

### **Gasoline and Diesel Blending Course**

#### **Duration**

Three classroom days: NOVEMBER 7 to 9, 2017 (NEW YORK CITY)



#### **Summary**

This three-day course is designed for traders, independent blenders and terminal operators, and fuels marketers, and provides a comprehensive overview and discussion of gasoline and diesel blending aspects relevant to traders. It addresses contemporary issues such as the latest specifications, ultra low sulfur fuels, impact of bio-fuels, Ethanol and bio-diesel blending, and environmental impact of various fuel specifications. Case studies are used to illustrate the relative importance of each aspect of the gasoline and diesel blending operation, together with specific exercises. The course is filled up with of plenty exercises and simulation of real cases (hands-on). Attendees will also receive blending exercises software that could be useful later in their work. Participants should bring a laptop, with Microsoft Excel Solver add-in installed, to course.



# **FREE**

800+ pages Gasoline & Diesel Blending Coursebook 35+Blending Programs and Exercises Gasoline Blending Optimizer Program (Demo) Diesel Blending Optimizer Program (Demo) Blending Components Data Base Gasoline and Diesel Specifications Catalogs And more....

This is the most comprehensive fuel blending training available in the world.

# Register Today!

#### Who Should Attend

- Fuel and Blend Component Traders
- Independent Blenders
- Terminal Operators
- Biofuel Producers/Traders/Blenders
- Market/Research Analysts
- Marketing Managers
- · Policy Makers/Legislators

#### Course Agenda

#### DAY ONE

- 1. Blending and Traders: Special Considerations
- 2. Primary and Secondary Importance Properties, and Their Significance
- 3. Spec Differences between Conventional, CBOB, RBOB and Oxigenated Gasolines
- 4. Typical Blending Components and Their Properties
- 5. The Relative Effect of Blend Component Properties on Changing Octane, RVP, T50
- 6. Blend Component and Finished Product Pricing
  - a. Internal cost of production
  - b. Commercial Pricing Basis: Component Properties Effects on Prices
  - c. Comparing Blend Component "Internal" Cost vs. Use of Market Prices



#### **DAY TWO**

- 1. Blending as "Arithmetic of Prices and Properties"
  - a. Linear vs. Non-Linear Blending: Why Bother?
  - b. Recipe Change Impact on Blend Prices While Meeting Specs
  - c. Recipe Change Impact on Blend Properties
  - d. What is a BLEND OPTIMIZER, and Why You Should Use One
- 2. What is Price, What Is Profit?
  - a. What Enters in Price and Profit Calculations
  - b. Gross Profit vs. Actual Profit
- 3. How Do We Evaluate and Compare Blendstocks Based on Properties and Price
  - a. To Buy
  - b. To Use
- 4. Ethanol Blending
  - a. Boost of Octane, RVP, and Depression of T50
  - b. Neat Specs (without Ethanol) and Specs After Addition
  - c. Impact on High Octane Components and Prices (e.g. Reformer Severity)

#### DAY THREE

- 1. Diesel Blending
  - Blend Components, Properties, and Prices Calculations
  - Diesel No-Linear Properties Calculations
  - Bio-Diesel vs. Renewable Diesel: What's the Difference
  - Diesel Lab test precision and blend targets

#### THROUGHOUT THE 3 DAYS

#### Hands-on Exercises

- Volumetric Blend Calculator for Gasoline, Diesel, Ethanol blends
- Non-Linear Property Calculators
- Blend component and off-specs price calculator
- Gasoline Blend Optimizer
- Diesel Blend Optimizer
- Ethanol property boost calculator

#### Reference Material Review

- a. Product Spec Books
- b. Market Price Bulletins
- c. Data Base of Blend Components
- d. Various Legislation (EPA, RFS, etc).
- e. List of Blending-related URL's



#### Instructors



Ara Barsamian is President of Refinery Automation Institute, LLC, a blending advisory services company, and a Director of the world-wide Blending Users Group (BUG). He has over forty years of experience with gasoline blending, diesel blending, and oil movements & storage tank farm automation. Previously, he was with EXXON Research and Engineering Company, 3X, and ABB, where he developed standard pre-packaged and skid-mounted in-line blending control and optimization systems, and pioneered the use of NIR on-line analyzers, neural network inferential property predictors, and statistical non-linear blend optimizers. He has published over 100 articles and conference papers related to blending process technology, troubleshooting, and project management. He received BS. and MS (Engineering) degrees from City University of New York and is a member of ASTM, IBIA, ISA, and AIChE.



Lee Curcio is a chemical engineer and Vice president at RAI. He has worked with RAI for the past three years in the areas of gasoline, diesel, bunker blending, ethanol nonlinear property correlations and octane boost, and naphtha and butane blending. He also teaches the gasoline, diesel, bunker blending optimization section of RAI's Blending public course. He worked previously at Catholic University of Louvain in advanced modeling and optimization. He holds BS and MS degrees in chemical engineering with high honors from University of Calabria, Italy.

#### **Course Dates and Venue**

November 7 to 9, 2017 New York City, USA

The early bird fee is \$ 3199 (if you register before October 20th, 2017): click here to register

The late fee is \$ 3399.

Refinery Automation Institute provides: Breakfast, Lunch, Mid-Morning and Mid-Afternoon meals.

The venue is located in the heart of New York City, a few steps from Time Square.

The address is: AMA Executive Conference Center, 1607 Broadway, New York, NY, 10019. Tel. +1 212-903-8060.

If you are attending the course, AMA has preferred hotel rates. Click here for more info



## COURSE SYLLABUS



### **Available for In-House Group Delivery**

Yes, please call Lee Curcio +1-(203) 945-7854 or email <u>lee@refautom.com</u> for a detailed proposal.