|--------|--|---|----------------------|------------------------|------|--------------------------------|--|
| 1      | Manhas, N., Kumar, L. S., & Adimule, V.                              | “Early-Stage Diagnosis of Breast Cancer: Amelioration in Approaches” in Drug and Therapy Development for Triple Negative Breast Cancer      | WILEY-online library | WILEY-VCH GmbH         | 2023 | 1-34                           | Print:<br>9783527351756<br><br>Online:<br>9783527841165<br><br><a href="https://doi.org/10.1002/9783527841165.ch1">https://doi.org/10.1002/9783527841165.ch1</a> |
| 2      | V.K. Ahluwalia, Lalita S. Kumar and Sanjiv Kumar                     | Chemistry of Natural Products: Amino Acids, Peptides, Proteins and Enzymes  | New Delhi            | Ane Books India        | 2006 | 249                            | 81-8052-089-7 (Pb)<br>81-8052-106-0 (Hb)   |
| 3      | Lalita S Kumar and Sanjiv Kumar (Eds. Sujata Santosh and C.K. Ghosh) | Quality Assured Delivery of PGDAC Programme using Vedyadhara Open e-Learning Environment (VOLE) in the Book “Creative Sparks of Innovation” | New Delhi            | MPDD, IGNOU, New Delhi | 2013 | 87-92 (Total No. of Pages 287) | 978-81-266-6603-4  |

### 4. Research Articles/Publications:

| S.No | Author/ Co-author (if any)  | Title   | Name of Journal                       | Volume | Page no. (s) | Year                          | ISSN No   |
|------|---|---|---------------------------------------|--------|--------------|-------------------------------|---|
| 1    | Nidhi Manhas <sup>a</sup> , Lalita S. Kumar, Pankaj Kumar, Vandna Sharma, Rajeev S. Joshi, Rangappa Keri, A.K. Swetha Vinayak Adimule | Enhanced photoluminescence dynamics, fluorescence decay and distinctive electrical properties of Eu <sub>2</sub> O <sub>3</sub> nanoparticles decorated liquid crystal nanocomposites | <i>Materials Characterization</i>     | 224    | 115083       | June 2025                     | <a href="https://www.sciencedirect.com/science/article/pii/S1044580325003729">https://www.sciencedirect.com/science/article/pii/S1044580325003729</a> |
| 2    | Jagannadha Rao Alla, Santosh Kumar Badampudi,   | Design, synthesis and biological evaluation of indazole   | <i>Journal of Molecular structure</i> | 1325   | 140949       | (15 <sup>th</sup> March 2025) | <a href="https://www.sciencedirect.com/s">https://www.sciencedirect.com/s</a>   |

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|---|---|--|---|--------------------|-------------|----------|---|
|   | Desu Gayathri Niharika, Amarendar Reddy M, Subrahmanyeswara Rao N, Rashmi Kumari, Lalita S Kumar  | carboxamide analogues as potential anticancer agents   |   |                    |             |          | <a href="https://www.science/article/abs/pii/S0022286024034562?via%3Dihub">cience/article/abs/pii/S0022286024034562?via%3Dihub</a>                    |
| 3 | Prasanta Kumar Nag, Titas Kumar Mukhopadhyay, Lalita S. Kumar   | Evaluating specific rotation of flexible chiral drugs using density functional theory and conformational studies   | <i>Journal of the Indian Chemical Society</i>               | 102                | 101584      | Feb 2025 | <a href="https://www.sciencedirect.com/science/article/pii/S0019452225000196">https://www.sciencedirect.com/science/article/pii/S0019452225000196</a> |
| 4 | Smriti Rana, Yogesh Kumar, Rahul Kaushik, Lalita S. Kumar   | Recent Developments in Metal-Organic Frameworks for Water Purification: A Mini Review  | <i>Chemistry Select</i>                                     | Volume 9, Issue 35 | e202403309  | 2024     | e202403309<br><a href="https://doi.org/10.1002/slct.202403309">https://doi.org/10.1002/slct.202403309</a>   |
| 5 | Manhas, N., Kumar, L. S. *, & Adimule, V.   | Photoluminescence and Supercapacitive Properties of Carbon Dots Nanoparticles: A Review.   | <i>Journal of Metastable and Nanocrystalline Materials,</i> | 37                 | 1-22        | 2023     | <a href="http://dx.doi.org/10.4028/p-Lp16yW">http://dx.doi.org/10.4028/p-Lp16yW</a>   |
| 6 | Manhas, N., Adimule, V. *, Lakshminarayana, P., Keri, R., Kumar, L.S.**, Bathula, C.  | Utilization of Co <sup>2+</sup> Doped Eu <sub>2</sub> O <sub>3</sub> Nanostructures and their Effect on the Dielectric and Photoisomerization of Liquid Crystals | <i>Physics of Fluids</i>                                    | 35 (10)            | 107-112     | 2023     | <a href="https://doi.org/10.1063/5.0171578">https://doi.org/10.1063/5.0171578</a>   |
| 7 | Kant, R.; Saini, K.; Upadhyay, R.; Amri, N.; Kumar, R.; S Kumar, L.   | Design, Synthesis and Characterization of Novel 1H-1,2,3-Triazole Quinoline-Isatin Tethered Conjugates   | <i>Asian J. Chem.</i>                                       | 35                 | 1269–1275.  | 2023     | <a href="https://doi.org/10.14233/ajchem.2023.27873">https://doi.org/10.14233/ajchem.2023.27873</a>   |
| 8 | Saini, K.; Upadhyay, R.; Kant, R.; Vajpayee, A.; Jain, K.; Kumar, A.; S Kumar, L.; Kumar, R.  | Design, Synthesis, Molecular Docking and DFT Studies on Novel Melatonin and Isatin Based Azole Derivatives.  | <i>RSC Adv.</i>   | 13                 | 27525–27534 | 2023     | <a href="https://doi.org/10.1039/D3RA05531K">https://doi.org/10.1039/D3RA05531K</a>   |
| 9 | Kant, R.; Saini, K.; Upadhyay, R.; Singh, Y.; Reddy, V.; Singh, S.; Kareem, M.; Dasegowda, K.; Prabhavati, H.; Kumar, R.; Park, J.; and S Kumar, L. | Design, Synthesis, In-Silico Screening and Antiproliferative Activity of Novel 1,2,3 Triazole Tethered Dibenzosuberane Conjugates.                               | <i>Biotechnol Bioproc E</i>                                 | 28                 | 761-773     | 2023     | <a href="https://doi.org/10.1007/s12257-023-0077-5">https://doi.org/10.1007/s12257-023-0077-5</a>   |

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| 10 | Rakesh Kumar, Dhiraj Kumar, Ravindra Kumar Upadhyay, Nidhi Deswal, Priya Takkar, Abdul Kareem, Vinod Kumar, Lalita S Kumar,  | Design, Synthesis, Antimicrobial Screening and Docking Studies of Newer 1,4-Dihydropyridine tethered Chalcone Hybrids   | <i>Chemistry Select</i>  | 7(41)  |           | 2022 | e202202928<br><a href="https://doi.org/10.1002/slct.202202928">https://doi.org/10.1002/slct.202202928</a> |
| 11 | Rakesh Kumar, Neha Yadav, Harshita Jain, Nidhi Deswal, Ravindra Kumar Upadhyay, Ankita Leekha, Anita Kamra Verma, Abdul Kareem, Rajasekhar Chikati, and Lalita S Kumar | Microwave-Assisted Synthesis of 4-Aryl-1,4-dihydropyridines as Potent Anticancer Agent and Their In-Silico Studies  | Chemistry Select   | 7 (19) |           | 2022 | 2365-6549<br>e202104129   |
| 12 | Yogesh Kumar, Javaid Shabir, Padmini Gupta, Lalita S. Kumar  | Design and Development of Amine Functionalized Mesoporous Cubic Silica Particles: A Recyclable Catalyst for Knoevenagel Condensation  | Catalysis Letters  | 152    | 1506-1516 | 2022 | 1011-372X   |
| 13 | Y. Kumar, R. Kaushik, S. Rani, S. Rafat, J. Shabir, K. Dev, L.S. Kumar   | Curcumin immobilized metal organic framework based fluorescent nanoprobe for selective sensing and bioimaging of Fe (II)  | Mater. Today Commun.   | (28)   | 102563    | 2021 | 2352-4928   |
| 14 | Reviewed   | Title: "Utilization of waste derived from the silicon carbide grinding sludge and stone sludge as silicon aluminum source for the synthesis of the amine functionalized mesoporous humidity control material" | Journal Name: Journal of Material Cycles and Waste Management (Springer) |        |           | 2021 |   |
| 15 | Reviewed   | Title: "Comparison of the two carbon allotropes as solid support: catalytic efficiency of the supported metalloporphyrins for the aerobic oxidation of  | <i>Chemistry Select</i> (Wiley)  |        |           | 2021 |   |

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|    |   | alcohols"  |  |        |                 |      |  |
| 16 | Yogesh Kumar,<br>Swati Rani,<br>Javaid Shabir, and<br>Lalita S. Kumar   | Nitrogen-Rich and<br>Porous Graphitic<br>Carbon Nitride<br>Nanosheet<br>Immobilized<br>Palladium<br>Nanoparticles as<br>Highly Active and<br>Recyclable Catalysts<br>for the Reduction of<br>Nitro Compounds<br>and Degradation of<br>Organic Dyes   | <i>ACS Omega</i>   | 5 (22) | 13250-<br>13258 | 2020 |  |
| 17 | Ismail, I. M.,<br>Prasad, M.,<br>Kumar, L. S.   | Application of In Situ<br>Generated Chiral<br>Oxazaborolidine<br>Catalyst for the<br>Enantioselective<br>Reduction of<br>Prochiral Ketones,<br><a href="http://dx.doi.org/10.31638/IJPRS.V7.I4.0008">http://dx.doi.org/10.31638/IJPRS.V7.I4.0008</a> | International<br>Journal for<br>Pharmaceutical<br>Research Scholars                              | 7(4)   | 31-39           | 2018 |  |
| 18 | Vinayak Adimule,<br>Sudha Medapa,<br>Lalita S Kumar   | Design, Synthesis<br>and Characterisation<br>of Novel Amine<br>Derivatives of 5-[5<br>(Chloromethyl)-1, 3,<br>4-Oxadiazol-2-yl]-2-<br>(4-Fluorophenyl)<br>Pyridine as a New<br>Class of Anticancer<br>Agents   | Bangladesh Journals<br>online, Bangladesh/D<br>haka University<br>Journal of Pharma.<br>Sciences | 16(1)  | 11-19           | 2017 |  |
| 19 | Raunaq, Lalita S.<br>Kumar, SatyaVir<br>Arya and Shashi<br>Bala Singh   | Adsorption-<br>Desorption of<br>Tebuconazole in<br>Three Soils   | Pesticide Research<br>Journal  | 29(1)  | 82-87           | 2017 |  |
| 20 | Srinivasa Rao Y,<br>Sivalakshmi Devi<br>A, Sudarshan<br>Rao, K<br>Nageswara Rao<br>K, Anantha<br>Lakshmi P V,<br>Lalita S Kumar | Synthesis and<br>Characterization of<br>Process-related<br>impurities in<br>Azelnidipine   | North Asian<br>International<br>research Journal   | (2)    | 37-59           | 2016 |  |
| 21 | AdimuleVinayak,<br>Medapa Sudha,<br>Adarsha<br>Haramballi<br>Jagadeesha and<br>Kumar Sanjeev<br>Lalita                          | Design, Synthesis,<br>Characterization and<br>Cancer Cell Growth-<br>Inhibitory Properties<br>of Novel Derivatives<br>of 2-(4-Fluoro-<br>phenyl)-5-(5-Aryl<br>Substituted-1, 3, 4-<br>Oxadiazol-2-yl)<br>Pyridine                                    | British Journal of<br>Pharmaceutical<br>Research   | 7(1)   | 34-43           | 2015 |  |
| 22 | SrinivasaRao Y,<br>Chandan Kumar  | Identification,<br>Isolation and   | North Asian<br>International   | (1)    | 92-107          | 2015 |  |

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|----|--|--|---|------|-------------|------|--|
|    | V, Sivalakshmi<br>Devi A, Anantha<br>Lakshmi P V,<br>Lalita S Kumar  | Characterization of<br>Process related<br>Impurities in<br>Irbesartan  | research Journal  |      |             |      |  |
| 23 | Srinivasa Rao, A.<br>Sivalakshmi Devi,<br>V. Chandan<br>Kumar, K.<br>Nageswara Rao,<br>G. Tataji, P. V.<br>Anantha Lakshmi,<br>Lalita S. Kumar | Identification and<br>Characterization of<br>Impurities in<br>Lisinopril   | International Journal<br>of Pharmaceutical<br>Chemistry Research          | 4(3) | 1-11        | 2015 |  |
| 24 | Vinayak Adimule,<br>Sudha Medapa,<br>Prakash Kumar<br>Rao, Lalita<br>S.Kumar   | Synthesis of N-{[(2,<br>4 dichloro phenyl)-1,<br>3, 4-oxadiazole-2-yl]<br>methyl} amine<br>derivatives as<br>anticancer precursors   | International Journal<br>of Medicinal<br>Chemistry and<br>analysis/ India | 4(4) | 231-<br>235 | 2014 |  |
| 25 | Vinayak Adimule,<br>Sudha Medapa,<br>Prakash Kumar<br>Rao, Lalita S.<br>Kumar  | Synthesis,<br>Characterization and<br>Cytotoxic evaluation<br>of Novel derivatives<br>of 1-[2-(Aryl<br>substituted)-5-(4'-<br>Fluoro-3-methyl<br>biphenyl-4-yl)-[1, 3,<br>4] oxadiazole-3-yl]-<br>ethanone                         | International Journal<br>of Pharmaceutical<br>Chemistry                   | 4(3) | 88-91       | 2014 |  |
| 26 | Vinayak Adimule,<br>Sudha Medapa,<br>Prakash Kumar<br>Rao, LalitaS.<br>Kumar   | Design, synthesis,<br>characterization and<br>anticancer properties<br>of novel derivatives<br>of 1-[2-(aryl<br>substituted)-5-(4-<br>methoxy biphenyl-4-<br>yl)-[1, 3, 4]<br>oxadiazole-3-yl]-<br>ethanone                        | International Journal<br>of Pharma Sciences.                              | 4(5) | 713-<br>717 | 2014 |  |
| 27 | Vinayak Adimule,<br>Sudha Medapa,<br>Adarsha HJ,<br>Prakash Kumar<br>Rao, Lalita<br>S.Kumar  | Synthesis,<br>characterization &<br>cytotoxic evaluation<br>of novel derivatives<br>of 1, 3, 4-oxadiazole<br>containing 5-phenyl<br>thiophene moiety   | Journal of Pharmacy<br>and Biological<br>Sciences                         | 9(5) | 42-48       | 2014 |  |
| 28 | Vinayak Adimule,<br>Sudha Medapa,<br>Prakash Kumar<br>Rao, Lalita.S.<br>Kumar  | Novel substituted<br>phenoxy derivatives<br>of 2-chloro-n-{5-[2-<br>(4-methoxy phenyl)-<br>pyridine-3yl]-[1, 3, 4]<br>thiadiazole-2-yl]-<br>acetamides:<br>Synthesis,<br>characterization and<br>in vitro anticancer<br>properties | Journal of<br>Pharmaceutical,<br>chemical and<br>biological sciences      | 2(2) | 130-<br>137 | 2014 |  |
| 29 | Vinayak Adimule,<br>Sudha Medapa,<br>papaya JB,  | Synthesis,<br>characterization<br>& cytotoxic  | Journal of Pharma<br>Research   | 3(9) | 176-<br>179 | 2014 |  |

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|----|---|---|---|--------|-------------|------|--|
|    | Adarsha HJ,<br>Prakash Kumar<br>Rao, Lalita. S.<br>Kumar  | evaluation of 2-(4-fluorophenyl) substituted pyridine containing 1, 3, 4-oxadiazole moiety.   |   |        |             |      |  |
| 30 | Vinayak Adimule,<br>Sudha Medapa,<br>Lalita S Kumar   | Design, Synthesis and Cytotoxic Evaluation of Novel Amide Derivatives of 5-[2-(4-Fluorophenyl) Pyridin-3-yl]-1, 3, 4-Thiadiazol-2-Amine   | Pharmanest, An International Journal of Advances in Pharmaceutical Sciences | 5(1)   | 1761 - 1768 | 2014 |  |
| 31 | Vinayak Adimule,<br>Sudha Medapa,<br>Prakash Kumar<br>Rao, Lalita.S.<br>Kumar                                   | Synthesis, Characterization And in vitro Cytotoxic Evaluation of Novel Amide Derivatives Of 5-[2-(4- Methoxy phenyl) Pyridin-3-Yl]-1, 3, 4-Thiadiazol-2-Amine                                 | World Journal of Pharmaceutical Research                                    | 3(6)   | 525-535     | 2014 |  |
| 32 | Vinayak Adimule,<br>Sudha Medapa,<br>padmashreekulkar ni, Adarsha HJ<br>Prakash Kumar<br>Rao, Lalita S<br>Kumar | Synthesis, Characterization and Cytotoxic Evaluation of Novel Schiff Base Derivatives of 5-[2-(4-Fluorophenyl) Pyridin-3-yl]-1, 3, 4-Thiadiazol-2-Amine                                       | American Journal of Pharma Tech Research, India                             | 4(6)   | 328-337     | 2014 |  |
| 33 | Vinayak Adimule, Sudha Medapa, papaya JB, Adarsha HJ, PK Rao, Lalita S Kumar                                    | Synthesis and Cytotoxic evaluation of Novel 2-(4-N, N-Dimethyl) pyridine containing 1, 3, 4-oxadiazole moiety   | Asian Journal of Biomedical and Pharmaceutical Sciences                     | 04(37) | 1-5         | 2014 |  |
| 34 | Vinayak Adimule,<br>Sudha Medapa,<br>Prakash Kumar<br>Rao, Lalita S<br>Kumar                                    | Design, Synthesis, Characterization and Anticancer Properties of Novel 2-Chloro-N-(Aryl Substituted) Acetamide Derivatives of 5-[2-(4-Methoxyphenyl) Pyridin-3-yl]-1, 3, 4-Oxadiazole-2-Thiol | International Journal of Drug Development and Research                      | 6(4)   | 188-195     | 2014 |  |
| 35 | Vinayak Adimule, Sudha Medapa, Prakash Kumar Rao, Lalita.S. Kumar   | Synthesis, Characterization and Cytotoxic Evaluation of Novel Schiff Base Derivatives of 5-[2-(4-Fluorophenyl) Pyridin-3-yl]-1, 3, 4-Thiadiazol-2-Amine                                       | Indo American Journal of Pharmaceutical Research, India-USA                 | 04(12) | 5705-5710   | 2014 |  |
| 36 | Vinayak Adimule, Sudha Medapa, Prakash  | Design, Synthesis, Characterization and Cytotoxic Evaluation  | International Bulletin of Drug Research                                     | 4(7)   | 84-93       | 2014 |  |

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|----|--|---|--|----------|-------------|------|--|
|    | Kumar Rao,<br>Lalita S Kumar   | of Novel 2-Chloro-N-(Aryl Substituted) Acetamides Derivatives of 5-[2-Phenyl Pyridin-3-yl]-1, 3, 4-Oxadiazole-2-Thiol   |  |          |             |      |  |
| 37 | Vinayak Adimule, Sudha Medapa, Adarsha HJ, Prakash Kumar Rao, Lalita S. Kumar                      | Synthesis, Characterization, in vitro Anticancer Properties of 1-{5-Aryl-2-[5-(4-Fluoro-Phenyl)-Thiophen-2-yl]-[1, 3, 4] Oxadiazol-3-yl}-Ethanone                             | International Journal of Pharma Research and Review                      | 3(12)    | 20-25       | 2014 |  |
| 38 | Vinayak Adimule, Sudha Medapa, Adarsha HJ, Padmashree Kulkarni, Prakash Kumar Rao, Lalita S. Kumar | Synthesis, characterization of some novel 1, 3, 4-oxadiazole compounds containing 8-hydroxy quinolone moiety as potential antibacterial and anticancer agents                 | International Journal of Pharmacological Research                        | 4(4)     | 180-185     | 2014 |  |
| 39 | Vinayak Adimule, Sudha Medapa, Prakash Kumar Rao, Lalita S. Kumar                                  | Synthesis, Characterization and Cytotoxic evaluation of Novel derivatives of 1-[2-(Aryl substituted)-5-(4'-Fluoro-3-methyl biphenyl-4-yl)-[1, 3, 4] oxadiazole-3-yl]-ethanone | International Journal of Pharmaceutical Chemistry                        | 4, No. 3 |             | 2014 |  |
| 40 | Vinayak Adimule, Sudha Medapa, Lalita S Kumar  | Design, Synthesis and Cytotoxic Evaluation of Novel Amide Derivatives of 5-[2-(4-Fluorophenyl) Pyridin-3-yl]-1, 3, 4-Thiadiazol-2-Amine                                       | Universiti Sains Malaysia / Malaysian Journal of Pharmaceutical Sciences | 5(5)     | 1761 - 1768 | 2014 |  |
| 41 | Vinayak Adimule, Sudha Medapa, Lalita S Kumar  | Synthesis, Cytotoxic evaluation of Novel Methyl Amine Derivatives of 2-(4-Fluorophenyl) substituted Pyridine Containing 1, 3, 4-Oxadiazole Moiety                             | Wiley online library, USA/ Journal of heterocyclic Chemistry             | 9(5)     | 42-48       | 2014 |  |
| 42 | Lalita S Kumar and Sanjiv  | Quality Assured Delivery of Post  | Creative Sparks of Innovation,   |          | 87          | 2013 |  |



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|----|---|--|--|--------|-----------|------|--|
|    | Kumar   | Graduate Diploma in Analytical Chemistry using Vedyadhara Open e-Learning Environment (VOLE), Article                                      | NCIDE, IGNOU   |        |           |      |  |
| 43 | Vinayak Adimule, Sudha Medapa, Prakash Kumar Rao, Lalita. S. Kumar            | Synthesis, characterization and anticancer activity of Schiff base derivatives of 5-(2-phenoxy pyridine-3-yl)-1, 3, 4-thiadiazole-2-amine. | International Research Journal of Pharmacy                     |        | 62-66     | 2013 |  |
| 44 | Lalita S Kumar, Biplab Jamatia, A. K. Aggarwal, S. Kannan                     | Mobile Device Intervention for Student Support Services in Distance Education Context – FRAME Model Perspective, EURODL                    | European Journal of Open, Distance and E- Learning             | II     | 1-9       | 2011 |  |
| 45 | Lalita S. Kumar and Bharat Inder Fozdar                                       | Course Evaluation: A Holistic Approach   | Indian Journal of Open and Distance Learning                   | 18 (2) | 63-76     | 2009 |  |
| 46 | Bharat Inder Fozdar, Lalita S Kumar and Anurag Saxena                         | In-service Teacher Training Programme Effectiveness: An analysis of learner opinion on the effectiveness of the Programme                  | Malaysian Journal of Distance Education                        | 9(2)   | 65-87     | 2007 |  |
| 47 | Bharat. I. Fozdar, Lalita S Kumar   | Mobile Learning and Student Retention  | International Review of Research in Open and distance Learning | 8(2)   | 1-18      | 2007 |  |
| 48 | Bharat. I. Fozdar, Lalita S Kumar   | A Study of the Factors Responsible for the Dropouts from the B.Sc. Programme of IGNOU  | International Review of Research in Open and Distance Learning | 7(3)   | 1- 15     | 2006 |  |
| 49 | Bharat I. Fozdar, Lalita S Kumar  | Teaching Chemistry at Indira Gandhi National Open University   | Turkish Online Journal of Distance Education-TOJDE             | 7 (2)  | 82-89     | 2006 |  |
| 50 | F.J. Maria Pushparaj, S. Kannan, L. Vikram, Lalita S. Kumar and K.S. Rangappa | Alkaline hexacyanoferrate (III) oxidation of substituted 4-oxo acids: a mechanistic study  | J. Phys.Org. Chem.   | 18     | 1042-1049 | 2005 |  |
| 51 | Sanjiv Kumar and Lalita S Kumar   | SI Units for Chemists  | Chemistry Education Review                                     | 14(4)  | 25-32     | 1999 |  |
| 52 | V.K. Ahluwalia, Lalita Nayal, Shashi Bala and                                 | 2-Phenyl-6-cinnamoylchromans as Synthones for 2-   | Indian J. Chem   | 27B    | 72-73     | 1988 |  |

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|----|---|---|-----------------|-----|---------|------|--|
|    | Sudha Raghav  | Amino and 2-Mercapto-4, 5-substituted thiazoles   |                 |     |         |      |  |
| 53 | V.K. Ahluwalia, Lalita Nayal and Shashi Bala                                | Synthesis of Some 2-Amino-6-aryl-4-dihydrobenzopyranyl pyrimidines as potential antifungal & antibacterial agents   | Indian J. Chem. | 27B | 193-194 | 1988 |  |
| 54 | V.K. Ahluwalia, Lalita Nayal and A.K. Tehim                                 | New routes to the Synthesis of 8-(dihydrocinnamoyl) dihydrocoumarin derivatives   | Indian J. Chem  | 27B | 70-71   | 1988 |  |
| 55 | V.K. Ahluwalia, Lalita Nayal, Shashi Bala and Sudha Raghav                  | Acid Catalysed Condensation of Isoprene with hydroxypropiophenones : Synthesis of 2,2-dimethylchromans and some new 2-amino & 2-mercapto-4-aryl-5-methylthiazoles | Indian J. Chem. | 27B | 629     | 1988 |  |
| 56 | V.K. Ahluwalia, Lalita Nayal, Neelu Kaila, Shashi Bala Singh and A.K. Tehim | Synthesis & Antimicrobial Activity of Substituted 3,4-Dihydro-2H-1-benzopyrans  | Indian J. Chem. | 26B | 384     | 1987 |  |

#### 5. Policy Documents Reports/ Mimeos: Nil

| S. No. | Title | Institution/ Agency | Year |
|--------|-------|---------------------|------|
| 1.     |       |                     |      |
| 2.     |       |                     |      |
| 3.     |       |                     |      |

#### 5. MOOCs/ eSLMs/ eModules developed :

| S. No.   | Author/ Co-author (if any) | Title   | Credits | Level | Host Portal: (SWAYAM/ NPTEL/ NMEICT/ ePG Pathshala/ | Year    | Weblink   |
|--|----------------------------|---|---------|-------|---|---------|---|
| <b>Unit - I: Mechanism of Organic Reactions, B. Sc. 1<sup>st</sup> Year, Paper code, CH 102, Organic Chemistry-I</b> |                            |   |         |       |   |         |   |
| 1  | Prof. Lalita S Kumar       | Mechanism of Organic Reactions-I: Basic Concepts                                  |         | B.Sc. | SWAYAM  | 2014-15 | <a href="https://www.youtube.com/watch?v=XnD7iMR-hsk">https://www.youtube.com/watch?v=XnD7iMR-hsk</a> |
| 2  | Prof. Lalita S Kumar       | Mechanism of Organic Reactions-II: Nucleophilicity and Types of Organic Reactions |         | B.Sc. | SWAYAM  | 2014-15 | <a href="https://www.youtube.com/watch?v=iCooLGQK-M4">https://www.youtube.com/watch?v=iCooLGQK-M4</a> |
| 3  | Prof. Lalita S Kumar       | Mechanism of Organic Reactions-III: Types of Organic Reactions                    |         | B.Sc. | SWAYAM  | 2014-15 | <a href="https://www.youtube.com/watch?v=1CMYPwGrmk0">https://www.youtube.com/watch?v=1CMYPwGrmk0</a> |

|   |                      |  |  |       |        |         |   |
|---|----------------------|--|--|-------|--------|---------|---|
|   |                      | and intermediates  |  |       |        |         |   |
| 4   | Prof. Lalita S Kumar | Mechanism of Organic Reactions-IV: Energy Considerations in Reaction Mechanism   |  | B.Sc. | SWAYAM | 2014-15 | <a href="https://www.youtube.com/watch?v=EbYdNTCmE-o">https://www.youtube.com/watch?v=EbYdNTCmE-o</a>   |
| 5   | Prof. Lalita S Kumar | Mechanism of Organic Reactions-V: Determination of Reaction Mechanisms           |  | B.Sc. | SWAYAM | 2014-15 | <a href="https://www.youtube.com/watch?v=wBw_Sz8O3k0">https://www.youtube.com/watch?v=wBw_Sz8O3k0</a>   |
| <b>Unit – VII, Paper – II: Alkyl and Aryl Halides</b> |                      |  |  |       |        |         |   |
| 1   | Prof. Lalita S Kumar | Alkyl and Aryl halides-I: Classification and Nomenclature                        |  | B.Sc. | SWAYAM | 2014-15 | <a href="https://www.youtube.com/watch?v=b6cNSmRAS9k&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=35&amp;t=112s">https://www.youtube.com/watch?v=b6cNSmRAS9k&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=35&amp;t=112s</a> |
| 2   | Prof. Lalita S Kumar | Alkyl and Aryl halides-II: Preparation of Alkyl Halides-I                        |  | B.Sc. | SWAYAM | 2014-15 | <a href="https://www.youtube.com/watch?v=8S6SU_A2V0g&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=35">https://www.youtube.com/watch?v=8S6SU_A2V0g&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=35</a>                       |
| 3   | Prof. Lalita S Kumar | Alkyl and Aryl halides-III: Preparation of Alkyl Halides-II                      |  | B.Sc. | SWAYAM | 2014-15 | <a href="https://www.youtube.com/watch?v=ebeSQY17HyU&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=36">https://www.youtube.com/watch?v=ebeSQY17HyU&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=36</a>                       |
| 4   | Prof. Lalita S Kumar | Alkyl and Aryl halides-IV: Reactions of Alkyl Halides – I                        |  | B.Sc. | SWAYAM | 2014-15 | <a href="https://www.youtube.com/watch?v=EkJrm2q7Ll4&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=37">https://www.youtube.com/watch?v=EkJrm2q7Ll4&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=37</a>                       |
| 5   | Prof. Lalita S Kumar | Alkyl and Aryl halides-V: Reactions of Alkyl Halides – II                        |  | B.Sc. | SWAYAM | 2014-15 | <a href="https://www.youtube.com/watch?v=V2AWGt2LRVs&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=38">https://www.youtube.com/watch?v=V2AWGt2LRVs&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=38</a>                       |
| 6   | Prof. Lalita S Kumar | Alkyl and Aryl halides-VI: Structure, Preparation and Properties of Aryl Halides |  | B.Sc. | SWAYAM | 2014-15 | <a href="https://www.youtube.com/watch?v=SLZEMaiQxo0&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=39">https://www.youtube.com/watch?v=SLZEMaiQxo0&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=39</a>                       |
| 7   | Prof. Lalita S Kumar | Alkyl and Aryl halides-VII: Reactions of Aryl Halides                            |  | B.Sc. | SWAYAM | 2014-15 | <a href="https://www.youtube.com/watch?v=uZVjj6Jvsp4&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=40">https://www.youtube.com/watch?v=uZVjj6Jvsp4&amp;list=PLOnJQiDsowogkSRUXJZe7552OJosPLzx9&amp;index=40</a>                       |

**6. Presentation/Invited talk/Chair in National or International Seminar/Conference/ Workshops (Please do not mention if it is only participation without presentation)**

| S N | Author/ Co author (if any)          | Title of presentation, /Talk/Lecture                | Name Organizing institute                              | Conference/ Workshop   | City              | Date and Year                             |
|-----|-------------------------------------|---|--|--|-------------------|---|
| 1.  | V.Mallikarjuna Sarma , K. Subramany | Photocatalytic Properties Of Transition Metal Doped | PG & Research Deptt of Physics Seethalakshmi Ramaswami | 2nd International Virtual Conference on Materials Science and Applications | Tamil Nadu, India | 1 <sup>st</sup> -2 <sup>nd</sup> Feb 2024 |

|    |   |   |  |  |              |                               |
|----|---|---|--|--|--------------|-------------------------------|
|    | am<br>Lalita<br>S<br>Kumar  | Cus Magnetic<br>Nanoparticles<br>Towards Waste<br>Water<br>Treatment  | College  | (ICMSA-2024)   |              |                               |
| 2. | Smriti<br>Rana,<br>Yogesh<br>kumar,<br>Rahul<br>Kaushik,<br>Lalita S<br>Kumar | “Photocatalytic<br>Degradation of<br>Dye in<br>Wastewater by<br>Hybrid Zinc<br>Metal-Organic<br>Framework”  | Department of<br>Chemistry<br>Under the aegis<br>of, IQAC,<br>Atma Ram<br>Sanatan Dharma<br>College, DU                        | International<br>Conference on<br>Chemical and<br>Biological Sciences<br>(ICCBS)                                 | New<br>Delhi | 27th-29th<br>January,<br>2024 |
| 3. | Mallikarjun<br>a Sarma,<br>Subramany<br>am and<br>Lalita S<br>Kumar           | “Photocatalytic<br>Degradation of<br>Profenofos<br>Pesticide in<br>Agricultural<br>Runoffs by<br>Pristine ZnO<br>Nanostructures”                  | Department of<br>Chemistry<br>Under the aegis<br>of, IQAC,<br>Atma Ram<br>Sanatan Dharma<br>College, DU                        | International<br>Conference on<br>Chemical and<br>Biological Sciences<br>(ICCBS)                                 | New<br>Delhi | 27th-29th<br>January,<br>2024 |
| 4. | Prasanta<br>Kumar Nag<br>and Lalita<br>S Kumar                                | “Conformation<br>Studies Through<br>DFT Scanning of<br>Dihedral Angle<br>and Estimation<br>of Specific<br>Rotation of<br>Chiral Drugs”            | Department of<br>Chemistry<br>Under the aegis<br>of, IQAC,<br>Atma Ram<br>Sanatan Dharma<br>College, DU                        | International<br>Conference on<br>Chemical and<br>Biological Sciences<br>(ICCBS)                                 | New<br>Delhi | 27th-29th<br>January,<br>2024 |
| 5. | Brijesh<br>Kumari,<br>Lalita S<br>Kumar,<br>Devendra<br>Dhami                 | “Chemical<br>Composition of<br>Essential Oils of<br><i>Erigeron annuus</i><br>Flowers: A<br>Comparative<br>Account”                               | Department of<br>Chemistry<br>Under the aegis<br>of, IQAC,<br>Atma Ram<br>Sanatan Dharma<br>College, DU                        | International<br>Conference on<br>Chemical and<br>Biological Sciences<br>(ICCBS)                                 | New<br>Delhi | 27th-29th<br>January,<br>2024 |
| 6. | Jagannadha<br>Rao. Alla,<br>Santosh<br>Kumar and<br>Lalita S<br>Kumar         | Three Way<br>Synthesis of<br>Indazole Based<br>Benzamides   | Department of<br>Chemistry<br>Under the aegis<br>of, IQAC,<br>Atma Ram<br>Sanatan Dharma<br>College, DU                        | International<br>Conference on<br>Chemical and<br>Biological Sciences<br>(ICCBS)                                 | New<br>Delhi | 27th-29th<br>January,<br>2024 |
| 7. | Smriti<br>Rana,<br>Yogesh<br>kumar,<br>Rahul<br>Kaushik,<br>Lalita S<br>Kumar | “Immobilization<br>of terpyridine<br>moiety with<br>amine-<br>functionalized<br>ZIF-8 for<br>enhanced dye<br>degradation in<br>aqueous<br>medium” | International<br>Conference on<br>Smart<br>Consumption and<br>Sustainable<br>Living (ICSCSL-<br>2023)                          | Miranda House,<br>University of Delhi  | New<br>Delhi | August<br>24-25,<br>2023.     |
| 8. | Nidhi<br>Manhas,<br>Dr.<br>Vinayak<br>Adimule ,<br>Dr.<br>Parashuram          | Utilization of<br>Co <sup>2+</sup> Doped<br>Eu <sub>2</sub> O <sub>3</sub><br>Nanostructures<br>and their Effect<br>on the Dielectric<br>and      | Manipal Institute<br>of Technology,<br>Bengaluru in<br>association with<br>National Institute<br>of Technology,<br>Uttarakhand | International<br>conference on Recent<br>Advances in Fluid<br>Mechanics and<br>Nanoelectronics<br>(ICRAFMN-2023) | Bengaluru    | July 12-<br>14, 2023          |

|     |  |  |   |  |                  |  |
|-----|--|--|---|--|------------------|--|
|     | L, Dr. Rangappa Keri, Dr. Lalita S Kumar , Dr. Chinna Bathula  | Photoisomerization of Liquid Crystals  |   |  |                  |  |
| 9.  | Jagannadha Rao. Alla, Santosh Kumar and Lalita S Kumar   | Synthesis, Characterisation and Biological Evaluation of Some Indazole Derivatives”  | International conference on Designing a sustainable future: Advances and opportunities in green chemistry (ICGC - 2023) | University of Ladakh, Green Chemistry Network Centre and Indian Society of Analytical scientists | Leh, Ladakh      | 3rd to 5th July, 2023.                         |
| 10. | Prasanta Kumar Nag and Lalita Kumar  | Calculation of Chiroptical Properties of Some Chiral Drug Molecules using the Density Functional Theory  | International Conference on Designing a Sustainable Future: Advances and Opportunities in Green Chemistry (ICGC - 2023) | University of Ladakh, Green Chemistry Network Centre and Indian Society of Analytical scientists | Leh, Ladakh      | 3 <sup>rd</sup> to 5 <sup>th</sup> July, 2023. |
| 11. | Nidhi Manhas, Dr. Vinayak Adimule , Dr. Parashuram L, Dr. Rangappa Keri, Dr. Lalita S Kumar , Dr. Chinna Bathula | The Influence of Co <sup>2+</sup> : SeO <sub>2</sub> Liquid Crystal Nanostructures on Enhanced Photoluminescence and Photoisomerization Properties | Mahatma Gandhi University, Kottayam, Kerala, India  | International Hybrid Conference on Nano Structured Materials and Polymers (ICNP)                 | Kerala, India    | May 12-14, 2023.                               |
| 12. | Ravi Kant and Lalita S Kumar   | ‘Synthesis of Novel Triazole Substituted Dibenzosubranes as Multidrug Resistance Modulators’   | National Conference on ‘Current trends and Futuristic Challenges in Chemical Sciences’                                  | Department of Chemistry, Osmania University, Hyderabad   | Telangana        | 29 <sup>th</sup> – 30 <sup>th</sup> July 2022. |
| 13. | Lalita S Kumar (Session Chair)   | Biodegradation & Bioremediation  | School of Interdisciplinary and Trans-disciplinary Studies, IGNOU   | International Conference: Environmental and Ecological Sustainability: Engaging the Stakeholders | IGNOU, New Delhi | 4-5 October, 2018                              |
| 14. | Lalita S Kumar (Session Chair)   | Environmental Pollution: Miscellaneous   | School of Interdisciplinary and Trans-disciplinary Studies, IGNOU   | International Conference: Environmental and Ecological Sustainability: Engaging the Stakeholders | IGNOU, New Delhi | 4-5 October, 2018                              |
| 15. | Lalita S   | Research Ethics  | UGC-HRD Centre  | UGC sponsored  | Hissar,          | November                                       |

|     |   |  |  |  |              |  |
|-----|---|--|--|--|--------------|--|
|     | Kumar   |  | (Academic Staff College) G. J. University of Science & Technology  | Refresher course on Research Methodology   | Haryana      | , 2018                                       |
| 16. | Lalita S Kumar  | Education and Career in Chemical Sciences  | School of Sciences, Indira Gandhi National Open University   | DST Vigyan Jyoti Residential Prog-Breaking Stereotypes in the Field of S & T for Girl Students through Motivational Guidance | New Delhi    | June, 2018                                   |
| 17. | Lalita S Kumar and B.I. Fozdar  | Researching Student Workload   | STRIDE, IGNOU  | Course work on Research Methodology  | New Delhi    | September , 2018                             |
| 18. | Lalita S Kumar and B.I. Fozdar  | Researching Student Workload   | STRIDE, IGNOU  | Course work on Research Methodology  | New Delhi    | December , 2017                              |
| 19. | Lalita S Kumar and Sanjiv Kumar   | Content Development: Interactive PDF   | STRIDE, SOCIS and RSD, IGNOU   | Refresher Programme on ICT in ODL for the teachers and Academics of IGNOU  | New Delhi    | August, 2016                                 |
| 20. | Raunaq, Lalita S Kumar, Satya Vir Arya, Neera Singh & Shashi Bala Singh | Agrochemicals for food and environmental safety”                                 | Sorption Desorption Behaviour of Tebuconazole In Indian Soils Of Different Agro Climatic Regions, Poster | National symposium   | IARI, Delhi  | 2015   |
| 21. | Lalita Kumar, Sanjiv Kumar, Kalyana-puram Srivathsan                    | Early Experiences with a Community Driven Open Education management System       | 7 <sup>th</sup> Pan Commonwealth Forum on Open Learning  | International Conference Centre, Abuja   | Nigeria      | 2-6 December , 2013                          |
| 22. | Lalita S Kumar and J A Farooqi, Convenors                               | Chemistry: Education and Research Frontiers                                      | Raman Chair, SOS and Chemistry Discipline, SOS, IGNOU, Maidan Garhi, New Delhi,                          | National Conference celebrating International Year of Chemistry 2011   | New Delhi    | 13th-14th October, 2011                      |
| 23. | Lalita S Kumar and Manisha, Poster presentation                         | National Conference on "Chemistry: Education and Research Frontiers              | Raman Chair and School of Sciences, IGNOU  | Convention Centre, IGNOU, Maidan Garhi, New Delhi, India,  | New Delhi    | 13th-14th October, 2011                      |
| 24. | Lalita S Kumar  | “Embedded Workplace Training for a Skill Development Programme: Critical Factors | Indira Gandhi National Open University, Delhi  | International Conference, 6 <sup>th</sup> Pan-Commonwealth Forum on Open Learning: Skill Development                         | Kochi, India | 24 <sup>th</sup> -28 <sup>th</sup> Nov. 2010 |

|     |   |   |   |  |                  |   |
|-----|---|---|---|--|------------------|---|
|     |   | for Effective Implementation”   |   |  |                  |   |
| 25. | Lalita S Kumar                                  | Alternative models of course development in the changing scenario of ODL  | STRIDE, IGNOU   | National Workshop on Self Learning Materials Developments        | New Delhi        | March 22 <sup>nd</sup> to 27 <sup>th</sup> 2010   |
| 26. | Lalita S Kumar as a panelist along with members | Consolidation of Learner Support Services                                 | RSD, IGNOU  | Learners' Conference   | New Delhi        | 16 <sup>th</sup> May 2010                         |
| 27. | Lalita S Kumar                                  | Alternative models of course development in the changing scenario of ODL  | STRIDE, IGNOU   | National Workshop on Self Learning Materials Developments        | New Delhi        | March 22 <sup>nd</sup> to 27 <sup>th</sup> 2010   |
| 28. | Lalita S Kumar & Biplab Jamatia                 | International Conference on Distance Education and Open Learning          | Organised by IACSIT, (DEOL 2009)                              | Mobile Phones as Effective Learner Support Devices: A Case Study | NTU, Singapore   | 9 <sup>th</sup> to 11 <sup>th</sup> October, 2009 |
| 29. | Joint Coordination with NCIDE                   | Question bank for AEC-01 course   | NCIDE, IGNOU  | On Demand Examination  | New Delhi        | 7 <sup>th</sup> to 9 <sup>th</sup> Sept., 2009    |
| 30. | Lalita S Kumar and B I Fozdar                   | A study of the Factors Responsible for Dropout of B.Sc. Students of IGNOU | The International Council on Distance Education (ICDE), IGNOU | International Conference on “Open and Distance Education         | New Delhi, India | 19-23 Nov. 2005                                   |

**7. Consultancy assignment (if any): Nil**

| S.No. | Organization/ agency | Cost, title of consultancy | Duration |
|-------|----------------------|----------------------------|----------|
|       |                      |                            |          |

**8. Details of Institution/ Government/ Industry / own Institution Sponsored Research Projects (including Programme Evaluation) and Amount (Both completed and ongoing): Nil**

| S. No. | Agency | Amount | Duration with dates | Status i.e. ongoing/ completed |
|--------|--------|--------|---------------------|--------------------------------|
|        |        |        |                     |                                |

**9. Details of PhD and MPhil Scholars (including those awarded degree):**

| S. No. | Name and enrolment no:           | Year of registration | Year of completion/ award |
|--------|----------------------------------|----------------------|---------------------------|
| 1      | Vinayak Adimule (127722788)      | August 2012          | 2016                      |
| 2      | Y. Srinivasa Rao (112247220)     | May 2011             | 2017                      |
| 3      | Inamdar Ismail Murad (127724140) | July 2012            | 2019                      |
| 4      | Raunaq (122877737)               | September 2012       | 2020                      |
| 5      | Yogesh (179342040)               | July 2017            | 2021                      |



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|----|--------------------------------------|--------------|----------|
| 6  | Ravikant (173101790 )                | January 2017 | 2023     |
| 7  | Mr. Jagannadha Rao. Alla (198570359) | July 2019    | 2025     |
| 8  | Ms. Nidhi Manhas (202493220)         | July 2020    | 2025     |
| 9  | Mr. P. K. Nag (202493410)            | July 2020    | 2025     |
| 10 | Ms. Brijesh Kumari (202492812)       | July 2020    | Pursuing |
| 11 | Mr. V. Mallikarjun Sarma (202492962) | July 2020    | Pursuing |
| 12 | Ms. Smriti Rana (210270143)          | July 2021    | Pursuing |

**10. Details of Programmes/ Courses coordinated/ written/ edited/ translated (if applicable):**

| S. N o. | Programme  | Course  | Unit (print)/ Audio/ Video/ eSLM   | Coordinated/ Written/ Edited (content/ Language/ Format)/ Translated | Period         |
|---------|--|---|--|--|----------------|
| 1       | Ph.D. (Chemistry)  | RCH-001, Research Methodology                       | 1. Ethical issues in conducting chemical research<br>2. Safety issues, Chemical Hazards and their management<br>3. Research problem and Hypothesis   | Face to Face Teaching  | 2017-till date |
|         |  | RCH-003, Analytical Techniques in Chem.-II          | 1. Gas chromatography<br>2. High Performance Column Chromatography   |  |                |
|         |  | RCHE-001, Advances in Organic Chemistry             | 1. Asymmetric synthesis<br>2. Organosilicone compounds<br>3. Homogeneous hydrogenations<br>4. Oxidations<br>5. Principles of green chem. and its applications  |  |                |
| 2       | M.Sc. Chem. on Campus Coordinator for MCH-543                    | MCH 422, Organic Reaction Mechanism                 | Units I, II and III  | Face to Face Teaching  | 2009-2013      |
|         |  | MCH 426, Chemistry Lab V                            | Chemistry Lab V  | Lab work   |                |
|         |  | MCH 512, Reactions for Organic Synthesis            | Units II, III and IV   | Face to Face Teaching  |                |
|         |  | MCH 516, Chemistry Lab VIII                         | Chemistry Lab VIII   | Lab work   |                |
|         |  | MCH-543, Chemistry of Primary and Sec Metabolites   | Full Course  | Face to Face Teaching  |                |
|         |  | MCH-563, Project Work                               | Project dissertation and Lab work  | Guiding for the project work   |                |
| 3       | M.Sc. Chem. and M.Sc. Analytical Chemistry (Distance Mode) Sem-I | MCH-012, Stereochemistry and Reactive Intermediates | Unit-1 Molecular Symmetry and Chirality<br>Unit-2 Stereoisomerism of Molecules with Chiral Centres<br>Unit-3 Conformations of Six-Membered Rings<br>Unit-4 Stereochemistry of Molecules Without Chiral Centres | Coordination and content writing                                     | 2021 till date |



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|--|---|---|---|----------------------------------|----------------|
|  |   |   | Unit-5 Configuration<br>Unit-6 Topicity and Prostereoisomerism<br>Unit-7 Asymmetric Induction<br>Unit-8 Molecular Dissymmetry and Chiroptical Properties<br>Unit-9 Organic Reaction Mechanism<br>Unit-10 Carbocations: Structural Aspects<br>Unit-11 Carbocation: Rearrangement Reactions<br>Unit-12 Carbanions<br>Unit-13 Free Radicals as Intermediates<br>Unit-14 Carbenes as Intermediates<br>Unit-15 Nitrenes as Intermediates<br>Unit-16 Arynes as Intermediates      |                                  |                |
|  | M.Sc. (Chemistry) and M.Sc. Analytical Chemistry Sem-I  | MCH-015 Biology for Chemists                      | Unit-1 Cell and Cell Organelles<br>Unit-2 Carbohydrates and Lipids<br>Unit-3 Proteins and Nucleic Acids<br>Unit-4 Intermediary Metabolism<br>Unit-5 Metabolism of Carbohydrates and Lipids<br>Unit-6 Metabolism of Proteins and Nucleic Acids<br>Unit-7 The Immune System<br>Unit-8 Genetics and Molecular Biology  | Coordination and content writing | 2021 till date |
|  | M.Sc. (Chemistry) and M.Sc. Analytical Chemistry Sem-II | MCH-017 Organic Chemistry-II                      | Unit-17 Asymmetric Synthesis  | Content writing                  | 2021 till date |
|  |   | MCHL-017 Separation and Spectroscopic Methods Lab | Experiment 6: Spectrophotometric Determination of Fe <sup>2+</sup> Ions Using 1,10-Phenanthroline<br>Experiment 7: Spectrophotometric Determination of Nickel Using Dimethylglyoxime<br>Experiment 8: Spectrophotometric Determination of Methyl ethyl Ketone<br>Experiment 9: Determination of the Concentrations of Aspirin and Caffeine in Proprietary Analgesic Tablet by UV Spectrometry<br>Experiment 10: Characterisation of Functional Groups Using IR Spectroscopy | Coordination and content writing | 2021 till date |
|  | M.Sc. (Chemistry) and Sem-III                           | MCH-022 (Separation and Spectroscopic Methods)    | Unit-9, UV-Visible Spectrometry<br>Unit-10, IR and Raman Spectrometry<br>Unit-11, Fluorimetry and Phosphorimetry<br>Unit-12, Atomic Absorption and Emission Spectrometry<br>Unit-13, <sup>1</sup> H NMR Spectroscopy<br>Unit-14, Two-Dimensional NMR Spectroscopy   | Content writing                  | 2024 till date |

|          |   |  |   |                                  |                |
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|          |   |  | Unit-15, $^{13}\text{C}$ NMR Spectroscopy<br>Unit-16, High Resolution Mass Spectrometry<br>Unit-17, Hyphenated Techniques<br>Unit-18, Scattering and Diffraction  |                                  |                |
|          | M.Sc.<br>(Chemistry)<br>and M.Sc.<br>Analytical<br>Chemistry<br>Sem-III | MCH-023<br>(Environmental<br>Chemistry)                | Unit-1, Nature and Formation of Soil<br>Unit-2, Soil Quality Parameters<br>Unit-3, Soil Fertility and Productivity<br>Unit-7: Atmosphere: Nature and Importance<br>Unit-8: Meteorological Aspects of Air Pollution<br>Unit-9: Air Pollutants<br>Unit-10: Air Quality Monitoring and Control   | Coordination and content writing | 2024 till date |
|          | M.Sc.<br>(Chemistry)<br>and M.Sc.<br>Analytical<br>Chemistry<br>Sem-IV  | MCH-024<br>(Introduction to Research)                  | Unit 1: Foundations of Research<br>Unit 2: Research Problem<br>Unit 3: Research Design and Hypothesis<br>Unit 4: Sampling and Data Analysis<br>Unit 5: Evaluation of Analytical Data in Chemical Research<br>Unit 6: Ethics and Safety in Chemical Research<br>Unit 7: Presentation of Research Work and Thesis   | Coordination and content writing | 2024 till date |
|          | M.Sc.<br>(Chemistry)<br>Sem-IV  | MCHE-012<br>(Spectroscopic Study of Organic Compounds) | Unit-1, UV-Visible Spectroscopy: Some Basic Concepts<br>Unit-2, UV-Visible Spectra of Some Illustrative Compounds<br>Unit-3, Infrared Spectroscopy-Basic Aspects and Applications<br>Unit-4 IR Spectra of Some More Classes of Organic Compounds<br>Unit-5 Basic Concepts of NMR Spectroscopy<br>Unit-6 $^1\text{H}$ NMR Spectroscopy<br>Unit-7 Complex NMR Spectra<br>Unit-8 Applications of NMR Spectroscopy<br>Unit-9 Introduction to 2D-NMR<br>Unit-10 $^{13}\text{C}$ NMR Spectroscopy<br>Unit-11 Applications of DEPT, INEPT and $^{13}\text{C}$ NMR Spectroscopy | Coordination and content writing | 2024 till date |
| <b>4</b> | M.Sc.<br>Analytical<br>Chemistry<br>Sem-IV                              | MCHL-018<br>(Environmental Chemistry Lab)              | Expt 1-Water and soil Sampling<br>Expt 2-Determination of pH and Conductance of Water and Soil<br>Expt 3- Determination of Total Available Nitrogen in a Soil Sample<br>Expt 4- Determination of Available Phosphorus in a Soil Sample<br>Expt 5- Estimation of Alkalinity of the Given Water Sample<br>Expt 6- Estimation of Soluble Chlorides in the Given Water Sample   | Coordination and content writing |                |

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|          |   |  | Expt 7- Estimation of Soluble Sulphates in the Given Water Sample<br>Expt 8- Estimation of Dissolved Oxygen in the Given Water Sample<br>Expt 9- Determination of Hardness in the Given Water Sample<br>Expt 10- Determination of a Dustfall, Rainfall and Humidity<br>Expt 11- Determination of a Dustfall, Rainfall and Humidity<br>Expt 12- Detection of CO and NO <sub>2</sub> in Gaseous Emissions<br>Expt 13- Determination of SPM and NO <sub>2</sub> in Ambient Air<br>Expt 14- Determination of Sulphur Dioxide in Ambient Air<br>Expt 15- Identification of Pesticides in Pesticide Residues |                                  |                |
|          |   | MCH-003<br>(Spectroscopic Methods of Analysis)                       | Unit-3: Infra Red Spectrometry<br>Unit-4; Raman Spectrometry<br>Unit-11; Applications of AAS and AES<br>Unit-12: NMR Spectroscopy<br>Unit-13: Mass Spectrometry  | Coordination, Transformation     | 2024 till date |
|          |   | MCHL-003<br>(Spectroscopic Methods of Analysis Lab)                  | Experiment 1: Spectrophotometric determination of Fe <sup>2+</sup> ions using 1,10-phenanthroline<br>Experiment 2: Spectrophotometric determination of nickel using dimethylglyoxime<br>Experiment 3: Determination of chromium and manganese in a mixture<br>Experiment 4: Spectrophotometric detmn. of methylethyl ketone<br>Experiment 5: Determination of pK <sub>a</sub> of an indicator using spectrophotometry  | Coordination, Transformation     | 2024 till date |
| <b>5</b> | M.Sc.<br>(Environmental) Sciences SOITS | MEC-01, Environmental Chemistry                                      | Unit-1, Basic Analytical Techniques<br>Unit -4, Chromatographic Techniques   | Self Written<br><br>Self written | 2017-till date |
| <b>6</b> | Bachelor of Science (B.Sc.), SOS        | CHE-01, Atoms And Molecules  | Unit-1, Old Quantum Theory<br>Unit-2, Wave Mechanics   | Vetting                          | 1989-till date |
|          |   | CHE-02, Inorganic Chemistry Coordinator 2004-2008 and 2017-Till Date | Unit-5, Alkaline Earth Metals<br>Unit-7, Elements of Group-14<br>Unit-9, Elements of Group-16  | Transformation and Vetting       |                |
|          |   | CHE-03L, Chemistry Lab I   | Unit-1, Laboratory Techniques and Procedures<br>Unit-4, Estimation of Iron<br>Unit-5, Estimation of Copper   | Transformation and Vetting       |                |
|          |   |  | Unit-1, Reaction Mechanism – Introduction  |                                  |                |

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|  |  | CHE-06, Organic Reaction Mechanism         | Unit- 2, Kinetics and Mechanism of Reactions   | Transformation and Vetting               |                |
|  |  |  | Unit-3, Aliphatic Nucleophilic Substitution<br>Unit-4, Aromatic Electrophilic and Nucleophilic Substitution<br>Unit-5, Carbon-Carbon multiple bond addition<br>Unit-6, Addition in Carbonyl Compounds<br>Unit-7, Elimination Reaction<br>Unit-8, Oxidation and Reduction<br>Unit-9, Carbene, Nitrene and Benzyne<br>Unit-10, Free Radicals<br>Unit-11, Molecular Rearrangements<br>Unit-12, Pericyclic Reactions | Vetting                                  |                |
|  |  | CHE-09, Biochemistry<br><b>Coordinator</b> | Unit-5, Proteins<br>Unit-6, Enzymes<br>Unit-7, Vitamins, Co-enzymes and Minerals<br>Unit-8, Bioenergetics<br>Unit-9, Metabolism –I<br>Unit-10, Metabolism –II<br>Unit-11, Regulation of Metabolism<br>Unit-12, Photosynthesis  | Coordination, Transformation and Vetting | 1994-till date |
|  |  | AEC-01, Environmental Chemistry            | Unit-1, Nature and Formation of Soil<br>Unit-2, Soil Quality Parameters<br>Unit-3, Soil fertility and evaluation<br>Unit- 7, Atmosphere: Nature & Importance<br>Unit-8, Meteorological Aspects of Air Pollution<br>Unit-9, Air Pollutants  | Coordination, Transformation and Vetting | 2003-till date |
|  |  |  | Unit-10, Air Quality Monitoring and Control<br>Ex-3, Determination of Percent Organic Matter Content in a Soil Sample<br>Ex-4, Determination of Total Available Nitrogen in a Soil Sample<br>Ex-5, Determination of Available Sulphur in a Soil Sample<br>Ex-6, Determination of Available Phosphorus in a Soil Sample<br>Ex-7, Determination of Extractable Manganese and Iron in a Soil Sample                 | Coordination, Self Written and Vetting   |                |

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| 7 | Bachelor of Science (B.Sc.), SOS as per CBCS | BCHCT-131, Atomic Structure, Bonding, General Organic Chemistry and Aliphatic Hydrocarbons  | Unit-7, Covalent Bond<br>Unit-14, Organic Reactions and Reactive Intermediates   | Self Written and Vetting               | 2014 till date  |
|   |  | BCHCL-132, Atomic Structure, Bonding, General Organic Chemistry and Aliphatic Hydrocarbons : Laboratory   | Unit-1, Introduction to Titrimetry<br>Exp-2, Estimation of Oxalic Acid By Redox Titration<br>Exp-3, Estimation of Water of Crystallisation In Mohr's Salt<br>Exp-4, Estimation of Iron (II) Ions By Chromatometry Using Internal Indicator<br>Exp-5, Estimation of Copper (II) Ions Iodometrically | Coordination, Self Written and Vetting | 2014 till date  |
|   | Bachelor of Science (B.Sc.), SOS as per CBCS | BCHCT-133 and BCHCL-134, Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I   | Unit -2: Techniques In Organic Laboratory<br>Exp - 8: Purification of Organic Compounds by Recrystallisation and Distillation<br>Exp- 9: Criteria of Purity: Determination of Melting and Boiling Points<br>Exp- 12: Preparation of Oxime and Phenylhydrazone                                      | Self Written and Vetting               | 2019- till date |
|   |  | BCHCT-135 and BCHCL-136, Solutions, Phase equilibrium, Conductance, Electrochemistry and Functional Group Organic Chemistry-II<br><br>BCHCT-137, and BCHCL-138 Coordination Chemistry, States of Matter and Chemical Kinetics | Course Team Member   |  |                 |
|   | Bachelor of Science (B.Sc.), SOS as per CBCS | BCHET-141   | UNIT 14: Flame Atomic<br>UNIT 15: Final Atomic Emission Spectrometry   | Transformation                         |                 |
|   |  | BCHEL-142, Analytical Methods in Chemistry  | Experiment 3: Separation and Identification of a Mixture of Sudan Yellow and Sudan Red Dye by TLC<br>Experiment 4: Separation of a Mixture of Plant Pigments by TLC  | Self Written and Vetting               | 2019 to 2022    |
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|  |   | BCHET-147, and<br>BCHEL-148<br>Organometallics,<br>Bioinorganic<br>Chemistry,<br>Polynuclear<br>Hydrocarbons and<br>UV, IR<br>Spectroscopy | Course team member  |   |                     |
|  |   | BCHET-149,<br>Molecules of Life  | Unit-1 Cell Structure and Function<br>Unit-4 Amino Acids<br>Unit-5 Peptides<br>Unit-6 Proteins<br>Unit-7 Enzymes: Nature and<br>Classification<br>Unit-8 Enzymes: Activation and<br>Inhibition<br>Unit-9 Enzymes: Drug and Action<br>Unit-14 Bioenergetics<br>Unit-15 Carbohydrate Metabolism<br>Unit-16 Kreb's Cycle and its<br>Metabolic Role<br>Unit-17 Metabolism of Lipids and<br>Proteins | Coordination, Self<br>written and vetting | 2022                |
|  |   | BCHEL-150,<br>Molecules of Life:<br>Laboratory   | Expt. 3: Determination of $pK_a$ of<br>Glycine by pH metry<br>Expt. 9: Synthesis of Aspirin and<br>Its Comparison With an Aspirin<br>Tablet by TILC<br>Expt. 10: Extraction of DNA  | Coordination, Self<br>written and vetting | 2022                |
|  |   | BCHS-183<br>Laboratory<br>Management Skills  | Unit-1 Introduction to a Laboratory<br>Unit-2 Design and Components of a<br>Laboratory<br>Unit-4 Communication in a<br>Laboratory<br>Unit-5 Routine Management of a<br>Laboratory<br>Unit-7 Files and Records<br>Unit-9 Fire Hazards<br>Unit-10 Electricity and Gas<br>Hazards<br>Unit-11 Chemical and Biological<br>Hazards  | Coordination and<br>content writing       | 2023<br>onwar<br>ds |
|  | B.Sc. (Food<br>Safety and<br>Quality<br>Management)<br>(BSCFFSQM) | BPVC-102<br>Food Chemistry<br>and Nutrition  | Unit-1 Basics of Food Chemistry<br>Unit-2 Water<br>Unit-3 Carbohydrates<br>Unit-4 Proteins<br>Unit-5 Lipids<br>Unit-6 Vitamins<br>Unit-7 Minerals<br>Unit-8 Enzymes<br>Unit-9 Nutritional Aspects<br>Unit-10 Nutritive Value of<br>Agricultural Produce   | Editing                                   | 2024<br>onwar<br>ds |

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|  |  |  | Unit-11 Nutritive Value of Animal Produce<br>Unit-12 Metabolism of Nutrients<br>Unit-13 Food Additives-I<br>Unit-14 Food Additives-II   |         |              |
|  |  | BPVC-102<br>Food Chemistry and Nutrition | Experiment 1: To Prepare A Standard Solution Of Sodium Hydroxide<br>Experiment 2: To Collect and Prepare A Food Sample for Chemical Analysis<br>Experiment 3: To Determine the Moisture Content in a Food Sample<br>Experiment 4: To Determine the Sugar and Starch Content in A Food Sample<br>Experiment 5: Determination of Protein Content in a Food Sample<br>Experiment 6: Determination of Fat Content in a Food Sample<br>Experiment 7: Determination of Ash Content in Foods<br>Experiment 8: Determination of Acidity and Ph in Foods<br>Experiment 9: Determination of Gluten Content in Wheat Flour<br>Experiment 10: To Determine the Specific Gravity of Oils and Fats  | Editing | 2024 onwards |
|  |  | BPVC-102<br>Food Chemistry and Nutrition | <b>Activity 1:</b> To observe the changes during dry heating of sugar<br><b>Activity 2:</b> To categorise the preservatives used in beverages, pickles, baked and canned products<br><b>Activity 3:</b> To boil an egg and observe the changes in its physical state<br><b>Activity 4:</b> To observe the changes in colour, texture and odour of roasted and unroasted semolina ( <i>sooji</i> ) and gram flour ( <i>besan</i> ).<br><b>Activity 5:</b> To study the rancidity of oils<br><b>Activity 6:</b> To draw a collage of Vitamin A rich foods<br><b>Activity 7:</b> To prepare a chart depicting the inter-relationship between the metabolism of carbohydrates, lipids and proteins.<br><b>Activity 8:</b> To prepare curd and learn the science behind it | Editing |              |

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| 8 | Bachelor of Science (Multidisciplinary) (BSCM), SOS as per FYUP | BCHCT-131, Atomic Structure, Bonding, General Organic Chemistry and Aliphatic Hydrocarbons  | Unit-7, Covalent Bond<br>Unit-14, Organic Reactions and Reactive Intermediates  | Self Written and Vetting         | 2014 till date |
|   |   | BCHCL-132, Atomic Structure, Bonding, General Organic Chemistry and Aliphatic Hydrocarbons :<br>Laboratory<br><b>Coordinator</b> along with other faculty | Unit-1, Introduction to Titrimetry<br>Exp-2, Estimation of Oxalic Acid By Redox Titration<br>Exp-3, Estimation of Water of Crystallisation In Mohr's Salt<br>Exp-4, Estimation of Iron (II) Ions By Chromatometry Using Internal Indicator<br>Exp-5, Estimation of Copper (II) Ions Iodometrically            | Self Written and Vetting         | 2014 till date |
|   |   | BCHCL-134, Chemical Energetics, Equilibria and Functional Group Organic Chemistry-I   | Unit -2: Techniques In Organic Laboratory<br>Exp - 8: Purification of Organic Compounds by Recrystallisation and Distillation<br>Exp- 9: Criteria of Purity: Determination of Melting and Boiling Points<br>Exp- 12: Preparation of Oxime and Phenylhydrazone   | Self Written and Vetting         | 2019-till date |
|   |   | BCHS-183 Laboratory Management Skills   | Unit-1 Introduction to a Laboratory<br>Unit-2 Design and Components of a Laboratory<br>Unit-4 Communication in a Laboratory<br>Unit-5 Routine Management of a Laboratory<br>Unit-7 Files and Records<br>Unit-9 Fire Hazards<br>Unit-10 Electricity and Gas Hazards<br>Unit-11 Chemical and Biological Hazards | Coordination and content writing | 2023 onwards   |
|   | B.Sc. (Food Safety and Quality Management) (BSCFFSQM)           | BPVC-102 Food Chemistry and Nutrition   | Block 1: Food Chemistry - I<br>Block 2: Food Chemistry - II<br>Block 3: Basic Nutrition<br>Block 4: Food Additives<br>Block 5: Activities Manual<br>Block 6: Practical Manual   | Editing                          | 2024 onwards   |
|   | Post Grad. Diploma in   | MCH-003, Spectroscopic Methods  | Unit-3: Infra Red Spectrometry<br>Unit-4; Raman Spectrometry<br>Unit-11; Applications of AAS and AES<br>Unit-12: NMR Spectroscopy<br>Unit-13: Mass Spectrometry   | Coordination, Transformation     | 2007-till date |



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| 9  | Analytical Chemistry<br>PGDAC<br><br><b>Programme Coordinator</b> |  |  |                                      |                |
|    |   | MCHL-003,<br>Spectroscopic Methods Lab<br><br><b>Coordinator</b> | Experiment 1: Spectrophotometric determination of Fe <sup>2+</sup> ions using 1,10-phenanthroline<br>Experiment 2: Spectrophotometric determination of nickel using dimethylglyoxime<br>Experiment 3: Determination of chromium and manganese in a mixture<br>Experiment 4: Spectrophotometric detmn. of methylethyl ketone<br>Experiment 5: Determination of pK <sub>a</sub> of an indicator using spectrophotometry  | Coordination, Transformation         | 2007-till date |
| 10 | PG Diploma in Pharmaceutical Sales management, PGDPSM SOVET       | MVE-002, Pharmacology and Toxicology                             | Unit-8, Drugs Acting on Respiratory System<br>Unit-9, Drugs Acting on Central Nervous System<br>Unit-10, Drugs Acting on Gastrointestinal Tract System<br>Unit-11, Local Anaesthetics<br>Unit-12, Chemotherapy-I<br>Unit-13, Chemotherapy-I I  | Transformation                       | 2009-tilldate  |
| 11 | PG Diploma in Pharmaceutical Analytical Techniques, PGDPAT SOVET  | MVE-013: Spectroscopic Methods                                   | Unit-1, Properties of electromagnetic Radiation<br>Unit-2, Ultraviolet – Visible Spectroscopy<br>Infra red Spectroscopy<br>Unit-3, Fluorimetry and Phosphorimetry<br>Unit-4, Flame Photometry<br>Unit-5, Atomic Absorption Spectroscopy<br>Unit-6, Atomic Emission Spectroscopy<br>Unit-7, Nuclear Magnetic Resonance Spectroscopy<br>Unit-8, Mass Spectrometry<br>Unit-9, Structure Elucidation by Integrated Methods<br>Unit-10, X-Ray Diffraction methods | Content, Language and Format Editing | 2010-tilldate  |
|    |   | MVE-014: Separation and Thermal Methods                          | Full Course  | Content, Language and Format Editing |                |
|    |   | MVEL-002: Separation and   | Full Course  | Content, Language and Format Editing |                |

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|    |   | Spectral Methods of Analysis   |  |  |                            |
| 12 | PG Diploma in Food Safety and Quality Management, PGDFSQM (SOA) | MVP-001, Food Fundamentals and Chemistry<br><br>MVPI-001, Food Microbiology<br>MVP-002, Food Laws and Standards<br>MVP-003, Principles of Food Safety and Quality Management<br>MVP-004, Food Safety and Quality Management Systems<br>MVPL-001, Food Safety and Quality Auditing<br>MVPL-002, Chemical Analysis and Quality Assurance | Unit-5, Water<br>Unit-6, Carbohydrates<br>Unit-7, Carbohydrates<br>Unit-8, Lipids<br>Unit-9, Vitamins and Minerals<br>Unit-10, Food Additives<br><br>Member of the Course Teams  | Self Written<br><br>Course Team Member         | 2007-2008<br><br>2007-2008 |
| 13 | PG Diploma in Env. and Occupational Health (PGDEOH)             | Environmental Pollution  | Unit-1, Environmental Pollution Chemistry<br>Unit-2, Air Pollution<br>Unit-3, Solid Waste Pollution<br>Unit-4, Soil Pollution<br>Unit-5, Noise Pollution<br>Unit-6, Radiation Pollution<br>Unit-7, Water Pollution<br>Unit-8, Electronic Waste Pollution   | Course Editing                                 | 2018-till date             |
| 14 | PG Cert. in Professional Dev. of Teachers, PGCPDT (SOE)         | MESE-004, Chemistry Teaching   | Unit-18, Carbohydrates and Lipids<br>Unit-19, Proteins and Nucleic Acids<br>Unit-20, Replication, Transcription and Protein Biosynthesis   | Transformation<br>Self Written<br>Self Written | 2005-till date             |
| 15 | Certificate in Pharmal Sales Management, CPSM SOVET             |  | Member, Programme and Course Expert Committee<br>Phase-I approved  |  | July, 2008 till date       |
| 16 | Certificate Programme in Laboratory Techniques (CPLT)           | LT-01, Good Laboratory Practices<br><br><b>Coordinator</b>   | Unit-11, Electricity and Gas Hazards<br>Unit-12, Fire Hazards ( <b>Video Programme " Just break the triangle"</b> in English and Hindi)<br>Unit-13, Radiation and Chemical Hazards<br>Exp-8, Basic aspects of Electrical Maintenance<br>Exp-9, Study of Supply of Gas, Electricity and Water in a Laboratory | Coordination, Transformation and Vetting       | 2001-2016                  |

|           |   |   |   |  |                |
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|           |   |   | Exp-10, Identification of Compressed Gases and Study of their Handling and Storage<br>Exp-11, Study of Fire Safety Measures in a Laboratory<br>Ex-12, Classifying and Handling of Hazardous Chemicals                     |  |                |
| <b>17</b> | Revised Certificate Programme in Laboratory Techniques (CPLT) | CLT-101, Good Laboratory Practices<br><br><b>Coordinator</b>      | Unit-8, Electricity and Gas Hazards<br>Unit-9, Fire Hazards<br>Unit-10, Chemical and Biological Hazards   | Coordination, Transformation and Vetting | 2014-till date |
|           | <b>Coordinator</b>  | CLTL-101, Good Laboratory Practices Lab<br><br><b>Coordinator</b> | Ex-7: Basic Aspects of Electrical Maintenance<br>Ex- 8: Supply of Gas, Electricity and Water in a Laboratory<br>Ex- 9: Fire Safety Measures in a Laboratory<br>Ex- 10: Classification and Handling of Hazardous Chemicals | Coordination, Transformation and Vetting | 2014-till date |

### 11. Training programmes designed and conducted, duration and dates

| S. No. | Programme  | Dates  | Place                                 | Mode (Specify-<br>Face to Face<br>Radio counselling<br>Teleconferencing<br>Web conferencing<br>Any Other |
|--------|--|--|---------------------------------------|--|
| 1      | Refresher course in chemistry: As one of the Coordinators of the programme ( jointly by IGNOU & CPDHE, DU) | 6.1.1992 - 25.01.1992                                | CPDHE, Univ. of Delhi, Delhi          | ~ 40   |
| 2      | Course designing for Laboratory Technicians: As one of the Coordinators of the programme                   | 13.5.1996 - 18.5.1996                                | IGNOU, New Delhi                      | ~ 20   |
| 3      | <b>Teacher Training:</b> Teaching Chemistry  | 17 <sup>th</sup> -22 <sup>nd</sup> Oct, 2005         | NIL, Dadri, UP                        | ~ 30   |
| 4      | <b>Teacher Training</b> Programme  | 23 <sup>rd</sup> - 26 <sup>th</sup> Oct, 2007        | NERIE, Shillong                       | ~ 25   |
| 5      | <b>Orientation</b> " Women in different careers "  | 09.03.07   | IEEE, Jamia Millia Islamia, New Delhi | ~ 25   |
| 6      | <b>Orientation,</b> Refresher Course in Environmental Studies  | Feb 23rd to March 17 <sup>th</sup> 2009<br>24.2.2009 | CPDHE, Univ. of Delhi, Delhi          | ~ 40   |
| 7      | Orientation of Counsellors of PGDAC Programme  | 2009, 2010 and 2012                                  | Bangalore and Delhi                   | ~ 25   |
| 8      | Personal Contact Programme / Workshop for PGCPDT, MESE-004   | 17-22nd Oct'2005                                     | NIL, Ghaziabad                        | ~ 35   |
| 9      | Exploratory Workshop for Analytical Chemistry Programme as one of the members                              | 27.3.1997 - 28.3.1997                                | EMPC, IGNOU, Delhi                    | ~ 15   |

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|----|--|--|------------------------------|------|
| 10 | <b>Orientation</b> , “Recent Trends in Chemical Sciences”                    | 26.12.12 to 15.1.13, 7.1.13                        | CPDHE, Univ. of Delhi, Delhi | ~ 40 |
| 11 | <b>Training</b> , Creative use of technology and tools for teaching learning | 20 <sup>th</sup> Feb to 21 <sup>st</sup> Feb, 2013 | NCIDE, IGNOU                 | ~ 30 |

## 12. Details of Counselling sessions conducted:

| S. N. | Programme   | Course/Prog.                                      | Place        | Dates       | Duration | Mode             |
|-------|---|---|--------------|-------------|----------|------------------|
|       | M.Sc. in Analytical Chemistry – A distance education programme from IGNOU   | MSCANCHEM   | IGNOU, Delhi | 21.07. 2024 | 1 Hour   | IRC              |
|       | An introduction to B.Sc. Multidisciplinary Programme                        | BSCM  | IGNOU, Delhi | 18.03. 2024 | 1 Hour   | IRC              |
|       | CPLT and PGDAC programmes for the prospective learners of July 2023 Session | CPLT and PGDAC programmes                         | IGNOU, Delhi | 18.06. 2023 | 1 Hour   | IRC              |
|       | Introduction to "Laboratory Management Skills" course                       | BCHS-183  | IGNOU, Delhi | 20. 11.2022 | 1 Hour   | IRC              |
| 1     | Molecules of Life: Preparation of Term and Examination                      | BCHET-149   | IGNOU, Delhi | 17.05.2022  | 1 Hour   | IRC              |
| 2     | Molecules of Life-An introduction to the elective course in chemistry       | BCHET-149   | IGNOU, Delhi | 05.10.2021  | 1 Hour   | IRC              |
| 3     | PGDAC and CPLT  | Lab courses                                       | IGNOU, Delhi | 16.03.2021  | 1 Hour   | IRC              |
| 4     | CPLT in the context of the web support for the learners through WEAS.       | CLT-101 to 104 and CLTL-101 to 104                | IGNOU, Delhi | 18.10.2020  | 1 Hour   | IRC              |
| 5     | PGDAC: An Introduction to Lab Courses                                       | MHCL-001 to 004                                   | IGNOU, Delhi | 25.02.2020  | 1 Hour   | IRC              |
| 6     | PGDAC: An Introduction to theory courses                                    | MCH-001 to 004                                    | IGNOU, Delhi | 24.02.2020  | 1 Hour   | IRC              |
| 7     | PGDAC: Programme structure and General Analytical Techniques                | MCH-001 to 004                                    | IGNOU, Delhi | 20.01.2020  | 1 Hour   | IRC              |
| 8     | Teleconferencing, B.Sc.   | CHE-05  | IGNOU, Delhi | 20.02.2019  | 1 Hour   | Teleconferencing |
| 9     | IRC-1 <sup>st</sup> Block, B.Sc.  | CHE-06  | IGNOU, Delhi | 20.01.2019  | 1 Hour   | IRC              |
| 10    | Teleconferencing for Academic Counselors, CPLT                              | All Courses                                       | IGNOU, Delhi | 10.09.2018  | 1 Hour   | Teleconferencing |
| 11    | IRC, CPLT   | All Courses                                       | IGNOU, Delhi | 10.05.2018  | 1 Hour   | IRC              |
| 12    | IRC of the programme in general, PGDAC                                      | MCH-001, 002, 003, 004<br>MCHL-001, 002, 003, 004 | IGNOU, Delhi | 05.03.2013  | 1 Hour   | IRC              |
| 13    | Audio Recording under “IGNOU Time”, SOS                                     | About all SOS programmes                          | IGNOU, Delhi | 03.07.13    | 1 Hour   | Audio Recording  |
| 14    | Free Radicals IV, B.Sc.   | CHE-06  | IGNOU, Delhi | 01.03.2013  | 1 Hour   | EDUSAT           |
| 15    | Free Radicals III, B.Sc.  | CHE-06  | IGNOU, Delhi | 01.02.2013  | 1 Hour   | EDUSAT           |

|    |   |  |              |            |          |                    |
|----|---|--|--------------|------------|----------|--------------------|
| 16 | IRC of the programme in general, CPLT                             | LT-1, 2, 3 and 4                                     | IGNOU, Delhi | 9.10.12    | 1 Hour   | IRC                |
| 17 | IRC of the programme in general, PGDAC                            | MCH-001, 002, 003, 004<br>MCHL-001, 002, 003, 004    | IGNOU, Delhi | 19.8.12    | 1 Hour   | IRC                |
| 18 | Free Radicals I, B. Sc.   | CHE-06   | IGNOU, Delhi | 06.07.2012 | 1 Hour   | EDUSAT             |
| 19 | Free Radicals II (2nd session), B. Sc.                            | CHE-06   | IGNOU, Delhi | 06.07.2012 | 1 Hour   | EDUSAT             |
| 20 | Essentials of Pharmaceutical Chemistry-II, PGDPSM                 | MVE-001  | IGNOU, Delhi | 25.05.2012 | 1 Hour   | EDUSAT             |
| 21 | Oxidation and Reduction (2 Sessions), B.Sc.                       | CHE-06   | IGNOU, Delhi | 07.01.2011 | 2 Hours  | EDUSAT             |
| 22 | Essentials of Pharmaceutical Chemistry-I, PGDPSM                  | MVE-001  | IGNOU, Delhi | 25.03.2011 | 1 Hour   | EDUSAT             |
| 23 | Organic Reaction Mechanism: Eliminations, B.Sc.                   | CHE-06   | IGNOU, Delhi | 01.07.2011 | 1½ Hours | EDUSAT             |
| 24 | PGDAC Programme Induction, PGDAC                                  | MCH-001, 002, 003, 004<br>MCHL-001, 002, 003, 004    | IGNOU, Delhi | 12.01.2010 | 2 Hours  | EDUSAT             |
| 25 | IRC of the whole course and pollution in specific, B.Sc.          | AEC-01   | IGNOU, Delhi | 24.8.10    | 1 Hour   | IRC                |
| 26 | Post Graduate Diploma in Analytical Chemistry: An Overview, PGDAC | MCH-001, 002, 003, 004<br>MCHL-001, 002, 003, 004    | IGNOU, Delhi | 07.05.2010 | 2 Hours  | EDUSAT             |
| 27 | IRC of the programme in general B.Sc.                             | All the Chem courses in general                      | IGNOU, Delhi | 17.1.10    | 1 Hour   | IRC                |
| 28 | IRC of the programme-general CPLT                                 | LT-1, 2, 3 and 4                                     | IGNOU, Delhi | 11.8.09    | 1 Hour   | IRC                |
| 29 | IRC of the programme in general B.Sc.                             | All the Chem. courses in general                     | IGNOU, Delhi | 18.10.09   | 1 Hour   | IRC                |
| 30 | On Handling of lab component of Chemistry courses B.Sc.           | CHE-03(L), CHE-07 L, CHE-08(L), CHE-11(L), CHE-12(L) | IGNOU, Delhi | 2.6.09     | 1 Hour   | IRC                |
| 31 | Aromatic Hydrocarbons: (In Hindi), B.Sc.                          | CHE-05   | IGNOU, Delhi | 02.01.2009 | 1 Hour   | EDUSAT             |
| 32 | Reactions of the carbon-carbon double bond, B.Sc.                 | CHE-06   | IGNOU, Delhi | 01.05.2009 | 1 Hour   | EDUSAT             |
| 33 | On Handling of lab component of Chemistry courses B.Sc.           | CHE-03(L), CHE-07L, CHE-08(L), CHE-11(L), CHE-12(L)  | IGNOU, Delhi | 21.9.08    | 1 Hour   | IRC                |
| 34 | B.Sc.   | Recording of Gyan Vani Studio at EMPC                | IGNOU, Delhi | 5.11.08    | 1 Hour   | GyanVani recording |
| 35 | Aromatic Hydrocarbons: (In Hindi)                                 | CHE-05   | IGNOU, Delhi | 04.01.2008 | 1 Hour   | EDUSAT             |
| 36 | IRC of the programme in general                                   | LT-1, 2, 3 and 4 (CPLT)                              | IGNOU, Delhi | 16.10.07   | 1 Hour   | IRC                |

|    |  |                                       |                     |            |        |                                |
|----|--|---------------------------------------|---------------------|------------|--------|--------------------------------|
| 37 | Aromatic Hydrocarbons – III, B.Sc.                             | CHE-05                                | IGNOU, Delhi        | 07.09.2007 | 1 Hour | EDUSAT                         |
| 38 | Aromatic Hydrocarbons IV, B.Sc.                                | CHE-05                                | IGNOU, Delhi        | 05.10.2007 | 1 Hour | EDUSAT                         |
| 39 | IRC for course in general                                      | AEC-01 (B. Sc.)                       | IGNOU, Delhi        | 5.6.2007   | 1 Hour | IRC                            |
| 40 | Stereochemistry – II, B.Sc.                                    | CHE-05                                | IGNOU, Delhi        | 05.01.2007 | 1 Hour | EDUSAT                         |
| 41 | Aromatic Hydrocarbons: Aromaticity                             | CHE-05                                | IGNOU, Delhi        | 27.04.2007 | 1 Hour | EDUSAT                         |
| 42 | On Handling of lab component of Chemistry courses B.Sc.        | CHE-03(L), 07(L), 08(L), 11(L), 12(L) | IGNOU, Delhi        | 4.11.07    | 1 Hour | IRC                            |
| 43 | Aromatic Hydrocarbons II, B.Sc.                                | CHE-05                                | IGNOU, Delhi        | 04.05.2007 | 1 Hour | EDUSAT                         |
| 44 | IRC of the programme in general                                | LT-1, 2, 3 and 4 (CPLT)               | IGNOU, Delhi        | 4.2.07     | 1 Hour | IRC                            |
| 45 | Atmospheric Pollution Causes and concerns, BDP                 | ACE                                   | IGNOU, Delhi        | 21.03.2007 | 1 Hour | EDUSAT                         |
| 46 | Aromatic Hydrocarbons – V, B.Sc.                               | CHE-05                                | IGNOU, Delhi        | 02.11.2007 | 1 Hour | EDUSAT                         |
| 47 | Stereochemistry - III, B.Sc.                                   | CHE-05                                | IGNOU, Delhi        | 02.02.2007 | 1 Hour | EDUSAT                         |
| 48 | Chemistry Virtual Lab Need and Concerns,                       | Chemistry Courses                     | IGNOU, Delhi        | 26.12.2006 | 1 Hour | Teleconferencing               |
| 49 | Importance of virtual lab for distance science learners        | Lab Courses                           | NCIDE, IGNOU, Delhi | 26.12.06   | 1 Hour | Two way Video Teleconferencing |
| 50 | Stereochemistry – I, B.Sc.                                     | CHE-05                                | IGNOU, Delhi        | 10.11.2006 | 1 Hour | EDUSAT                         |
| 51 | Thermodynamic and Kinetic Control in Reaction Mechanism, B.Sc. | CHE-06                                | IGNOU, Delhi        | 08.09.2006 | 1 Hour | EDUSAT                         |
| 52 | Aromaticity and Reactivity of aromatic compounds, B.Sc.        | CHE-06                                | IGNOU, Delhi        | 08.08.2006 | 1 Hour | EDUSAT                         |
| 53 | Nucleophilic substitution, B.Sc.                               | CHE-06                                | IGNOU, Delhi        | 6.03.2006  | 1 Hour | EDUSAT                         |
| 54 | Organic Reaction Mechanism: Basic Concepts, CHE-06             | B.Sc.                                 | IGNOU, Delhi        | 6.02.2006  | 1 Hour | EDUSAT                         |
| 55 | Reactions of the Carbonyl group, B.Sc.                         | CHE-06                                | IGNOU, Delhi        | 03.04.2006 | 1 Hour | EDUSAT                         |
| 56 | B.Sc. (Chem) programme   | B.Sc. (Chem.)                         | IGNOU, Delhi        | 29.01.2006 | 1 Hour | IRC                            |
| 57 | Electrophilic Aromatic Substitution,                           | CHE-06                                | IGNOU, Delhi        | 01.05.2006 | 1 Hour | EDUSAT                         |
| 58 | IRC on Biomolecules, B.Sc.                                     | CHE-09                                | IGNOU, Delhi        | 15.07.2006 | 1 Hour | EDUSAT                         |
| 59 | IRC of the programme in general                                | LT-1, 2, 3 and 4 (CPLT)               | IGNOU, Delhi        | 20.12.2005 | 1 Hour | IRC                            |
| 60 | Introduction to Environmental Chemistry                        | AEC-01                                | IGNOU, Delhi        | 12.12.2005 | 1 Hour | EDUSAT                         |
| 61 | IRC for Course in general                                      | AEC-01 (B.Sc.)                        | IGNOU, Delhi        | 27.11.2005 | 1 Hour | IRC                            |
| 62 | Teleconferencing for feedback and monitoring                   | MESE-004 (PGCPDT)                     | IGNOU, Delhi        | 17.11.2005 | 1 Hour | Teleconferencing               |
| 63 | Teleconferencing for Induction                                 | MESE-004 (PGCPDT)                     | IGNOU, Delhi        | 19.09.2005 | 1 Hour | Teleconferencing               |
| 64 | Session on the experiments of                                  | CHE-03(L)                             | IGNOU,              | 9.3.2005   | 1 Hour | IRC                            |

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|----|--|-----------------|--------------|-----------|--------|--------|
|    | Chem lab courses                                     |                 | Delhi        |           |        |        |
| 65 | Edusat session on intro to Environmental Chem, B.Sc. | AEC-01          | IGNOU, Delhi | 22.7.2005 | 1 Hour | EDUSAT |
| 66 | Edusat session on Programme Induction, B.Sc.         | CHE-01-CHE12(L) | IGNOU, Delhi | 7.9.2005  | 1 Hour | EDUSAT |
| 67 | Replay Modes for Edusat: Interactive, CPLT           | LT-1,2,3,4      | IGNOU, Delhi | 5.2.2005  | 1 Hour | IRC    |

**13. Details of Patents granted (if any): Nil**

**14. Contribution to IGNOU's corporate life:**

| S. No. | Chairperson/ Member of Committee | Name of the Committee   | Date/ period                  |
|--------|----------------------------------|---|-------------------------------|
| 1      | Member                           | UGC, CBCS Committee of IGNOU,   | May, 2016 to 2018             |
| 2      | Expert                           | Doctoral Research Committee (SOITS)                                     | Dec. 2016 till date           |
| 3      | Chairperson                      | Committee for equitable distribution, SOS                               | 11 <sup>th</sup> July, 2019   |
| 4      | Chairperson                      | Zero Waste Campus   | 1 <sup>st</sup> January, 2019 |
| 5      | Member                           | Study/Sabbatical Leave  | 8 <sup>th</sup> October, 2018 |
| 6      | Member                           | Guidelines for notifying use of Aadhar Identity                         | 22 <sup>nd</sup> March, 2017  |
| 7      | Member                           | Identification of Obsolete items, SOS                                   | Jan, 2017 to Jan, 2019        |
| 8      | Expert                           | Doctoral Research Committee (SOITS)                                     | Dec. 2016 till date           |
| 9      | Member                           | General Cleanliness Committee   | Oct. 2016 till date           |
| 10     | Member                           | Committee for equitable distribution, SOS                               | 22 <sup>nd</sup> July, 2016   |
| 11     | Member                           | UGC, CBCS Committee of IGNOU  | May, 2016 to 2018             |
| 12     | Member                           | Screening /shortlisting the applications for the post of Lab. Attendant | 7 <sup>th</sup> January, 2013 |
| 13     | Member                           | Reception Committee for 13 <sup>th</sup> Prof. G. Ram Reddy Memorial    | 2 <sup>nd</sup> July, 2008    |
| 14     | Chairperson                      | FYUP Committee, SOS   |                               |
| 15     | Member                           | Institutional Ethics Committee (IEC)                                    | 19 <sup>th</sup> July, 2024   |

**15. Administrative position/s held in the University (even as in charge): Nil**

| S. No. | Designation | Period |
|--------|-------------|--------|
|        |             |        |

**16. Any other contribution/information**

- A.** Contributed as a resource person in a number of workshops organized by **NCERT** for developing and reviewing of textual material at upper primary, secondary and senior secondary levels; creating supplementary multimedia packages, kits etc. for secondary and senior secondary level. The details are as under.

| S.N | Inviting Agency             | Title   | Date                  |
|-----|-----------------------------|---|-----------------------|
| 1   | NCERT                       | Development of Laboratory Manual in Science at Upper Primary Stage  | 14 -18 January, 2013  |
| 2   | DCETA, Chacha Nehru Bhawan, | Development of interactive multimedia learning objects on science concepts for classes IX and Xth: Script | 8- 10 September, 2008 |



**DOSSIER**  
**TO BE FILLED BY TEACHER/ ACADEMIC**

|    |  |   |                         |
|----|--|---|-------------------------|
|    | NIE Campus   | development   |                         |
| 3  | NCERT, NIE Workshop                                  | Preparation of Manual for Science & Mathematics Kits for Upper Primary Stage: Review and Finalisation   | 12-16 May, 2008         |
| 4  | NCERT, NIE Workshop                                  | Workshop on Capacity Building of HMs and teachers of RIE DMP Schools on the use of Sciences and Mathematics Kits: Manual Preparation                            | 29- Jan, 02 Feb, 2008   |
| 5  | NCERT  | Development of Multimedia CD on learning materials regarding workshop   | 28 Jan, 01- Feb, 2008   |
| 6  | NCERT, DESM  | Development of Project Books on Environment Education for Classes VI to X, Finalisation Meeting   | 28-Nov, 2007            |
| 7  | NCERT, DCETA   | Workshop for the development of Multimedia CD on learning materials: Development of Multimedia script   | 8-12 October, 2007      |
| 8  | NCERT  | Review of the tests prepared for languages and Maths for class III and languages and Science and Social Science for Classes VII/VIII for the achievement survey | 17 - 18 Sept, 2007      |
| 9  | NCERT, DCETA   | Workshop for the development of Multimedia CD on learning materials   | 29 May - 4 June, 2007   |
| 10 | NCERT, DESM  | Development of Textbook in Science at Upper Primary Stage (Class VIII): Review of revised draft   | 07 - 11 May, 2007       |
| 11 | NCERT, DESM  | Development of Science Textbook Class VII: Review of the first draft textbook development committee   | 30 March- 3 April, 2007 |
| 12 | NCERT, DCETA, National Centre for Computer Education | Workshop for the development of Multimedia CD on learning materials: Transformation of the script into Multimedia   | 26-30 March, 2007       |
| 13 | NCERT, DCETA   | Development of Multimedia CD on learning Materials: Final scrutiny and vetting of script  | 5-9 March, 2007         |
| 14 | NCERT, DCETA, Chacha Nehru Bhawan                    | Workshop for the development of Multimedia CD on learning materials : Designing and Developing the script   | 6-8 February, 2007      |
| 15 | NCERT, DESM  | Development of Science Textbook Class VII: First Planning Meeting of the Textbook Development Committee   | 15-17 January, 2007     |
| 16 | NCERT, DESM  | Development of Science Textbook Class VII: ( Review Workshop)   | 08-14 August, 2006      |
| 17 | NCET, DESM   | Meeting for the Development of manuscript of the Science textbook for Class VII: Revised Draft  | 3-7 July, 2006          |
| 18 | NCET, DESM   | Meeting for the Development of manuscript of the Science textbook for Class VII: First Draft  | 29 May-2 June, 2006     |
| 19 | NCET, DESM   | Development of manuscript of the Science textbook for Class VII: First Meeting of the Textbook Development Committee  | 15-17 April, 2006       |
| 20 | NCERT, DESM  | Chemistry textbook of Class XI (Hindi Version ): Review of Draft  | 16- 18 January, 2006    |
| 21 | NCERT, DESM  | Workshop for the development of the manuscript of the   | 21-28 November,         |



|    |                  |   |                                      |
|----|------------------|---|--------------------------------------|
|    |                  | Science and Technology textbook of Class VI: Revised Draft  | 2005                                 |
| 22 | NCERT, DESM      | Workshop for the development of the manuscript of the Science and Technology textbook of Class VI: First Draft discussion | 14-18 October, 2005                  |
| 23 | NCERT, DESM      | Workshop for the development of the manuscript of the Science and Technology textbook of Class VI                         | 31 August - 2 Sept, 2005             |
| 24 | NCERT, DESM      | Reviewing the problems for Problem Book in Chemistry for Class XI   | 28 March - 1 April, 2005             |
| 25 | NCERT, DESM      | Development of Concept-based experiments in chemistry for Hr. Sec. Stage  | 20-24 December, 2004                 |
| 26 | NCERT, DESM      | Quick Review of textbooks in Chemistry for XI & XII Stage   | 11-15 October, 2004                  |
| 27 | NCERT, DESM, NIE | Workshop on Development of Multimedia Package on Organic Chemistry for Sr. Sec. Level                                     | 23-27 August, 2004                   |
| 28 | NCERT, DESM      | Assessment of Laboratory Requirements for Carrying out Practical in Sciences and Technology at Secondary Stage            | 17-18 September, 2003                |
| 29 | NCERT, DESM      | Workshop for Finalization of Tools for Evaluation of NCERT Textbooks for Higher Secondary Stage                           | 18-20 June, 2003                     |
| 30 | IGNOU & UNESCO   | Training in Science for teachers from SAARC countries   | 15.11.99                             |
| 31 | SCERT, New Delhi | Supplementary material for teachers at +2 level   | 26-27 Dec,00 & 1-3, Jan,01           |
| 32 | NCERT            | Dev of Textual material- secondary. Stage   | 11.04.02 -18.04.02<br>18-22 Nov., 02 |
| 33 | NCERT            | Dev of Textual material- secondary stage  | 2002                                 |

## Manuscripts Reviewed

1. "Immobilization of PdCl<sub>2</sub> on natural asphalt sulfonic acid network to catalyze C-N and C-O bonds formation in DMF under a ligand free and simple conditions", *Chemistry Select* (Wiley), Year: 2022
2. "Utilization of waste derived from the silicon carbide grinding sludge and stone sludge as silicon aluminium source for the synthesis of the amine functionalized mesoporous humidity control material", *Journal of Material Cycles and Waste Management* (Springer), Year: 2021
3. "Comparison of the two carbon allotropes as solid support: catalytic efficiency of the supported metalloporphyrins for the aerobic oxidation of alcohols", *Chemistry Select* (Wiley), Year: 2021.
4. Smartphone-assisted ratiometric fluorescent sensor to quantitatively detect curcumin in traditional Chinese medicine based on Förster resonance energy transfer, *Microchimica Acta*, Year 2024.

5. Design and evaluation of a novel pyridine-thiazole hybrid adsorbent as high- capacity adsorbent for methylene blue removal from water, *scientific reports*, Year 2025

**B. Technology Enabled Learning (TEL) related activities**

Successively contributed to the two cycles of the **MOOC** titled, “Organic Chemistry-1” and coordinated one cycle hosted at Study Webs of Active-Learning for Young Aspiring Minds (**SWAYAM**)-an indigenous IT platform of INDIA, developed by Ministry of Human Resource Development, Government of India. The Details are as under.

- **Cycle 1:** 24.10.16 to 19.12.16
- **Cycle 2:** 16.10.17 to 10.12.17
- **Cycle 3:** 17.09.18 to 31.12.18 (Run as Coordinator of the **MOOC** with an Enrolment of over 5000 students)

**Signature of Teacher /Academic**