



GULF
SCIENTIFIC
CORPORATION

TRAINING GUIDE 2019





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WELCOME TO GULF SCIENTIFIC CORPORATION TRAINING CENTER

Gulf Scientific Corporation is a leading provider of laboratory technologies and training courses in the Middle East.

We are pleased to present the 2019 training guide.

Gulf Scientific Corporation (GSC) offers a variety of specialized training courses and workshops designed to enhance the knowledge and practical skills of professionals working in the fields of analytical and life sciences.

Our training programs have been developed to cater for the needs of a wide range of applications, including clinical, research, education, pharmaceutical, environmental sciences, agriculture and food sciences, and oil and gas. We provide in-house and onsite training programs that cover specific applications and needs.

GSC's unique state-of-the-art training center in Dubai, UAE allows training delegates to develop knowledge by providing practical and technical hands-on experience. Our custom-built premises include three dedicated laboratories for analytical and life science instruments, as well as a lecture hall with a total capacity of up to 45 delegates at any given time.

Each course featured in this guide can be adapted and customized to suit your specific requirements and needs. Our training courses and workshops meet the highest international standards and cover a vast range of topics.

In its 29-year history, GSC has successfully conducted over one thousand training programs for highly reputed organizations across the Middle East.

We look forward to providing you with our innovative and manufacturer-certified training services.



TRAINING CENTER



Analytical Science Lab



Merck Lab

Life Science Lab



Training Center

COURSE CALENDAR 2019

Course	Date	Duration (Days)
PerkinElmer Courses		
Fundamentals of Inductively Coupled Plasma	February 25 - 26 September 16 - 17	2 2
Fundamentals of Flame Atomic Absorption	March 25 - 26 September 30 - October 1	2 2
Fundamentals of Graphite Furnace Atomic Absorption	March 27 - 28 October 2 - 3	2 2
Fundamentals of Gas Chromatography (GC)	Upon Request	2
Fundamentals of Gas Chromatography/ Mass Spectrometry (GC/MS)	Upon Request	2
Liquid Chromatography Courses		
Fundamentals of High Performance Liquid Chromatography (HPLC)	April 14 - 16 September 22 - 24	3 3
ACQUITY Ultra High Performance Liquid Chromatography (UPLC) [®] for Laboratory Practitioners	April 17 - 18 September 25 - 26	2 2
Empower Chromatographic Data Management Software	Upon Request	3
Mass Spectrometry Courses		
Fundamentals of Liquid Chromatography Mass Spectroscopy (LC-MS/MS)	April 28 - 30 November 3 - 5	3 3
Peak Tracking & Co-elution Detection Using QDa & PDA Combined Mass & Spectral Data	Upon Request	2



Course	Date	Duration (Days)
Lab Water Purification Courses		
Lab Water for Clinical Systems	Upon Request	3
Microbiology Courses		
Microbiology Quality Control	Upon Request	2
Bio-Pharma Process Solutions	Upon Request	1
Genomics Courses		
Molecular Cytogenetic Testing Using Whole Genome Arrays	Upon Request	5
Whole Transcriptome Analysis Using Microarrays	Upon Request	4
Multiplexing Courses		
Luminex® Multiplexing for Biomarker	Upon Request	2
Fundamentals of Luminex Multiplexing Technology	Upon Request	2
Luminex® Multiplexing in Infectious Disease Testing	Upon Request	2
Luminex® Multiplexing in Oncology	Upon Request	2

Fundamentals of Inductively Coupled Plasma (ICP)

Course Code
PE 001

Course Dates
February 25-26, 2019
September 16-17, 2019

Duration
2 Days

Venue
GSC Training Center

Introduction

Fundamentals of ICP is a comprehensive course that comprises a study of basic emission theory, radial versus axial viewing, Optima™/Avio200 hardware, and Syngystix™ software. All lab experiments will be conducted on current models of the PerkinElmer ICP.

Who should attend?

- Novice users of ICP.
- Participants who wish to enhance their understanding of the instrumentation.
- Participants who wish to enhance their understanding of the basic theory.
- Participants with experience based only on routine work and wish to acquire a better understanding of Method Development and Parameter Optimization.

Topics Covered

- Theory of Atomic Emission.
- Plasma Performance.
- Identifying and Overcoming Interferences.
- ICP Components.
- Data Reprocessing.
- Radial vs. Axial Viewing.
- Method Development and Parameter Optimization.
- Background Correction.
- Quality Control.
- System Troubleshooting and Maintenance Procedures.

Affiliates:





Fundamentals of Flame Atomic Absorption

Course Code
PE 002

Course Dates
March 25-26, 2019
September 30-October 1, 2019

Duration
2 Days

Venue
GSC Training Center

Introduction

This comprehensive training course entails a study of basic Atomic Absorption theory. It provides analysts with the knowledge and skills required for optimizing and troubleshooting basic Flame Atomic Absorption. Laboratory exercises include experiments in controlling interferences, as well as procedures for developing methods. Syngistix™ software will also be covered.

Who should attend?

- Novice users of Flame Atomic Absorption.
- Participants who wish to enhance their understanding of the instrumentation.
- Participants who wish to enhance their understanding of the basic theory.
- Participants with experience based only on routine work and who wish to acquire a better understanding of Method Development and Parameter Optimization.

Topics Covered

- Theory of Atomic Absorption.
- Hardware Optimization and Calibration.
- Background Correction.
- Flame Emissions Analysis.
- Identifying and Overcoming Interferences.
- Setting up the Element Parameter File.
- System Maintenance Procedures.

Affiliates:



Fundamentals of Graphite Furnace Atomic Absorption

Course Code
PE 003

Course Dates
March 27-28, 2019
October 2-3, 2019

Duration
2 Days

Venue
GSC Training Center

Introduction

The Graphite Furnace Atomic Absorption training course includes a study of basic Atomic Absorption theory. It provides analysts with the knowledge and skills required for optimizing and troubleshooting basic Graphite Furnace Atomic Absorption. Laboratory exercises include experiments in controlling interferences, as well as procedures for developing methods. Syngistix™ software will also be covered.

Who should attend?

- Novice users of Graphite Furnace Atomic Absorption.
- Participants who wish to enhance their understanding of the instrumentation.
- Participants who wish to enhance their understanding of the basic theory.
- Participants with experience based only on routine work and who wish to acquire a better understanding of Method development and Parameter optimization.

Topics Covered

- Introduction to Graphite Furnace Atomic Absorption.
- Hardware Optimization and Calibration.
- Background Correction.
- Identifying and Overcoming Interferences.
- Matrix Modifiers.
- Setting up the Element Parameter File.
- Quality Control.
- System Maintenance Procedures.

Affiliates:





Fundamentals of Gas Chromatography

Course Code

PE 004

Course Dates

Upon Request

Duration

2 Days

Venue

GSC Training Center

Introduction

This training course introduces new users to Gas Chromatography(GC) instrumentation. It provides them with an orientation of the hardware and software, as well as the experimental requirements that enable successful operation of the system.

Who should attend?

- Novice users of GC.
- Participants who wish to enhance their understanding of the instrumentation.
- Participants who wish to enhance their understanding of the basic theory.
- Participants with experience based only on routine work and who wish to acquire a better understanding of Method Development and Parameter Optimization.

Topics Covered

- Basic Principles of GC.
- GC Hardware, gases, injectors, column installation, detectors etc.
- Set-up of GC and data handling for qualitative and quantitative analysis.
- Optimization of data handling parameters.
- Routine maintenance and simple troubleshooting.

Affiliates:



Fundamentals of Gas Chromatography/ Mass Spectrometry (GC/MS)

Course Code

PE 005

Course Dates

Upon Request

Duration

2 Days

Venue

GSC Training Center

Introduction

This module introduces new users of Clarus GC/MS to Gas Chromatography/Mass Spectrometry (GC/MS). It provides them with an orientation of the hardware and software, as well as the experimental requirements that enable successful operation of the system.

Who should attend?

- Novice users of GC/MS.
- Participants who wish to enhance their understanding of the instrumentation.
- Participants who wish to enhance their understanding of the basic theory.
- Participants with experience based only on routine work and who wish to acquire a better understanding of Method Development and Parameter Optimization.

Topics Covered

- Basic principles of GC/MS.
- Tuning the instrument.
- Developing a Clarus MS method for quantization and GC control method.
- Library searching.
- Routine maintenance and simple troubleshooting.

Affiliates:





Fundamentals of High Performance Liquid Chromatography (HPLC)

Course Code
LC 001

Course Dates
April 14-16, 2019
September 22-24, 2019

Duration
3 Days

Venue
GSC Training Center

Introduction

For decades, HPLC has been a powerful analytical technique that is applied in many different fields of study and in research labs, quality control and regulatory facilities in both the public and private sectors. This course will cover the origins, theoretical and instrumental aspects of operations and requirements for HPLC today. It will include a review of chromatographic terminology and will cover topics such as sample preparation, method development, detectors and some troubleshooting.

Who should attend?

- Novice users of HPLC.
- Participants with experience based only on routine work who wish to acquire a better understanding of qualitative analysis.
- Participants that wish to enhance their understanding of the instrumentation.
- Participants that wish to enhance their understanding of the basic theory and practical aspects of chromatography.

Topics Covered

- Review of chromatographic terminology retention & selectivity factor, plate count and efficiency of separation.
- Types of solvents and their properties: solvent polarity, selection and preparation of solvents for LC.
- Modes of chromatography, absorption (normal phase), theory and application.
- Factors affecting reverse phase LC.
- Detectors: Types of LC detectors and application.
- Sample preparation: clean up requirements, filtration, liquid extraction, GPC clean up and automated sample preparation.
- Method development: Selecting LC modes, ion suppression, ion pairing and ion exchange.
- Isocratic versus gradient elution.
- Start-up and shut down procedures.
- Column care and cleaning.
- Accessing projects and acquisition methods.
- Creating sample sets and running samples.
- Processing methods and background processing.
- Reviewing results and generating reports.
- Backing up and restoring data.
- Configuring chromatographic data systems.

Affiliates:

Waters
THE SCIENCE OF WHAT'S POSSIBLE.™

ACQUITY UPLC® for Lab Practitioners

Course Code

LC 002

Course Dates

April 17-18, 2019

September 25-26, 2019

Duration

2 Days

Venue

GSC Training Center

Introduction

This course explains how the ACQUITY UPLC® system combines new chemistry with advances in instrumentation to access increased speed, resolution and sensitivity in chromatographic analysis. Included in the course are exercises that familiarize participants with ACQUITY Console software, priming the instrument, running tests, sample preparation and method transfer.

Who should attend?

This course is for participants who intend to move beyond the limits of conventional HPLC and understand the chemistry, operating principles and user maintenance of the ACQUITY UPLC® system.

Topics Covered

- An introduction and global overview of UPLC.
- Understanding the differences between HPLC and UPLC.
- A brief refresher of HPLC and an in-depth look at UPLC chemistry.
- An overview of the ACQUITY UPLC system's hardware and configuration.
- Using the ACQUITY Console software for:
 - Priming the Binary Solvent Manager and Sample Manager
 - Calibrating the Sample Manager
 - Setting default parameters.
- Maintaining your ACQUITY UPLC System for optimal performance and reliability:
 - General troubleshooting techniques, including tips and tricks.
 - Utilizing Connections Insight with its Intelligent Device Management (IDM) technology.

Prerequisites

Participants must have a basic knowledge of the principles of HPLC.

Affiliates:

Waters

THE SCIENCE OF WHAT'S POSSIBLE.™



Empower Chromatographic Data Management Software

Course Code
EM 001

Course Dates
Upon Request

Duration
3 Days

Venue
GSC Training Center

Introduction

This instructor-led, hands-on computer course offers participants with comprehensive guidance, from log in to running samples through reporting. The course format includes exercises to reinforce topics covered, including teaching the user to efficiently acquire, process, and report chromatographic data using Empower. In addition, practical exercises are undertaken in the laboratory.

Who should attend?

The Empower software course is for new users who wish to build a strong foundation in the use of Empower software.

Topics Covered

- Empower overview: terminology; log-in window properties; Empower interfaces, including QuickStart, Pro, OpenAccess and Web.
- Utilizing Pro Interface: log-in; Empower software options; “Configure System” window:
 - Create a chromatographic system
 - Create a project
 - Backup and restore a project
 - Change project/ system
 - User account, user types, user groups, group administration
 - User privileges
 - Audit trials.
- “Browse Project” window.
- Photodiode Array (PDA) software option.
- Custom fields.
- Use of administrative features for productivity, including system policies and privileges; default string; acquisition serves and chromatographic system, etc.

Affiliates:

Waters
THE SCIENCE OF WHAT'S POSSIBLE.™

Prerequisites

- Participants must have at least three months of experience with Empower software.
- Participants are required to review mandatory course materials in advance of the course commencement date.

Fundamentals of Liquid Chromatography - Mass Spectrometry (LC-MS/MS)

Course Code

MS 001

Course Dates

April 28-30, 2019

November 3-5, 2019

Duration

3 Days

Venue

GSC Training Center

Introduction

This course provides information on how to make an effective transition from traditional HPLC detectors to MS detectors. It covers current ionization techniques and mass analyzers, as well as how to convert existing HPLC methods for use with MS detectors. Practical examples guide users on how to modify the HPLC separation to make them suitable for MS detection.

Who should attend?

This course is designed for users and technicians of the operation of the Tandem Quadrupole Mass Detector (TQD).

Topics Covered

- Overview of Mass Spectrometry.
- Selecting an appropriate MS ionization technique.
- Overview of Mass Analyzer.
- Conversions of established HPLC methods for use with an MS detector.
- Instrument overview: RF and Quadrupole Theory Mass Resolution API techniques (ESI, APCI, AESCI, APPI).
- Instrument Calibration and Optimization: A guide for instrument tuning; setup and calibration in MS and MS/MS modes (ESI and APCI); cone voltage and collision energy optimization; and instrument thresholding.
- Instrument Set-up: MS console, smart start fluidics, autotune, autocalibration, system check and diagnostics.
- Data Acquisition with MassLynx: full scan, product ion and precursor ion scans. Choice of acquisition parameters: SIR, MRM, and CNL acquisitions.
- Flow Injection Analysis.
- Data Processing using MassLynx.
- HPLC coupling: choice of solvents and additives Isocratic vs. Gradient methods Column Temperature Column Dimensions.
- Quantification with MassLynx: QuanOptimise QuanLynx Browser.
- General User Maintenance.

Affiliates:

Waters

THE SCIENCE OF WHAT'S POSSIBLE.™

Prerequisites

Participants have abasic knowledge of the principles of liquid chromatography, as well as TQD Mass Spectrometer with at least 6 weeks of experience on the instrument, along with familiarity with MassLynx software.



Peak Tracking & Co-elution Detection Using QDa & PDA

Course Code
MS 002

Course Dates
Upon Request

Duration
2 Days

Venue
GSC Training Center

Introduction

This course is designed to address some of the challenges faced during the method development phase. Multiple detectors can be used for analysis of a single sample with each detection technique dependent on a different physical or chemical property of the molecule. Combining detector responses into a single software interface allows streamlined data analysis in a simplified platform.

Who should attend?

This course is for participants who intend to move beyond the limits of conventional HPLC in method development by adding mass spectrometry for peak tracking and co-elution detection.

Topics Covered

- Overview of ACQUITY UPLC H-Class system with Auto-Bend Plus™.
- Overview of ACQUITY UPLC PDA Detector & QDa detectors.
- The challenges of peak tracking and co-elution detection using only PDA spectral information.
- Using combined Mass & PDA spectral data for easy peak tracking and co-elution detection.
- Empower® 3 FR3 Software for data interpretation.

Prerequisites

Participants must possess basic knowledge of the principles of HPLC.

Affiliates:

Waters
THE SCIENCE OF WHAT'S POSSIBLE.™

Lab Water Purification for Clinical Systems

Course Code

MM 001

Course Dates

Upon Request

Duration

3 Days

Venue

GSC Training Center

Introduction

This training course is designed for professionals who aim to learn the basic principles of clinical lab water purification systems, trouble shooting, quality control and maintenance. It will provide participants with successful and reliable operations of Lab Water units and overall laboratory productivity.

Who should attend?

- Biomedical engineers and end-users in hospitals and clinics using Millipore Elix or AFS water purification systems connected to clinical analyzers.
- Engineers of clinical analyzers companies.

Topics Covered

- Water chemistry, contaminants and purification technologies.
- Pre-Installation and site preparation.
- Installation and operational training.
- Troubleshooting, diagnostics and use of Field Service Software.
- Common troubleshooting scenarios and emergency bypass techniques.
- Bacterial and product quality monitoring procedures.
- Consumables replacement.
- Preventive maintenance procedures.
- Common troubleshooting scenarios and emergency bypass techniques.
- Consumables replacement.

Prerequisites

Participants are required to have background knowledge of in clinical equipment and their requirements.

Affiliates:





Microbiology Quality Control

Course Code
MM 002

Course Dates
Upon Request

Duration
2 Days

Venue
GSC Training Center

Introduction

Microbiology Quality Control is a two-day course that provides an in-depth review of regulatory requirements for the microbiological testing of pharmaceutical products, water, beverages and soft drinks, its validation and practical implementation.

As an essential part of the course, trainees will participate in an interactive workshop on how to perform a membrane filtration test. Participants' case studies will also be discussed. In addition, GSC's expert instructors will also provide valuable suggestions for regulatory compliance.

After completing the course, participants will gain a better understanding of the current requirements for microbiological testing of filterable solutions in accordance with regulations. Participants will also become familiar with sufficient testing procedures from method development and validation to routine test results interpretation.

Who should attend?

This course is designed for quality control, quality assurance or regulatory affairs personnel overseeing the performance of bacteriological testing of pharmaceuticals, water, soft drinks, a variety of beverages, and all filterable solutions.

Topics Covered

- Liquid and air sampling (environmental monitoring) based on the principle of Andersen Air Sampler (MAS-100® Family).
- Using ATP technology, the best method- available for measuring hygiene and cleaning in seconds (HY-LiTE® System).
- False positive test results.
- False negative test results.
- Optimizing membrane filtration testing procedures.
- Use of membrane filtration and air sampler hardware.
- Demonstration of complete microbiological testing of water, pharmaceuticals, soft drinks, and other beverages.
- Answers to specific user-related questions.
- Sterility testing for pharmaceutical products.

Affiliates:

MERCK

Bio-Pharma Process Solutions (BPS)

Course Code

MM 003

Course Dates

Upon Request

Duration

1 Day

Venue

GSC Training Center

Introduction

Bio-Pharma Process Solutions is a one-day course that provides thorough preparation and follow up that will ensure the end-user tests the appropriate filter(s) for applications in order to achieve the most accurate results.

Who should attend?

This course is designed for production departments' personnel, as well as quality assurance and regulatory affairs personnel overseeing the performance of sterile and non-sterile filtration of pharmaceuticals, water, soft drinks, a variety of beverages, and all filterable solutions.

Topics Covered

- Integrity testing principles- run IT4 demonstration.
- Hands-on filtration and sampling (Vmax).
- Product offerings (clarification; pre-filtration; sterile filtration).

Objectives

- Understanding Vmax methodology.
- Handle Vmax trails independently.
- Provide an adapted sizing.
- Introduction to filtration and integrity testing, as well the basics of integrity testing filters.

Affiliates:





Molecular Cytogenetic Testing Using Whole Genome Arrays

Course Code
LS 001

Course Dates
Upon Request

Duration
5 Days

Venue
GSC Training Center

Introduction

This course provides a practical demonstration of the molecular cytogenetic workflow using the most advanced whole genome array from Applied Biosystems (formerly Affymetrix)– the CytoScan HD. Participants will have the opportunity to perform molecular cytogenetics, molecular genetics, and discusses important medical aspects of cytogenetic testing, as well as how to analyze and interpret generated microarray data.

Who should attend?

The course is designed for all scientists and researchers of medical science, biological science, genetics, bioinformatics, biotechnology, and other related fields. Participants must possess a basic knowledge of molecular biology.

Topics Covered

- Introduction to microarray technology.
- Features of the CytoScan microarray.
- Hands-on demonstration of the CytoScan workflow.
- Microarray data analysis.

Prerequisites

Participants should have a basic background in genetics, cell biology and biochemistry, as well as molecular biology.

Affiliates:

**applied
biosystems**

Authorised Distributor

Whole Transcriptome Analysis Using Microarrays

Course Code

LS 002

Course Dates

Upon Request

Duration

4 Days

Venue

GSC Training Center

Introduction

This course provides a practical demonstration of the whole transcriptome analysis using the latest gene expression arrays from Applied Biosystems (formerly Affymetrix)- the Human Transcriptome Array (HTA). Participants will have the opportunity to learn first-hand how to perform whole transcriptome arrays, as well as how to analyze and interpret generated microarray data.

Who should attend?

The course is designed for all scientists and researchers in medical science, biological science, computer science, bioinformatics, biotechnology and related fields. Participants must possess a basic knowledge of molecular biology.

Topics Covered

- Introduction to the microarray technology.
- Features of the HTA microarray.
- Hands-on demonstration of the HTA workflow.
- Microarrays data analysis.

Prerequisites

Participants should have a basic background in genetics, cell biology and biochemistry, as well as molecular biology.

Affiliates:

**applied
biosystems**

Authorised Distributor



Luminex® Multiplexing in Biomarker

Course Code

LS 003

Course Dates

Upon Request

Duration

2 Days

Venue

GSC Training Center

Introduction

This course demonstrates the benefits of Luminex multiplexing for the identification of biomarker and protein analysis. Luminex multiplexing instruments offer the only solution for applications requiring both high density and high throughput for up to 500 analytes at the same time. In addition to the basic operational training on the Luminex 200 instrumentation, participants will also receive hands-on training for the Immunology panel developed by one of the most notable Luminex partners, Millipore.

Who should attend?

This training course is ideal for both novice, as well as experienced users of Luminex technology and will allow them to introduce Luminex for Biomarker research.

Topics Covered

- Define key terms;
- Define components of the Luminex 200 systems.
- Describe the optics and fluidics processes of the Luminex 200.
- Explain xPONENT 3.1 features, benefits, compatibilities, and upgrades.
- Perform and explain system initialization.
- Perform system calibration and verification.
- Perform the daily shutdown routine.
- Demonstrate how to generate a protocol.
- Demonstrate how to create, run, and replay a batch.
- Explain the preventative maintenance schedule, and demonstrate how to generate reports.
- Discuss the function of key xPONENT commands.
- Discuss protein applications of Luminex technology,
- Describe the protein assay development workflow,
- Explain protein coupling chemistry, and perform protein coupling reactions.
- Explain Milliplex features, benefits, compatibilities, and upgrades.
- Explain the steps of developing a capture sandwich assay, and perform a capture sandwich assay.
- Discuss tips for developing protein assays.
- Analyze assay data using the quantitative function in xPONENT and Milliplex.
- Discuss assay results.

Affiliates:

Luminex®

Prerequisites

Participants should have basic knowledge in genetics, cell biology and biochemistry, as well as molecular biology.

Fundamentals of Multiplexing Technology

Course Code

LS 004

Course Dates

Upon Request

Duration

2 Days

Venue

GSC Training Center

Introduction

This training course offers an introduction into the world of Luminex multiplexing, as well as a basic operational training on the most popular Luminex platform, the Luminex 200. Participants will have the opportunity to familiarize themselves with the fundamentals of patented Luminex multiplexing in conjunction with the hands-on training on how to operate the Luminex 200 instrument and xPONENT 3.1 software.

Who should attend?

This training course is ideal for both novice and experienced users of Luminex technology who want to learn how to use Luminex 200 instrumentation and the new Exponent 3.1 Software. Furthermore, the participants of this course will get hands-on experience on how to run multiplex molecular diagnostics tests developed by Luminex.

Topics Covered

- Introduction to the Luminex Technology.
- Features of Luminex 200 instruments.
- Introduction to the Luminex Data acquisition software xPONENT 3.1.
- Practical demonstration on how Luminex 200 operates:
 - Probe height adjustments
 - Daily start up
 - Calibration/Verification
 - Creating a protocol
 - Creating and running a batch
 - Data analysis
 - Daily shut down.

Prerequisites

Participants must have a general knowledge of molecular biology.

Affiliates:

Luminex®



Luminex® Multiplexing in Infectious Disease Testing

Course Code
LS 005

Course Dates
Upon Request

Duration
2 Days

Venue
GSC Training Center

Introduction

This course demonstrates the benefits of Luminex multiplexing in the screening of infectious diseases in a clinical setting. In addition to the basic operational training on the Luminex 200 instrument, participants of this course will also receive a hands-on training for one of the following two molecular diagnostic panels developed by Luminex: Gastrointestinal Pathogen Panel (GPP); OR Respiratory Virus Panel (RVP).

Who should attend?

This training course is ideal for novice as well as experienced users of Luminex technology and will allow them to introduce Luminex for clinical testing, as well as expand on current testing portfolio.

Topics Covered

- Introduction to the Luminex Technology.
- Features of Luminex 200 instruments.
- Introduction to the Luminex Data acquisition software xPONENT 3.1.
- Practical demonstration on how Luminex 200 operates:
 - Probe height adjustments
 - Daily start up
 - Calibration/Verification
 - Creating a protocol
 - Creating and running a batch
 - Data analysis
 - Daily shut down.

Practical demonstration of molecular diagnostic test developed by Luminex:

- Laboratory requirements for multiplexing testing
- Sample preparation
- Multiplex PCR set up, run and clean up
- ASPE reaction
- Bead hybridization
- Sample acquisition on Luminex 200
- Data analysis.

Affiliates:

Luminex®

Prerequisites

Participants must have a basic background in genetics, cell biology and biochemistry, as well as molecular biology.

Luminex® Multiplexing in Oncology

Course Code

LS 006

Course Dates

Upon Request

Duration

2 Days

Venue

GSC Training Center

Introduction

This course demonstrates the benefits of Luminex multiplexing for the identification of chromosomal aberrations related to cancer. In addition to the basic operational training on the Luminex 200 instrumentation, participants will also receive a hands-on training for the Leukemia Translocation (LTx) panel developed by one of the most notable Luminex partners, Asuragen.

Who should attend?

This training course is ideal for novice as well as experienced users of Luminex technology and will allow them to either introduce Luminex for clinical testing or expand on current testing portfolio.

Topics Covered

- Introduction to the Luminex Technology.
- Features of Luminex 200 instruments.
- Introduction to the Luminex Data acquisition software xPONENT 3.1.
- Practical demonstration on how Luminex 200 operates:
 - Probe height adjustments
 - Daily start up
 - Calibration/Verification
 - Creating a protocol
 - Creating and running a batch
 - Data analysis
 - Daily shut down.

Practical demonstration of molecular diagnostic test developed by Luminex:

- Laboratory requirements for multiplexing testing
- Sample preparation
- Multiplex PCR set up and run
- Bead hybridization
- Sample acquisition on Luminex 200
- Data analysis.

Affiliates:

Luminex®

Prerequisites

Participants should have a basic background in genetics, cell biology and biochemistry, as well as molecular biology.



Terms & Conditions

Confirmation

Upon your request, Gulf Scientific Corporation will issue a quotation. Upon registration and payment, you will receive an invitation for training from GSC. If the course date you have selected is unavailable, you will be offered an alternative date.

Payment terms: 100% advance.

Cancellation

100% of course fees will be applicable if the registrant cancels up to one month prior to course commencement.

Accommodation or Transportation

Course fees do not include overnight accommodation and transportation. However, GSC may facilitate accommodation arrangements at a recommended hotel nearby the training center, as well as transportation to our training center in Dubai subject to availability and additional fees.

Visa Requirements

GSC may assist with the visa issuance process. Kindly note that we will require one recent passport sized photograph in color, as well as a colored copy of your valid passport in order to proceed with visa issuance arrangements. GSC cannot be held responsible for visa delays or rejections.

Please contact the GSC Training Center for further details.

Registration Contacts:

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●●●●●●●●
**Serving the Scientific
Community** since **1990**
●●●●●●●●

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