



## KONGUNADU ARTS AND SCIENCE COLLEGE

(AUTONOMOUS)

DEPARTMENT OF CHEMISTRY

### ACTIVITIES CONDUCTED UNDER DBT STAR COLLEGE SCHEME- 2023-2024

#### HANDS ON TRAINING

S. No.	Name of the Event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	Hands on Training on "IR Spectroscopy"	18-12-2023	<b>Dr. S. Senthilkumar</b> Senior Scientist, CSIR – Central Electrochemical Research Institute, Karaikudi. <b>Dr. P. Sakthivel</b> Professor, Department of Nanoscience and Technology Bharathiar University, Coimbatore.	Students - 81 Faculty – 4  Total - 85	Students and faculty were able to understand the handling of IR Instruments and their working principle.
2.	Hands on Training Programme on "Micro Scale Experiments in Inorganic Analysis"	04-01-2024	<b>Dr. A. Jeya Rajendran</b> Associate Professor (Retd.) Department of Chemistry Loyola College Chennai.	Students - 69 Faculty –07  Total - 76	The participants upgraded their practical skills on detecting the cations, anions and learnt how to eliminate the interfering radicals and to prepare and add the reagents.
3.	Hands on Training Programme on "Micro Scale Experiments in Organic Analysis"	05-01-2024	<b>Dr. S. Murugan</b> Professor and Head (Retd.) Department of Chemistry S. T. Hindu College, Nagerkovil.	Students - 34 Faculty -07  Total - 41	The participants gained practical skills on detecting the various organic functional groups with less reagents.
4.	Hands on Training on "Finding Food Adulteration"	12-01-2024	<b>Dr. G. Subashini</b> Assistant Professor Department of Chemistry PSGR Krishnammal College for women Coimbatore.	Chemistry students – 44 Physics students – 18 Faculty - 07  Total - 69	Students were taught to identify preservatives, colorants, dyes from different packed food items and to find food adulteration from turmeric, salt, edible oils and spices using chemical techniques.
5.	Hands on Training "Soap Making"	30-01-2024	<b>Dr. K.Poonkodi</b> Assistant Professor & Head, PG Chemistry,	45 Students	Students learnt about the saponification values of different oils

			Nallamuthu Gounder Mahalingam College, Pollachi.		and soap making process which enabled them to make organic soaps individually.
6.	Hands on Training on “Solvent Free microwave assisted irradiation reaction in organic synthesis”	27-02-2024	<b>Dr.D. Karthikumar</b> Assistant professor, Department of Chemistry PSG College of arts and science, Coimbatore.	Chemistry students – 60 Bio Chemistry-13 Botany - 13 Faculty- 7 Total - 93	Students were trained to perform solvent free microwave assisted irradiation reactions to synthesis organic compounds such as Aspirin and quinolone. This type of hands-on training motivated the students to take up projects in organic synthesis.

### CONFERENCES/ SEMINARS / WORKSHOPS ORGANIZED

S. No	Name of the Event/ Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1	Seminar on “Recent Trends in Advanced Materials and their Applications”	04-09-2023	<b>Dr. SakthiPandi K</b> Professor & Research Coordinator, SRM Trichy Campus, Tiruchirappalli. <b>Dr. Hemalatha K V</b> Assistant Professor Department of Chemistry, Coimbatore Institute of Technology, Coimbatore.	47 Students	Students understood about the applications of various advanced materials like super capacitors, nanocomposites, ceramics, polymers and metals.
2	Seminar on “Futuristic Trends and Opportunities in Basic Sciences”	08-09-2023	<b>Dr C. Ravidass</b> Head, Department of Physics, Bishop Heber College, Trichy. <b>Dr. D. Nalini</b> Head, Department of Chemistry, PSGR Krishnammal College for Women, Coimbatore.	195 Students	The students gained understanding of different methods for preparing thin films, techniques for fabricating solar cells and explored opportunities within various industries, research and development laboratories, as well as higher education prospects in reputable institutions.
3	Seminar on “Current Topics of Interest in Chemical	<b>21.09.2023</b>	<b>Dr. Shanmugaraju Sankarasekaran</b> Associate Professor in Chemistry, Indian Institute of	64 Students, 7 Faculty  Total 71	Various types of Sensor, their uses and applications in numerable areas are covered. The participants understood the concepts of Coupling

	Science Research”		Technology Palakkad, Kerala, India <b>Dr. R. Prabhakaran</b> Associate Professor Department of Chemistry Bharathiar University, Coimbatore		reactions.
4	Seminar on “Current trends in Pharmaceutical Industry and Futuristic opportunities”	04-03-2024	<b>Lakshmanan Subramaniam</b> Scientific Manager- Analytical R & D, BioconPharma Ltd, Bangalore.  <b>Mahendran Krishnan</b> Senior Manager, Somerset Therapeutics Ltd, Budihal, Karnataka.	Students-56 Faculty-07  Total - 63	Students gained insight into recent drug advancements, diverse medication forms, and practical skills encompassing drug formulation, manufacturing, FDA regulations, design, quality control, and progress documentation, enhancing their contribution to a comprehensive science exhibition.
5	Workshop on “In Silico Molecular Design”	11-01-2024	<b>Dr. V. Rajapandian</b> Assistant Professor Department of Chemistry, Sri SRMV, Coimbatore	42 Students	Students became familiar to use Gaussian software for drawing 3D chemical structures and calculations on bond angles and lengths, energy and related parameters in their project work.
6	Workshop on “Phytochemical Extraction from Tea Leaves”	19-02-2024	<b>M. Thennarasu</b> Group Manager Wipro Enterprises limited Kochi, Kerala.	Chemistry students-37 Physics-16, Biochemistry – 06, Botany – 06, Faculty –7, Total - 72	Students gained practical knowledge in isolating phytochemicals such as polyphenols and flavonoids, from tea leaves through chemical techniques and also improved their skills in identifying tea leaf varieties and to operate the rota vapor instrument for extraction.

### INVITED LECTURES

S. No.	Name of the event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	Invited lecture on “Recent Advancement and Opportunities in Chemistry”	11-07-2023	<b>Dr R Venkateswaran</b> Assistant Professor Department of Chemistry PSG College of Arts and Science Coimbatore.	63 Students and 07 Faculties	Student came to know about Recent advancement techniques and opportunities in Chemistry.

2	Invited lecture on “Evolution of Concepts of Acids and Bases: Their Applications in Chemical Sciences”	14-09-2023	<b>Prof. I. V. Muthu VijayanEnoch</b> Professor & Head of Nanosciences, Karunya Institute of Technology, Coimbatore.	64 Students 07 Faculties  Total - 80	Students gained a deeper understanding of various concepts of acids and bases and their wide range of applications in chemical industries.
3	Invited talk on “Multi functional metal Organic Framework for Environment Application”	22-01-2024	<b>Dr. D. Gangadharan</b> Assistant Professor Department of Sciences AmirtaViswa Vidyapeetham University, Coimbatore.	Students - 56 Faculty - 7  Total - 63	Students curiously learnt how to prepare multi -functional metal organic framework and how it is highly used to conserve aquatic system and environment.
4	Enrichment Programme on “Intellectual Property Rights (EPIPR)”	02-02-2024	<b>Dr. M. Selvakumar</b> Associate Professor, Department of Chemistry, Manipal University, Karnataka.	81 Students	Students and faculty were exposed to their rights in intellectual property as copyright, patent and Trademark.

### EXHIBITION / COMPETITIONS CONDUCTED

S. No.	Name of the event/Activity	Date	Number of Beneficiaries	Outcome
1	Model Making Competition	28-02-2024	23 students	To motivate internal achievement which is very important for self-learning and optimizing students group activity and self-responsibility.
2	Quiz Competition	28-02-2024	Chemistry students - 10 Botany students - 05 Bio chemistry Students - 17 Total - 32	Students gained insight into various current affairs across different subjects, recognizing the significance of collaborative activities in acquiring new knowledge. They also acquired firsthand experience in preparing for competitive exams, equipping themselves to tackle future challenges with confidence.
3	Interdepartmental Science Exhibition	02-03-2024	120 students	Anticipated outcomes involve disseminating scientific knowledge, developing project management skills, inspiring future pursuits, facilitating networking, recognizing achievements, engaging the public, and documenting progress, contributing to a holistic and impactful science experience.

### TRAINING COURSES CONDUCTED

S.	Name of the	Date	Resource Person	Number of	Outcome
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No.	event/ Activity			Beneficiaries	
1	Faculty Development Programme “Empowering Science Educators: AI &ML “	06-03-2024	<b>Dr. P.Subashini</b> Professor of Computer Science, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore.  <b>Dr.Valliappan Raman</b> Professor & HoD Department of Artificial Intelligence and Data Science, Coimbatore Institute of Technology, Coimbatore.	35 faculty	A groundwork was laid for proficient, ethically-minded educators, integrated curriculum development, influential research contributions, and a collaborative community dedicated to advancing AI/ML education trademark.
2	Faculty Training Programme on “Teaching Pedagogy and Skills”	25-03-2024	<b>Dr. S.K. Krishna,</b> Assistant Professor Department of Chemistry, Chikkaiah Naicker College, Erode.	30 Faculty	Development of interpersonal skills, positivism, fair minded, humour sense, consistent, punctuality which helps for a better classroom environment.
3	Hands on Training on “Handling of new Instruments for lab Technicians”	13-12-2023	<b>Mr. G.K. Shanmugasundram</b> Managing Partner Gemini Scientific Company Chennai.	16 Lab Assistants	Lab Assistants from various scientific disciplines understood about the handling of new instruments like digital potentiometer, colorimeter, rota vapour, Electrodes, hot air oven, etc.

### OUTREACH / EXTENSION ACTIVITIES

S. No.	Name of the event/Activity	Date	Resource Person	Number of Beneficiaries	Outcome
1.	Exploring science education for young minds (for school students)	07-07-2023	Faculty members of Chemistry.	37 students	Disseminating scientific knowledge among school students further creating thrust to take up science related studies in the college level.
2.	Exploring science education for young	05-10-2023	<b>Dr. K.Krishnaveni</b> Assistant Professor	175 School Students,	The students and teachers gained

	minds (School students Programme)	& 06-10-2023	of Chemistry, Kongunadu Arts and Science College, Coimbatore-29	9 Teachers,  Total - 185	knowledge in arranging the molecular module design, Preparation method of Soap and Sanitizer.
3.	Hands on “Chemistry experiments for school students (Grade XII)”	01-02-2024	<b>Dr K. Krishnaveni</b> Assistant Professor Department of Chemistry Kongunadu Arts and Science College Coimbatore.  <b>Dr K. Chandra Prakash</b> Assistant Professor Department of Chemistry Kongunadu Arts and Science College Coimbatore.	16 Students 1 Teacher Total 17	The participants got training on volumetric analysis and systematic qualitative analysis of organic compounds and functional group analysis which helps them to perform better in their practical examinations.