

Minnesota Chromatography Forum Presents...

# Introduction to High Performance Liquid Chromatography

October 4<sup>th</sup>-6<sup>th</sup>, 2011

## *Presenting MCF's three-day workshop in beginning HPLC!*

It's time again for the MCF's three day workshop in Beginning High Performance Liquid Chromatography!! This workshop will provide introductory training in HPLC and its application to practical industrial and laboratory analytical problems. A full day of hands-on training is included with instrumentation provided by local vendors.

Instructors: Dr. David Johnson (3M) and Dr. Larry Felice (Surmodics)

Date/Time: October 4<sup>th</sup>-6<sup>th</sup>, 2011; 8:00am ~ 4:00pm

Location: University of Minnesota, Saint Paul Campus  
Earle Brown Continuing Education Center – **Room 166**  
1890 Buford Avenue

### Day One

- I. Introduction
- II. Chromatographic Theory
- III. Column Chemistry
  - A. Background
  - B. Instrumentation
  - C. Modes of Chromatography
  - D. Solvents
  - E. Column Misc.
- IV. System Concerns (Practical)
  - A. Column Considerations and Care

### Day One Cont'd

- B. Solvent Selection and Use
- C. Plumbing/Fittings
- D. Detectors
- E. Sample Concerns
- F. Injection Misc.

### Day Two

Laboratory Exercises

### Day Three

- I. Post-Lab Discussion
- II. Sample Prep

### Day Three Cont'd

- III. Signal Processing
- IV. Methods Development
- V. Maintenance
- VI. Troubleshooting
- VII. Column Survey
  - Traditional Si-based Bonded Phases
  - Non-traditional Si-based Bonded Phases
  - Non-Si-based Columns

Lunch, as well as refreshments for morning and afternoon breaks, are provided each day. Please note any dietary restrictions on your registration form!

Parking is available in nearby pay lots (Lots S-104 and S-108, cash or check only).

Visit <http://www1.umn.edu/twincities/maps/CECC/> for more information about the location, available parking and to map directions from your location!

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## Meet the Instructors...

**Dr. David Johnson** received his B.S. in chemistry from the University of Minnesota in Minneapolis, and his Ph.D. in analytical chemistry from the University of Arizona in Tucson. After completion of his schooling, he began his career in industry with 3M. He worked in the 3M Corporate Research Laboratory Separations Group developing methods and doing general problem solving with various separation technologies including LC, GC, CE, and SPE. In addition, he performed research into novel sorbent systems and applications for SPE. Subsequently, he joined the Intellectual Properties and Competitive Analysis group whose mission is to protect 3M's intellectual property interests through scientific inquiry. After managing various groups in 3M's Corporate Analytical and Corporate Process Laboratories, he returned to the bench where he is now group leader of the Competitive and Litigation Analysis group in 3M's Corporate Research Analytical lab. In addition to his work at 3M, Dr. Johnson has served as an adjunct professor with the St. Paul Technical College, and an instructor in 3M's STEP program - a science encouragement outreach program for St. Paul high school students.

**Dr. Larry Felice** received his B.A. in chemistry from Queens College, New York, and his Ph.D. in analytical chemistry from Purdue University. He also completed a fellowship in environmental toxicology at Vanderbilt University. Dr. Felice began his career as a research scientist in the Environmental Chemistry Section at Batelle, N.W. in Richland, Washington. In 1984 he accepted the position of Assistant Professor at the University of Minnesota in the Department of Veterinary Diagnostic Medicine, and in 1990 received a promotion to Associate Professor of Analytical Toxicology. In these positions, he performed grant- funded research on veterinary toxicology, taught professional and graduate courses in toxicology, and advised graduate students. From 1995 to 2004, Dr. Felice directed an R&D group at Medtox Laboratories, responsible for the development of assays for the measurement of drugs in biological samples using HPLC, GC/GC/MS and LC/MS/MS. Currently, Dr. Felice is a Senior Chemist at Surmodics, where he is involved in the development of polymer coatings for medical device applications and polymer based drug delivery systems. Dr. Felice is the recipient of the 2008 Palmer Award, for his contributions to chromatography and the Minnesota Chromatography Forum.

For **registration information and questions** contact Jan Jopke at (952) 934-5082 or [ccsevents@comcast.net](mailto:ccsevents@comcast.net)  
For **course content information** contact Dr. David Johnson at [ddjohnson@mmm.com](mailto:ddjohnson@mmm.com)

To register for the course, please complete **ALL SECTIONS** of the form below and send it with a check for \$750 payable to the Minnesota Chromatography Forum. Major credit cards accepted.

**Mail to:**  
Minnesota Chromatography Forum  
c/o CCS Associates  
6611 Countryside Drive  
Eden Prairie, MN 55346

**or FAX to:** (952) 934-6741

**Deadline for Registration: September 27<sup>th</sup>, 2011**  
**Class size is limited! Register early!!**

Name, Title: \_\_\_\_\_  
Institution or company: \_\_\_\_\_  
Street Address: \_\_\_\_\_  
City, State, Zip Code: \_\_\_\_\_  
Telephone/FAX: \_\_\_\_\_  
e-mail Address: \_\_\_\_\_  
Credit Card: \_\_\_\_\_ exp \_\_\_\_\_

**Dietary Restrictions?** Vegetarian \_\_\_\_\_ Other(explain) \_\_\_\_\_ (Advance order required)

**Cancellation Policy:** Refunds (minus a 10% administration fee) will be issued for cancellations prior to the registration deadline. Refunds for cancellations made after the deadline will be made only if the spot is filled with another student.

**\*Note:** If confirmation is not received within 10 business days, contact Jan at (952) 934-5082 or [ccsevents@comcast.net](mailto:ccsevents@comcast.net)