

GTN ARTS COLLEGE (AUTONOMOUS)

DEPARTMENT OF CHEMISTRY

DBT REPORT

(2025 – 2026)

Department of Chemistry Activities for AY 2025 -2026

S. No.	Programme Type	Programme Title	No. of Programme	Date
1	FDP	A Faculty Programme on Innovative ICT Tools in Chemistry Teaching	1	19.12.2025
2	Guest Lecture	Organic Stereochemistry: Concepts and Applications	2	07.01.2026
	Guest Lecture	Climate Change		08.01.2026
3	Hands on Training	One Day Hands-on-Training on Thin Layer Chromatography	5	17.12.2025
	Hands on Training	Water Quality Parameter Analysis		22.12.2025
	Hands on Training	Photochemical Extraction Methods		24.12.2025
	Hands on Training	Thin Layer Chromatography		06.01.2026
	Hands on Training (Lab Assistants)	Handling of Analytical Instruments		07.01.2026
4	Intercollegiate Workshop	Healing with the Herbs of Life	1	23.12.2025
5	Intercollegiate Seminar	Micro and Nanoplastic Chemistry in the Environment	1	23.12.2025
6	Internship	Internship	1	25.12.2025 to 04.01.2026
7	Invited Talk	The Sustainable You: Cultivating a Greener Personality for a Better World	1	22.12.2025
8	Seminar	One Day Seminar on Advanced Materials for Next Generation Solar Cells	6	05.12.2025

	Seminar	One Day Seminar on Challenges and Strategic Solutions in Electrochemical 3D Nanodevices		19.12.2025
	Seminar	One Day Seminar on Nanomaterials and its Applications		22.12.2025
	Seminar	Defluoridation Using Biopolymer Based Adsorbents		24.12.2025
	Seminar	Corrosion Behaviour of Metals in Artificial Saliva		06.01.2026
	Seminar	Tricks on Chemical Bonding and Molecular Structure		08.01.22026
9	Skill Development	Skill Development and Entrepreneurial Opportunities in the Soap and Detergents	1	08.01.2026
10	Workshop	A One Day Workshop on Instrumentation of UV and FTIR Spectroscopy	2	19.12.2025
	Workshop	Preparation of Chemical Structure to Textnotes Using Software's		08.01.2026
11	Industrial vist	Sree Maruthi Sirpakalaikudam, Nilakottai and TWAD, Andipatti.	1	18.12.2025

Seminar on Advanced Materials for Next Generation Solar Cells on 05.12.2025



A One Day Seminar on “**Advanced Materials for Next Generation Solar Cells**” was organized on 05.12.2025 to provide students with an understanding of recent developments in advanced materials and their applications in next-generation solar cell technologies. The seminar was delivered by **Dr. S. Karuppuchamy**, Professor and Head, Dean – Research, Department of Energy Science, Alagappa University, Karaikudi, who shared valuable insights into emerging materials, innovative approaches, and current research trends in solar energy conversion. The programme provided an excellent opportunity for students to enhance their knowledge of advanced materials and their role in developing efficient and sustainable solar energy technologies. A total of 95 students actively participated in the seminar and benefited from the expert interaction.

One-Day Hands-on Training Programme on Thin-Layer Chromatography (TLC) was conducted on 17.12.2025



A One Day Hands-on Training on “**Thin Layer Chromatography**” was organized on 17.12.2025 to provide students with practical exposure to the principles, techniques, and applications of Thin Layer Chromatography (TLC). The training was conducted by **Mr. V. Murugesan**, Science Expert, No. 19, Thalavai Street, The I.L.E. Co., Madurai – 625001, who provided valuable demonstrations and hands-on guidance on the experimental procedures involved in TLC. The programme enabled students to gain practical knowledge and develop laboratory skills related to separation and identification of chemical compounds using chromatographic techniques. A total of 38 students actively participated in the training and benefited from the practical sessions.

Seminar on “Challenges and Strategic Solutions in Electrochemical 3D Nanodevices” was conducted on 19.12.2025



A seminar on “Challenges and Strategic Solutions in Electrochemical 3D Nanodevices” was conducted on 19.12.2025 with the objective of providing students with insights into recent developments, challenges, and innovative strategies in electrochemical nanodevice technology. The session was delivered by **Dr. G. Gnana Kumar**, M.Sc., B.Ed., Ph.D., Assistant Professor and Head, Department of Physical Chemistry, who shared valuable knowledge on the design, development, and applications of advanced electrochemical 3D nanodevices. The programme provided an opportunity for students to understand emerging research trends and technological advancements in the field. A total of 95 students actively participated in the seminar and benefited from the expert interaction.

Faculty Development Programme (FDP) on “ICT Tools for Science Education with Special Reference to Chemistry Teaching” was conducted on 19.12.2025



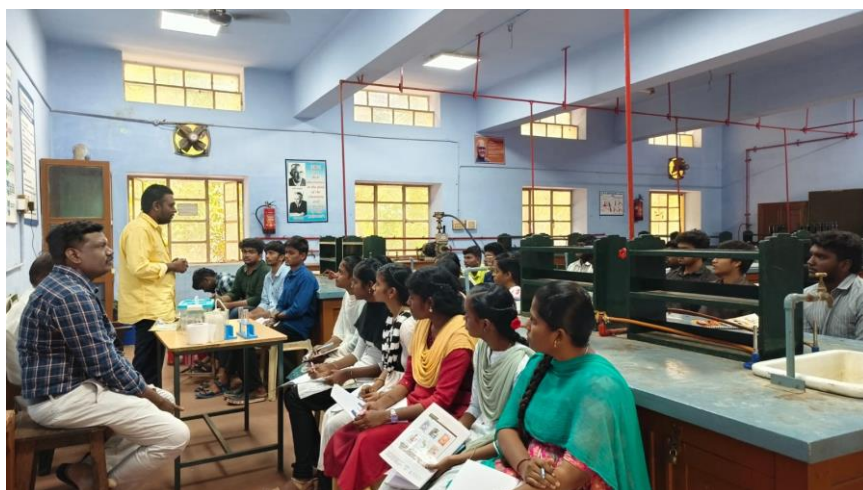
A Faculty Development Programme (FDP) on “**ICT Tools for Science Education with Special Reference to Chemistry Teaching**” was conducted on 19.12.2025, **Dr. S. Syed Abuthakir**, PG and Research Department of Chemistry, Jamal Mohamed College (Autonomous), Tiruchirappalli, to enhance the teaching and learning practices of faculty members through the effective integration of Information and Communication Technology (ICT) tools. The programme focused on the application of digital resources, interactive tools, multimedia content, and technology-enabled teaching strategies for making Chemistry education more engaging, effective, and student-centred. The FDP provided valuable exposure to innovative approaches for incorporating ICT tools into Chemistry teaching and learning.

Seminar-cum-Workshop on “UV and FT-IR Spectroscopy” was conducted on 19.12.2025



A Seminar-cum-Workshop on “UV and FT-IR Spectroscopy” was conducted on 19.12.2025 to provide students with both theoretical knowledge and practical exposure to important spectroscopic techniques used in Chemistry. The programme was conducted by **Dr. S. Syed Abuthakir**, PG and Research Department of Chemistry, Jamal Mohamed College (Autonomous), Tiruchirappalli, who provided valuable insights into the principles, instrumentation, spectral interpretation, and applications of UV-Visible and Fourier Transform Infrared (FT-IR) spectroscopy. The workshop helped students develop a better understanding of spectroscopic analysis and its applications in chemical research. A total of 85 students actively participated in the programme and benefited from the expert session.

A Hands-on Training Programme on “Water Quality Parameter Analysis” was conducted on 22.12.2025



A Hands-on Training Programme on “**Water Quality Parameter Analysis**” was conducted on 22.12.2025 to provide students with practical knowledge and laboratory skills related to the assessment of water quality. The training was conducted by **Mr. M. Sudhakaran**, Chemist, TWAD Board, Theni District, who provided valuable guidance on the analysis of important water quality parameters and their significance in determining the suitability of water for various purposes. The programme enabled students to gain practical exposure to water quality testing methods and enhanced their understanding of environmental chemistry. A total of 28 students actively participated in the training programme and benefited from the practical session.

Seminar on “Nanomaterials and Their Applications” was conducted on 22.12.2025



A Seminar on “**Nanomaterials and Their Applications**” was conducted on 22.12.2025 to provide students with an understanding of the fundamental concepts, unique properties, preparation methods, and diverse applications of nanomaterials. The seminar was delivered by **Dr. K. Sekar**, Assistant Professor (Sr. Gr.)/Chemistry, Department of Science and Humanities, who shared valuable insights into recent developments and technological applications of nanomaterials in various fields. The programme helped students gain awareness of emerging trends in nanoscience and its significance in modern research and technology. A total of 66 students actively participated in the seminar and benefited from the expert session.

Invited Talk on “The Sustainable You: Cultivating a Greener Personality for a Better World” was conducted on 22.12.2025



An Invited Talk on “**The Sustainable You: Cultivating a Greener Personality for a Better World**” was conducted on 22.12.2025 to create awareness among students about sustainable living, environmental responsibility, and the importance of developing eco-friendly habits. The session was delivered by **Dr. D. S. Buvaneshwari**, Associate Professor, Department of Chemistry, Thiagarajar College, Madurai, who highlighted the role of individuals in promoting environmental sustainability and building a greener society. The talk encouraged students to adopt responsible practices and contribute towards a cleaner and more sustainable future. A total of 50 students actively participated in the programme and benefited from the insightful session.

Intercollegiate Seminar on “Micro- and Nanoplastic Chemistry in the Environment” was conducted on 23.12.2025



An Intercollegiate Seminar on “**Micro- and Nanoplastic Chemistry in the Environment**” was conducted on 23.12.2025 to create awareness about the occurrence, chemical characteristics, environmental impact, and potential risks associated with microplastics and nanoplastics. The seminar was delivered by **Dr. M. Rajan**, Assistant Professor, Department of Natural Products Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai, who provided valuable insights into the emerging challenges posed by plastic pollution and the behaviour of micro- and nanoplastics in environmental systems. The programme enhanced students’ understanding of environmental chemistry and encouraged them to explore sustainable approaches for addressing plastic pollution. A total of 50 students actively participated in the intercollegiate seminar and benefited from the expert session.

**Intercollegiate Workshop on “Healing with the Herbs of Life”
was conducted on 23.12.2025**



An Intercollegiate Workshop on “**Healing with the Herbs of Life**” was conducted on 23.12.2025 to create awareness among students about the medicinal importance, therapeutic properties, and potential applications of herbal plants in healthcare and wellness. The workshop was conducted by **Dr. U. Ramesh**, Assistant Professor, Department of Molecular Biology, School of Biological Sciences, Madurai Kamaraj University, Madurai, who shared valuable insights into the biological significance of medicinal herbs and their role in promoting human health. The programme provided students with an opportunity to understand the importance of natural resources and the potential of herbal-based approaches in modern healthcare. A total of 50 students actively participated in the workshop and benefited from the expert session.

Hands-on Training Programme on “Photochemical Extraction Methods” was conducted on 24.12.2025



A Hands-on Training Programme on “**Photochemical Extraction Methods**” was conducted on 24.12.2025 to provide students with practical knowledge and experimental exposure to modern extraction techniques based on photochemical principles. The training was conducted by **Dr. N. Muniyappan**, Assistant Professor, Department of Chemistry, Sarawathi Narayanan College, Perungudi, Madurai, who provided valuable guidance on the principles, procedures, and applications of photochemical extraction methods. The programme enabled students to develop practical laboratory skills and understand the significance of photochemical approaches in chemical research and extraction processes. A total of 60 students actively participated in the training programme and benefited from the hands-on session.

Seminar on “Defluoridation Using Biopolymer-Based Adsorbents” was conducted on 24.12.2025



A Seminar on “**Defluoridation Using Biopolymer-Based Adsorbents**” was conducted on 24.12.2025 to provide students with an understanding of fluoride contamination in water and the application of biopolymer-based adsorbents for its effective removal. The seminar was delivered by **Dr. N. Vishwanathan**, Assistant Professor (Senior Grade), Department of Chemistry, Anna University, University College of Engineering–Dindigul, Dindigul – 624622, who shared valuable insights into the principles of adsorption, preparation and application of biopolymer-based materials, and their role in water purification. The programme enhanced students’ knowledge of environmental chemistry and sustainable approaches for fluoride removal from contaminated water. A total of 60 students actively participated in the seminar and benefited from the expert session.

**Seminar on “Corrosion Behaviour of Metals in Artificial Saliva”
was conducted on 06.01.2026**



A Seminar on “**Corrosion Behaviour of Metals in Artificial Saliva**” was conducted on 06.01.2026 to provide students with an understanding of the principles of corrosion and the factors influencing the degradation of metallic materials in artificial saliva. The seminar was delivered by **Dr. A. Krishnaveni**, Associate Professor and Head, Department of Chemistry, Yadava College, Madurai, who shared valuable insights into the electrochemical aspects of corrosion, metal–saliva interactions, and the importance of corrosion studies in biomedical applications. The programme enhanced students’ knowledge of corrosion science and its relevance to the safe and effective use of metallic materials in biological environments. A total of 55 students actively participated in the seminar and benefited from the expert session.

Hands-on Training Programme on “Thin-Layer Chromatography” was conducted on 06.01.2026



A Hands-on Training Programme on “**Thin-Layer Chromatography**” was conducted on 06.01.2026 to provide students with practical knowledge and laboratory experience in the principles, techniques, and applications of Thin-Layer Chromatography (TLC). The training was conducted by **Dr. S. Manimekalai**, Assistant Professor, Department of Chemistry, Yadava Women’s College, Madurai, who provided valuable guidance and practical demonstrations on the preparation, development, and interpretation of chromatographic plates. The programme helped students develop essential laboratory skills in the separation and identification of chemical compounds and enhanced their understanding of chromatographic techniques. A total of 62 students actively participated in the hands-on training and benefited from the practical session.

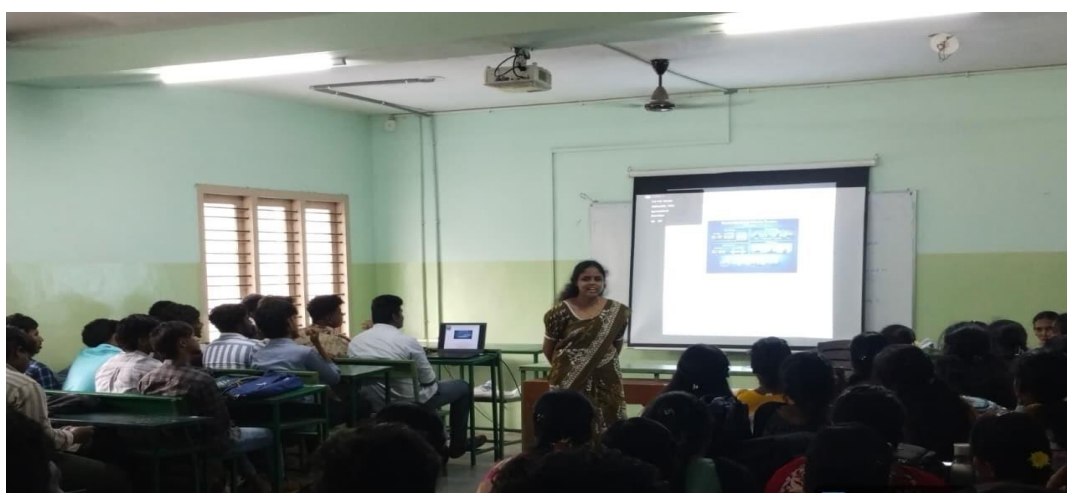
Guest Lecture on “Organic Stereochemistry: Concepts and Applications” and Hands-on Training Programme for Laboratory Assistants was conducted on 07.01.2026



A Guest Lecture on “**Organic Stereochemistry: Concepts and Applications**” was conducted on 07.01.2026 to provide students with a deeper understanding of the fundamental concepts of stereochemistry and its importance in organic chemistry. The lecture was delivered by **Dr. G. Rajkumar**, Assistant Professor, Department of Chemistry, Vivekananda College, Tiruvedakam, Madurai, who explained the concepts of molecular chirality, stereoisomerism, conformational analysis, and their applications in chemical and pharmaceutical sciences. The session helped students strengthen their conceptual understanding and appreciate the significance of stereochemistry in modern chemistry. A total of 63 students actively participated in the guest lecture and benefited from the expert interaction.

A **Hands-on Training Programme for Laboratory Assistants** was conducted on 07.01.2026 to enhance the practical skills and technical competencies of laboratory assistants in handling laboratory equipment, chemicals, safety procedures, and routine experimental practices. The training was conducted by **Dr. G. Rajkumar**, Assistant Professor, Department of Chemistry, Vivekananda College, Tiruvedakam, Madurai, who provided valuable practical guidance on effective laboratory management and safe working practices. The programme helped strengthen the participants' knowledge of laboratory safety, proper handling of chemicals and apparatus, and efficient execution of laboratory activities.

**Seminar on “Tricks on Chemical Bonding and Molecular Structure”
was conducted on 08.01.2026**



A Seminar on “Tricks on Chemical Bonding and Molecular Structure” was conducted on 08.01.2026 to help students develop a clear and effective understanding of the fundamental concepts of chemical bonding and molecular structure. The seminar was delivered by Dr. Sivasankari, Assistant Professor, Department of Chemistry, Cauvery College for Women, Trichy – 18, who introduced students to useful approaches, conceptual techniques, and problem-solving strategies for understanding molecular geometry, bonding theories, and related chemical concepts. The programme helped students strengthen their conceptual knowledge and improve their ability to approach chemistry problems effectively. A total of 28 students actively participated in the seminar and benefited from the expert session.

A Guest Lecture on “Climate Change” was conducted on 08.01.2026



A Guest Lecture on “Climate Change” was conducted on 08.01.2026 to create awareness among students about the causes, impacts, and consequences of climate change and its significance to the environment and society. The lecture was delivered by **Dr. N. Manimaran**, Assistant Professor, School of Chemistry, Bharathidasan University, Trichy – 24, who provided valuable insights into greenhouse gases, global warming, environmental changes, and sustainable approaches to addressing climate-related challenges. The session helped students understand the scientific aspects of climate change and encouraged them to recognize their role in promoting environmental sustainability. A total of 60 students actively participated in the guest lecture and benefited from the expert session.

**Skill Development Programme on “Skill Development and Entrepreneurial Opportunities in the Soap and Detergents Industry”
was conducted on 08.01.2026**



A Skill Development Programme on “**Skill Development and Entrepreneurial Opportunities in the Soap and Detergents Industry**” was conducted on 08.01.2026 to provide students with practical knowledge about soap and detergent preparation, production processes, quality considerations, and potential entrepreneurial opportunities in the industry. The programme was conducted by **Mr. V. Jeganathan**, Proprietor, Arasan Soap and Detergents, G. S. Nagar, 10th Street, Seelapadi, Dindigul, who shared valuable insights based on his industrial experience and guided students on the possibilities of establishing small-scale businesses in the soap and detergent sector. The session helped students develop an entrepreneurial mindset and understand the importance of skill-based employment and self-employment opportunities. A total of 38 students actively participated in the programme and benefited from the expert interaction.

Workshop on “Preparation of Chemical Structures to Text Notes Using Software” was conducted on 08.01.2026



A Workshop on “**Preparation of Chemical Structures to Text Notes Using Software**” was conducted on 08.01.2026 to provide students with practical knowledge of using software tools for preparing, editing, and incorporating chemical structures into digital text notes. The workshop was conducted by **Dr. C. Kirubakaran**, Guest Lecturer, Department of Computer Science and Applications, School of Computer Science and Technology, The Gandhigram Rural Institute (DTBU), Dindigul, who provided valuable guidance on the effective use of digital tools for creating and presenting chemical structures. The programme helped students enhance their digital and technical skills and enabled them to prepare well-organized chemistry notes using software-based applications. A total of 28 students actively participated in the workshop and benefited from the practical session.

**Industrial Visit was organized on 18.12.2025 to Sree Maruthi
Sirpakalaikudam, near Nilakottai and TWAD, Andipatti**



An Industrial Visit was organized on 18.02.2025 to Sree Maruthi Sirpakalaikudam, near Nilakottai and TWAD, Andipatti to provide II and III students with practical exposure to industrial activities and working practices. A total of 54 students participated in the visit and benefited from the programme. The visit enabled the students to gain first-hand knowledge about the various processes, techniques, and operational practices followed in the organization. It also helped them understand the practical application of concepts learned in the classroom and develop awareness of industrial standards, workplace practices, and career opportunities. The industrial visit was informative and beneficial in enhancing the students' practical knowledge, skills, and understanding of real-world industrial environments.