



**Custom Solutions Group LLC**  
 1419 Avenue A, Katy, TX 77493  
 Office: 281.574.9999  
 E-Mail: sales@csg-labs.com



## Experts in GC Training

For high quality jobs in the United States, U.S. employers need a highly skilled, technical workforce. Skilled workers are more productive, independent, flexible, and proactive. To this end, Custom Solutions Group LLC has established training courses in gas chromatography at our facility in Katy, Texas, just seven miles west of Houston’s Energy Corridor.

Custom Solutions Group LLC offers practical training in gas chromatography, for both novice and experienced gas chromatographers. Because we are highly proficient in a number of hardware platforms, we are able to tailor each training course to the specific needs of individual chromatographers. Because we are experts in a variety of ASTM, GPA, and other industry-standard methods, we can assist individual chromatographers in meeting the diverse needs of employers in the petroleum, petrochemical, natural gas, high purity gas, specialty gas, specialty chemical, semiconductor gas, catalysis, biofuel and research industries.



## Basic GC Course Topics

- Theory and Principles of Gas Chromatography
- Hardware Function and Principles
- Carrier Gas and Supply Gas Controls
- Types of Injectors and Inlets
- Columns, Classifications and Principles
- Detector Types, Uses, and Functions
- Instrument Calibration
- Sampling Issues



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With the move of U.S. GC manufacturing overseas, Custom Solutions Group was formed in April 2004, to provide U.S. - based gas chromatographers with the highest quality, customized solutions in gas chromatography. In conjunction with our business partners, Custom Solutions Group designs, builds and commissions new and used gas chromatographs, customized to meet the needs and the specific analytical challenges of scientists, chemists, engineers and technicians in a variety of industries, including: petroleum, petrochemical, natural gas, high purity gas, spe-

cialty gas, specialty chemical, semiconductor gas, catalysis, biofuel and research industries.

Our team combines decades of experience in customized gas chromatography. We are Made-in-the-U.S.A. on the U.S. Gulf Coast. Our operations heavily emphasize continuous quality improvement and just-in-time manufacturing, enabling us to provide fast, flexible solutions at the highest value, in the least amount of time, thus saving time and money for inexperienced, understaffed, and/or overburdened laboratories.

- ✓ Courses consist of lecture and some hands on familiarization.
- ✓ Lunch, Snacks and Beverages are provided.

## Class Schedule - 2023

September 12-13th	Tuesday & Wednesday
September 14-15th	Thursday & Friday
November 7-8th	Tuesday & Wednesday
November 9-10th	Thursday & Friday

### Enrollment

Email: sales@csg-labs.com

Call: Kerry Kreiling (281) 507-9569





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## Petroleum & Petrochemicals

- Natural Gas and Natural Gas Liquids (including early regroup and extended analysis)
- Refinery Gas and Refinery Gas Liquids (including rapid refinery gas analysis)
- Simulated Distillations
- Detailed Hydrocarbon Analysis
- High Purity Ethylene and Propylene
- Trace CO and CO<sub>2</sub>
- Acid and Sulfur Gases
- Trace Sulfur Speciation
- Sulfur Simulated Distillations

## Special Products

- Automated Stream Selection
- Heated Cylinder Gas Autosamplers
- Liquefied Petroleum Gas Autosamplers
- Specialty Gas Autosamplers
- Low Pressure and Vacuum Sampling Panels
- Class 1 Division 2 and Class 1 Division 1 Enclosures

## Research and Biofuels

- Catalyst Research
- Membrane Research
- Greenhouse Gas Analysis
- Ethanol Analysis
- Biodiesel Analysis

## Specialty Gas

- Permanent Gases
- Rapid Synthetic Gas Analysis
- Medical Gases
- Trace Impurities in High Purity Gas
- Reference Gases
- Reference Gas-Liquids Standards
- Hydrogen Generation and Fuel Cell Analysis
- Beverage Grade CO<sub>2</sub> Analysis
- Chlorine Gas Analysis
- Halocarbon Gases and Liquids
- Hydride Gases
- Acid Gases

## Electronics Gas Analysis

- Trace Impurities in Hydride Gases
- Trace Impurities in Fluoride Gases
- Trace Impurities in Chloride Gases
- Trace Impurities in High Purity Halocarbon Gases

