Training on Multivariate Data Analysis (MVA) and Design of Experiments (DoE) - Chemometrics & Spectroscopic Applications

July 05-07, 2010
Singapore, Singapore

Why Multivariate Analysis and DoE Training?
Tailored to meet the needs of professionals and students, each course is designed around real-world industry applications of chemometrics and multivariate analytical methods, with intensive, hands-on training using latest software tools.

Carefully selected course exercises and application examples provide students with Theory-to-Skills Building knowledge transfer, enabling them to achieve proficiency in applications development. CAMO training courses are taught by experts in the fields of Multivariate Statistics, Chemometrics, Spectroscopy and Process Analytical Technology Solutions (PAT).

Course participants will learn how to interpret complex data quickly and confidently using most modern multivariate techniques. With a non-mathematical approach, our participants can quickly and safely start using the methods in their own work to optimize, classify or predict products and processes.

Who should participate in this program?
The courses have been designed for individuals:
- Involved in R&D, product development, process optimization, quality control & monitoring
- Working or likely to work with spectroscopic instruments (NIR, FTIR, UV, UV/VIS, NMR, Raman, Mass Spectroscopy), chromatography instruments (LC, GC) and other sources of multivariate data as part of laboratory, R&D, quality control or production processes
- Professional engineers and managers involved in pharmaceutical drug product manufacturing and development, Process Analytical Technology (PAT), quality assurance and regulatory affairs
- No prior knowledge of The Unscrambler® is required to attend our courses.

CAMO has more than 20 years experience in providing multivariate data analysis software, products and solutions. A recognized name in the chemometrics software domain, CAMO software solutions help clients understand the knowledge hidden inside data.

This integrated course has been designed to give participants a strong foundation in the basics and fundamentals of Multivariate Data Analysis and DoE. The course combines theoretical studies and practical workshops, ensuring that each participant gets individual focus, and understands the practical uses of MVA & DOE applications in R&D, Product Development, PAT, Laboratory, Quality Control & Assurance and Consumer Insights. Numerous real world data sets will be analyzed during the course.

www.camo.com
Register Now
Course Details

Multivariate Analysis Level - 1

- The world is multivariate – Introduction to multivariate data modelling
- When are multivariate methods useful?
- Principal Component Analysis (PCA)
- Multivariate regression:
  - MLR - Multi Linear Regression
  - PCR - Principal Component Regression
  - PLS - Partial Least Squares
- Relevant data collection
- Multivariate modelling step by step
- Pretreatment and scaling
- Detecting and dealing with outliers
- Calibration, validation
- Prediction
- The different validation methods
- Basic rules for successful data analysis

Design of Experiments

- What is Experimental Design?
- Experimental Design in R&D projects
- Screening Designs Optimization Designs and their analysis
- Experimental Design and PCA
- From screening to optimization
- Designs for product and process optimization
- Multivariate Analysis of Data collected on the basis of Experimental Designs

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1st Day: 10.00 - 17.00
2nd Day: 09.00 - 17.00
3rd Day: 09.00 - 17.00

Register Now

Suresh Kumar BV
Chemometric Consultant, CAMO Software

Suresh Kumar, has an M.Sc. in Physical Chemistry. A chemist by profession, Suresh has more than 10 years of experience in the Quality Control, Analytical Research & Development divisions of Food, Pharmaceuticals, Analytical Instruments Manufacturing, with emphasis on multivariate data analysis & calibration. Suresh has acquired hands on experience in operation, calibration and validations of sophisticated analytical instruments such as HPLC, GC, FT-IR, Near Infrared (NIR) and other Spectroscopic and Electro Analytical Techniques. Suresh is familiar with latest Regulations like PAT (Process analytical Technologies – A Sub Group of USFDA) for Complete Process Monitoring Validation methods. He is well-versed with cGLP and cGMP Guidelines. Suresh has specialized in providing training of multivariate data analysis in research and industrial applications.

Venue

National University of Singapore (NUS)
Singapore

Industry: SGD 1400 + tax | Academic: SGD 1120 + tax

Bulk discount of 10% for more than 3 participants from the same organization.
10% discount for existing user license under maintenance.

The course fee includes course material, coffee / tea and lunch. It also includes a free 30-day test installation of The Unscrambler® X to be able to apply the methods right away in your own area of work. Individual personal computer will be organized for practical exercises during training.

- The number of seats for the course is limited to 10
- Deadline for registrations: 2 weeks before the course start
- Payment: Along with registration

Cancellation/Substitution: Cancellations up to 2 weeks before the start date of the course will be refunded with 50% of the registration fee. Cancellations made less than 2 weeks before the start date of the course will not be refunded. The course participants may be substituted provided that Camo is notified.

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Bhanu Prakash:
E-mail: bhanup@camo.co.in
**Public Training Registration Form**

**Topic**
Multivariate Data Analysis (MVA) and Design of Experiments (DoE)  
- Chemometrics & Spectroscopic Applications

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**Industry Price**  
SGD 1400 + tax

**Academic Price**  
SGD 1120 + tax

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