



ADVANCED ANALYTICAL SERVICES

Providing you with the right team
and the right solution every time.



ABOUT US

Our Advanced Analytical Services team consists of fully-trained specialists with a combined 200+ years of analytical experience. With our broad network of local and regional offices, we are dedicated to providing you with the highest level of expert support.



WHAT WE DO

We offer a comprehensive range of services, as well as support and training packages, that are custom-designed for your specific needs.

- ✓ Consulting, Site Surveys, Selection & Feed Study
- ✓ System Design, Integration & Fabrication
- ✓ Commissioning & Startup
- ✓ Project Management & Field Installation
- ✓ Analytical Maintenance Contracts (AMC)
- ✓ On-site Supervision & Troubleshooting
- ✓ Technical Support & Training Solutions

We are excited for the opportunity to become your advanced analytical solutions provider!



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Need a solution? Contact us today!

Mike Kinder

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ADVANCED ANALYTICAL TRAINING SOLUTIONS

WHAT WE DO

Provide you and your team with the expert analytical training needed to properly and safely operate and maintain your equipment and systems.

ABOUT US

Triad's Advanced Analytical Services Training Team has the expertise to provide you with the skills to stay technologically-current with today's analytical equipment. We are dedicated to providing you with the highest level of industry analytical training.

We're excited for the opportunity to become your Analytical Training Provider!

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TRAINING CLASSES OFFERED



SAMPLE SYSTEM BASICS FOR THE ANALYZER TECHNICIAN

For the analyzer technician, this class will approach SHS issues the technician may encounter daily and offer potential solutions



ANALYZER TECHNICIAN 101

Introduction to various technologies a new analyzer technician may encounter, as well as basic chemistry and sample system maintenance



GEMS SYSTEM BASICS

Introduction to the technology and hardware used in a CEMS system, covering topics such as installation, maintenance & troubleshooting

COMING SOON



BASIC ANALYZER INSTALLATION FOR CONSTRUCTION

Helping the customer or contractor identify potential issues with the installation of their equipment, as well as how to avoid common pitfalls before and during the installation



TUNABLE DIODE LASER OVERVIEW

Introduction to basic theory, operation, troubleshooting and maintenance of the tunable diode laser (TDL) analyzer



BASIC CHROMATOGRAPHY

Introduction to basic theory, operation, maintenance and troubleshooting of the GC



INTRODUCTION TO CHEMISTRY (For the Analyzer Technician)

This class will introduce the technician to chemistry in an easy-to-understand format. Hands-on experiments will help reinforce learning. *No prerequisites*

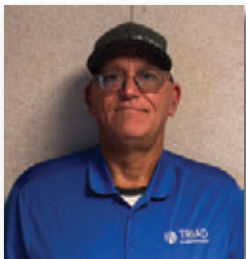
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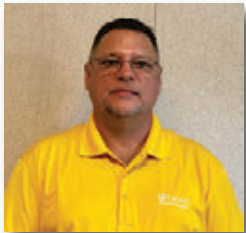
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ADVANCED ANALYTICAL INSTRUCTOR BIOGRAPHIES



JEFF OWENS

Jeff Owens has been in the analytical industry over thirty-five years. His industry experience includes more than thirty years of hands on work in a major "Petrochemical" plant in the gulf coast area. His work as a senior analytical specialist working on process equipment provided him with an extensive working knowledge of a multitude of technologies and equipment manufacturers. He was heavily involved in the research and development of a well-known and time proven laser spectroscopy instrument. As a senior instructor he is an exceptional technical writer and presenter. Jeff has traveled the world providing training to clients and coworkers.



JEFF DODSON

Jeff Dodson began his career as an analytical specialist with a specialty trade contractor to the petrochemical industry. He was nested as a contractor in two major plants on the gulf coast. This allowed him to experience maintenance and repair on a large variety of analytical equipment and instrumentation. As a lead specialist in his last contract position he was a project manager overseeing more than two to three major projects and five to ten minor projects at the same time. His experience includes the implementation of new applications, including those he designed and built himself. He has worked as a service technician, technical writer and trainer for a major analytical manufacturer. Jeff has over fifteen years in the business and has traveled the world performing project management, analyzer startup, commissioning, maintenance and repair as well as formal client training.



TODD RATAJCZAK

Todd Ratajczak began his career as a senior analyzer specialist after obtaining his MS in chemistry. He has over ten years' experience working for a major manufacturer. Todd's focus is in the spectroscopy discipline and he has an extensive background in chromatography and application design. Todd has traveled the world performing startup, commissioning, troubleshooting, training and various other analytical tasks.



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SAMPLE SYSTEM BASICS

COURSE DESCRIPTION



OBJECTIVES/PURPOSE

In this section we look at determining if a measurement is needed and if so, what the purpose of the measurement will be.



TAP LOCATION

In this section we will look at factors that need to be considered when choosing a new sample tap location, as well as evaluating existing tap locations.



TRANSPORT SYSTEM

In this section we will look at the sample transport system and how to deal with lag time with liquid and gas samples.



CONDITIONING SYSTEM

In this section we will look at what it takes to condition the sample so that the analyzer has a useable sample.



PHASE ISSUES

In this section we will discuss how to maintain the correct phase for the sample. We will also be looking at pressure and temperature effects on our sample.



CALIBRATION/VALIDATION

We will discuss the difference between calibration and validation and some things we need to consider when performing a calibration.



BASIC ANALYZER CHEMISTRY

In this section we will look at our sample from a non-technical chemistry standpoint and touch on some basic chemistry elements that will help the analyzer technician be more successful in their role.

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ANALYZER TECHNICIAN 101

COURSE DESCRIPTION



GENERAL OVERVIEW OF TECHNOLOGIES

In this section we will look at some of the more common, newer technologies the new analyzer technician may encounter in their daily work. Some, but not all technologies, include: TDL, Zirconia, pH, gas chromatography, paramagnetic, CEMS, gas density, etc.



BASIC CHEMISTRY

In this section we will take a brief look at chemistry and the role it plays in the daily operation of a plant and how it may affect our analytical equipment and measurements.



BASIC LOOP MEASUREMENTS

In this section we will look at how to use a multimeter as well as a source meter for checking loops and equipment. We will use a calibrator for checking equipment calibration as well.



COMMUNICATIONS

In this section we will be looking at the use of different methods of communications for getting the information from our analyzer to the DCS. This will include, analog, HART, Modbus, etc.



CALIBRATION VS. VALIDATION

In this section we will look at the difference between a calibration and validation and what you need to know before calibrating your analyzer.




SAMPLE SYSTEMS BASICS


In this system we will take a brief look at some basic considerations when troubleshooting an existing sample system.




DATA ANALYSIS & DOCUMENTATION

In this section we will look at using a spreadsheet to graph and analyzer data and use this information for basic troubleshooting. We will learn how to organize the information and present the information in easy to read, concise graphs. We will also discuss the value in proper documentation and some ideas for documenting your work.

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BASIC CHROMATOGRAPHY

COURSE SYLLABUS

- Chemistry for the Analyzer Technician
- Gas Chromatography
- What Makes Up a Gas Chromatograph
 - Hardware
 - Electronics
 - Oven
 - Columns
 - Detectors
 - Valves
- Communications
- Installation
- Installing the GC
- Installing the Sample System
- Startup and Commissioning
 - Ensuring proper startup of the GC
- Troubleshooting
 - Hardware
 - Communications
 - Software
 - Sample Systems
 - Chromatograms
- Sample Systems
 - What to look for BEFORE installing the equipment
 - What to do with existing systems to ensure the best chance for success

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