

## One-Day Intensive Hands on Workshop on Fundamentals of Gas Chromatography (GC) – Wave 5

Organized by VC AnalytiX at Venture Center

<b>Gains</b>	<ul style="list-style-type: none"> <li>Workshop is intended to introduce the underlying principle and technical aspects of Gas chromatography to the participants.</li> <li>Fundamental Principles of Gas Chromatography. Sample Introduction Techniques. Column selection and instrument parameters.</li> <li>GC detectors. Qualitative &amp; Quantitative Analysis using GC. Basic maintenance of GC. Troubleshooting process for problems like contamination, ghost peaks, baseline drift, peak tailing, reduced peak size, carrier gas leakage, and retention time shift.</li> <li>Practical applications of GC in the Industry. Best practices in GC. Hands On sample preparation.</li> <li>Live demonstration of data acquisition process. Data Interpretation strategies.</li> <li>Quick update on latest techniques/developments.</li> </ul>								
<b>Organized by</b>	Venture Center – a Technology Business Incubator								
<b>For whom</b>	<ul style="list-style-type: none"> <li>Industry professionals wishing to expand their skill sets (Industries – Pharma; Environmental; Forensic ; Food, Petrochemicals etc)</li> <li>Students and staff of polymer/ materials sciences/ engineering/ analytical/physical chemistry wishing to equip themselves for industry jobs</li> </ul>								
<b>When</b>	<b>(Wednesday) 31 July 2024   Time: 09:00 am – 05:30 pm</b>								
<b>Where</b>	Lecture Theater & Lab block, Venture Center, 100 NCL Innovation Park, Pashan Road, Pune-411008								
<b>Contact</b>	Technical: Dr. Deepti Khanvilkar   <a href="mailto:deepti.khanvilkar@venturecenter.co.in">deepti.khanvilkar@venturecenter.co.in</a>   +91-8956226083 Registration: Vineet Joshi   Email: <a href="mailto:vineet.joshi@venturecenter.co.in">vineet.joshi@venturecenter.co.in</a>   +91-9156465141								
<b>Registration</b>	<p><b>Maximum 20 seats; First-come-first-serve.</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Category</th> <th style="text-align: center;">Fees for GC</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Students with valid ID card</td> <td style="text-align: center;">1000 INR</td> </tr> <tr> <td style="text-align: center;">Micro and small enterprises/ individuals</td> <td style="text-align: center;">2000 INR</td> </tr> <tr> <td style="text-align: center;">Medium and large companies/ others</td> <td style="text-align: center;">4000 INR</td> </tr> </tbody> </table> <p><b>Steps for registration:</b></p> <ul style="list-style-type: none"> <li>Step 1: Interested participants need to fill in registration form at the following link.</li> <li><b>Register online at: <a href="https://forms.gle/w6e8QK2ink6y8RdP6">https://forms.gle/w6e8QK2ink6y8RdP6</a></b></li> <li>Step 2: Payment details will be shared via email to participants post screening of registration details and seat will be confirmed only after receipt of payment</li> </ul> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>More details at: <a href="https://www.venturecenter.co.in/analytical/home/technical-workshops-training-programs/">https://www.venturecenter.co.in/analytical/home/technical-workshops-training-programs/</a></li> <li><b>REGISTRATIONS AND FINAL PAYMENT DEADLINE Registration closes once 20 seats are full or on 25th July 2024 (whichever comes sooner)</b></li> <li><b>Fees paid is not refundable and non transferable under any circumstances</b></li> <li>The organizers reserve the right to accept or refuse or delay registrations so as to optimize the composition of the group and hence maximize learning for all participants</li> </ul>	Category	Fees for GC	Students with valid ID card	1000 INR	Micro and small enterprises/ individuals	2000 INR	Medium and large companies/ others	4000 INR
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<b>Introduction</b>									

Gas chromatography enables reliable, high-precision trace analysis with high repeatability. Gas chromatography is one of the most widely used techniques for analyzing volatile components/impurities and hydrocarbon mixtures. Some of the advantages of chromatography are the range of measurements and the detection of a wide range of components. Typical applications of GC include pesticide residue analysis, detection of drugs of abuse in urine, blood, tablets, determination of fatty acid contents in edible oils, fats. GC is widely used in the Food, Agriculture, Environmental, Forensic, Biotech, Fragrance, & Chemical Industries.

This workshop aims to give an introduction to the Fundamentals of Gas Chromatography for industry professionals and students. The workshop will be conducted by experts having vast experience working on high end chromatography techniques. The workshop includes lab sessions and data interpretation exercises. The workshop shall also discuss some recent trends and new developments in research and industry relating to chromatography techniques.

### Participants to note the following

- Course includes tea and lunch at Venture Center
- Course will include: Hands on practical session; Access to restricted website with online compilation of resources for GC; Course notes including slides, case studies and application notes and one-on-one feedback on data interpretation exercise
- **Please note, the participants will have to arrange for their own travel/local transport and accommodation and dinners**
- No sessions will be repeated if a participant is unable to attend due to any reasons.
- Free membership in mailing list to follow-up on workshop and intimation of relevant events/ funding/ opportunities from Venture Center.
- Online Certificate of Participation issued by Venture Center

### Event schedule

Time	Session title	Lead
9:00 to 9:30	Registration	Rutuja/Vineet
9:30 to 9:45	Introduction to the course and faculty	Edna
9:45 to 10:30	Introduction and fundamental principles of GC; General terms and essential concepts; Quick overview of GC; Typical data recorded	Deepti
10:30 to 11:00	Tea	
11:00-12:30	<ul style="list-style-type: none"> <li>• Practical Session</li> <li>• Instrumentation</li> <li>• Sample preparation</li> <li>• Sample Injection</li> </ul>	Saniya, Shubhangi, Deepti
12:30- 13:15	Lunch	
13:15 to 14:00	Instrumentation; Instrument parameters, Types of columns and column selection; Types of detectors, Applications	Deepti
14:00 to 14:30	Basic Maintenance of GC; Trouble shooting processes, Qualitative & Quantitative Analysis in GC	Deepti
14:30-16:00	Data Analysis & Interpretation VC Tour	Saniya, Shubhangi, Deepti
16:00 to 16:30	Tea	
16:30 to 17:00	Calculation and Discussion	Deepti
17:00 to 17:30	Closure – Feedback	Deepti

**Speaker (in alphabetical order of last name)**



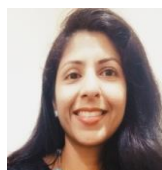
**Shubhangi Dherange**  
**Senior Associate-Analytical Services**

Shubhangi holds a Masters Degree in Analytical Chemistry from the Department of Chemistry, Savitribai Phule Pune University. Her responsibilities at Venture Center includes support incubatees and budding entrepreneurs by offering lab services; Contributing and ensuring smooth operations of lab block at VC.



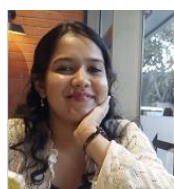
**Edna Joseph**  
**Head- Analytical Services**

Edna heads the Analytical Services Facility “VC AnalytiX” at Venture Center. She has a Masters in Organic Chemistry (Pune University), Masters in Business Administration –Marketing (Pune University), and holds a PG Diploma in Patent Law (NALSAR University). She also heads the Quality Assurance Unit at the GLP compliant Center for BioPharma Analysis (CBA) at Venture Center. She has demonstrated knowledge and understanding of many analytical instruments (e.g. elemental analysis, thermal analysis, chromatography etc.). She has run and assisted in proof-of-concept projects. Many technical and scientific workshops, especially those with hands-on lab exercises with lab instruments have been conceptualized, planned and organized by her.



**Deepti Khanvilkar**  
**Senior Specialist-Analytical Services**



Deepti is a Senior Specialist at VC AnalytiX in Venture Center. She has more than 10 years of research and academic experience in analytical chemistry. She holds a PhD in Anal. Chem. from Ghent Univ. Belgium, and M.S. in Pharm. Anal. from NIPER, Mohali. Her specialization lies in separation, quantification and imaging of target molecules in biological and synthetic matrices using elemental analysis, chromatographic and spectroscopic techniques. She has been engaged in teaching theoretical and practical aspects of analytical chemistry for past several years in various esteemed institutions including IISER, Bharati Vidyapeeth. She has several international publications, presentations and collaborative research stays to her credit.



**Saniya Rade**  
**Trainee-Analytical Services**

Saniya holds a Master’s degree in Biotechnology from Vellore Institute of Technology, Vellore. Her duties at Venture Center encompass assisting incubatees and aspiring entrepreneurs through the provision of laboratory services.



	<p>Entrepreneurship Development Center (Venture Center) – a CSIR initiative – is a Section 25 company hosted by the National Chemical Laboratory, Pune. Venture Center strives to nucleate and nurture technology and knowledge-based enterprises by leveraging the scientific and engineering competencies of the institutions in the Pune region in India. The Venture Center is a technology business incubator supported by the Department of Science &amp; Technology’s National Science &amp; Technology Entrepreneurship Development Board (DST-NSTEDB). Venture Center’s focuses on technology enterprises offering products and services exploiting scientific expertise in the areas of materials, chemicals and biological sciences &amp; engineering. For more information, visit: <a href="http://www.venturecenter.co.in/">http://www.venturecenter.co.in/</a></p>
	<p>The mission of VC AnalytiX is to set up and operate a world class, efficient and reliable Analytical Services Center as an open access facility. VC AnalytiX also organizes various workshops and trainings for students of academic and research institutes. For more information, visit <a href="http://www.venturecenter.co.in/analytical/">www.venturecenter.co.in/analytical/</a></p>