

Course Tuition		
	Standard Course Tuition	\$1700
	"Early Bird" Discount (prior to March 1, 2023)	\$1600
	Multiple Participants Discount (2 or more participants from the same company)	\$1575
	Full Time Graduate Student (Advisor letter certifying full time status must accompany registration)	\$1150
	1 Day Registration	\$850

FEE FOR UNIVERSITY HOUSING AND ON CAMPUS PARKING
Farrington Square Suite to be shared with 2 other participants each with own room in suite

University Housing Fees (\$65/person/night)		
Arrival Date & Time:	Departure Date:	
Number of Nights:	Roommate Request:	
Housing Total Costs (= # of days x \$65/person/night)		
University Parking Fees for On Campus Housing (\$10/car/day)		
Arrival Date:	Departure Date:	
Number of Days:		
Parking Total Costs (= # of days x \$15/car/day)		
University Parking for people living off campus: Zoellner Garage** June 5-9, 2023 (no daily fee available)		\$75
Registration, Housing & Parking: Total Cost		
**All participants parking on Lehigh's campus will be asked to complete a 1 page parking permit information sheet and also provide a copy of their car registration or rental car contract. After a participant has registered for parking, Debra Nyby will send a follow up email with the one page parking permit form to complete prior to coming to campus, which will ensure the check in process will be streamlined..		

Payment Options

Check will be sent with a copy of this registration form
(Please make check payable to: Lehigh University)

Please send an invoice to:

NOTE: To pay by credit card visit course website:
<http://wordpress.lehigh.edu/inadvemu/>

Refund requests received before May 1, 2023 will be honored in full. After May 1st, there will be a processing charge of \$850 deducted for meeting cancellation and a processing charge of one night (\$65.00) will be deducted for housing cancellations. Please note: Individuals who cancel and are assessed the \$850.00 cancellation fee will be provided with a set of the Short Course Notes.

We would greatly appreciate it if you could check the box below indicating how you learned about this Short Course. Thank you very much for your input.

A Colleague in my company

Previous Attendee

Trade Association

Other (please indicate source): _____

2023 Short Course Schedule

Monday, June 5, 2023

7:00 A.M. – 8:00 A.M. COURSE REGISTRATION

Rauch Business Center 291/292/293

8:00 A.M. – 9:30 A.M. Lecture 1

Free Radical Polymerization Mechanisms and Kinetics (F. Joseph Schork)

9:30 A.M. – 9:45 A.M. Coffee Break

9:45 A.M. – 11:15 A.M. Lecture 2

Emulsion Polymerization Mechanisms and Kinetics (F. Joseph Schork)

11:15 A.M. – 11:30 A.M. Coffee Break.

11:30 A.M. – 1:00 P.M. Lecture 3

Branching and Grafting in Emulsion Polymerizations (Peter A. Lovell)

1:00 P.M. – 2:00 P.M. Lunch

Rauch Business Center 291/292/293

2:00 P.M. – 3:30 P.M. Lecture 4

The Role of Surfactants in Emulsion Polymerization and Kinetics

(Mohamed S. El-Aasser)

3:30 P.M. – 3:45 P.M. Coffee Break

3:45 P.M. – 5:15 P.M. Lecture 5

Semi-Continuous Emulsion Polymerization and Structured Latexes

(Michael F. Cunningham)

Tuesday, June 6, 2023

8:00 A.M. – 9:30 A.M. Lecture 6

Colloidal Stabilization and Destabilization Mechanisms of Latex Systems

(Mohamed S. El-Aasser)

9:30 A.M. – 9:45 A.M. Coffee Break

9:45 A.M. – 11:15 P.M. Lecture 7

Characterization of Latex Particle Size and Particle Size Distribution:

Experimental Methods (Andrew Hollingsworth)

11:15 A.M. – 11:30 A.M. Coffee Break

11:30 A.M. – 1:00 P.M. Lecture 8

Correlation Between Colloidal Structure and Application Properties of

Acrylic Latexes (Bernd Reck)

1:00 P.M. – 2:00 P.M. Lunch

Rauch Business Center 291/292/293

2:00 P.M. – 3:30 P.M. Lecture 9

Inverse Emulsion Polymerization (Donna Visioli)

3:30 P.M. – 3:45 P.M. Coffee Break

3:45 P.M. – 5:15 P.M. Lecture 10

Latex Film Formation (Peter A. Lovell)

Wednesday, June 7, 2023

8:00 A.M. – 9:30 A.M. Lecture 11

Miniemulsions: Latex Systems via Polymerization in Monomer Droplets and

Direct Emulsification of Polymer Solutions (Mohamed S. El-Aasser)

9:30 A.M. – 9:45 A.M. Coffee Break

9:45 A.M. – 11:15 P.M. Lecture 12

Living Radical Polymerization and Advances in Future directions for

Emulsion Polymers/Polymer Colloids (Michael F. Cunningham)

11:15 A.M. – 11:30 A.M. Coffee Break

11:30 A.M. – 1:00 P.M. Lecture 13

Nonaqueous Colloids: Physics and Applications (Andrew Hollingsworth)

1:00 P.M. – 2:00 P.M. Lunch

Rauch Business Center 291/292/293

Wednesday, June 7, 2023 continued

2:00 P.M. – 3:30 P.M. Lecture 14

Latex Rheology (Cesar A. Silebi)

3:30 P.M. – 3:45 P.M. Coffee Break

3:45 P.M. – 5:15 P.M. Lecture 15

Sensors and Controls for Emulsion Polymerization Reactors

(F. Joseph Schork)

Thursday, June 8, 2023

8:00 A.M. – 9:30 A.M. Lecture 16

Reactor Design and Scale-up in Emulsion Polymerization

(Michael F. Cunningham)

9:30 A.M. – 9:45 A.M. Coffee Break

9:45 A.M. – 11:45 A.M. Lecture 17

Fundamentals and Advancement of Waterborne Epoxy and Polyurethanes

(Bedri Erdem)

11:45 A.M. – 12:00 P.M. Coffee Break

12:00 P.M. – 1:15 P.M. Lecture 18

Recent Patent Activity Involving Emulsion Polymers and

Reduction of Residual Monomers (Donna Visioli)

1:15 P.M. – 2:15 P.M. Picnic Lunch

RBC Courtyard

2:15 P.M. – 3:45 P.M. Lecture 19

Film Formation and Film Properties of Acrylic Latexes for Coatings and

Adhesives (Bernd Reck)

3:45 P.M. – 4:00 P.M. Coffee Break

4:00 P.M. – 5:30 P.M. Lecture 20

Water-Borne Soft-Soft Nanocomposites: Principles and Application Case

Studies (Peter Lovell)

7:00 P.M. – 9:00 P.M. Lecture 21

Question & Answer Session (Lecturers and Participants)

Friday, June 9, 2023

8:00 A.M. – 9:30 A.M. Lecture 22

Waterborne Pressure Sensitive Adhesives (Ying-Yuh Lu)

9:30 A.M. – 10:00 A.M. Coffee Break

10:00 A.M. – 11:30 P.M. Lecture 23

Monodisperse Latex Particles – Preparation, Surface Modification,

Characterization and Applications (Mohamed S. El-Aasser)

Please visit our website for further registration details, downloadable and on-line registration forms, abstracts of the lectures, biographies of the speakers and other logistics details.

<http://wordpress.lehigh.edu/inadvemu/>

For more information, or to mail in a registration form or check,

Please contact:

Debra Hartzell Nyby, Department of Chemical and Biomolecular

Engineering | Lehigh University

111 Research Drive

Bethlehem, PA 18015-4732

Phone: 610-758-3607

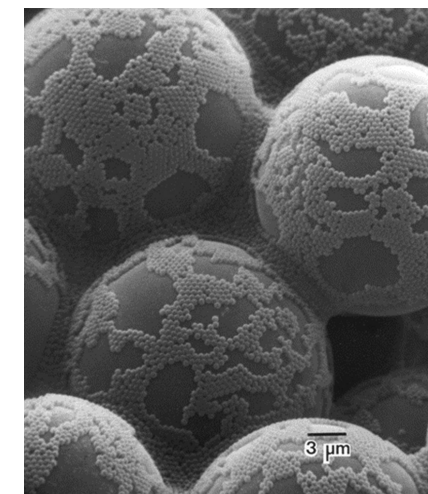
Email: debra.nyby@lehigh.edu



LEHIGH
UNIVERSITY

54th Annual Short Course

Advances in Emulsion Polymerization and Latex Technology



EPI Graduate Research Progress Report # 28 – SEM micrograph showing flocculation of a 154 nm diameter cationic acrylic latex onto the surface of a 19 μm monodisperse polystyrene latex.

June 5-9, 2023

Regarding COVID 19, we will abide by the Center for Disease Control and Prevention (CDC) guidelines and Lehigh University procedures.

“Advances in Emulsion Polymerization and Latex Technology”

June 5-9, 2023

Course Organizer

DR. MOHAMED S. EL-AASSER

Professor Emeritus

Department of Chemical and Biomolecular Engineering

Course Design

The course is an in-depth study of the synthesis, characterization, and properties of high polymer latexes. The subject matter includes a balance of theory and applications as well as a balance between chemical and physical problems. Lectures will be given by leading academic professors and industrial scientists. Lectures will begin with introductory material and reviews, and will progress through recent research results and industrial application.

Location and Time

Rauch Business Center | Lehigh University
621 Taylor Street | Bethlehem, Pennsylvania 18015

Registration/Check In: Monday, June 5th 7:00 a.m. – 8:00 a.m.
at Rauch Business Center 291/292/293

All Lectures will be held in the Rauch Business Center,
Perella Auditorium, Room 184

- Lectures will start at 8:00 A.M. Monday to Friday.
- Lectures on Friday will end by noon.

Participants

The course is designed for engineers and scientists who are actively involved in emulsion work as well as for those who wish to develop expertise in the area. A basic background in chemistry will be assumed. More advanced and experienced participants may elect to attend only those days in which material of specific interest is being presented. All participants will receive a printed set of course notes as well as additional supplementary course materials in PDF format.

Fees

\$1,700 for the entire five (5) days or \$850 per day for any portion of the course attended. Some discounts are available; see the course registration section for details.

Fees cover registration, a set of notes, five (5) days of beverages at break, and lunch provided for four (4) days.

Payment Options:

- Credit Card Payments can be completed on line. Please go to the following website to register for the course, university housing, and university parking to pay by credit card (Visa, Master Charge, or American Express). <http://wordpress.lehigh.edu/inadvemu/>

- Checks payable to Lehigh University should accompany application, which can be downloaded at the following website or using the brochure registration form. <http://wordpress.lehigh.edu/inadvemu/>

- If you require an invoice prior to making payment, please send your registration form for the course, university housing, and university parking to Debra Nyby at debra.nyby@lehigh.edu and an invoice will be sent to you.

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Transporation an Locale

Bethlehem is located in the heart of the Lehigh Valley about 50 miles north of Philadelphia and 80 miles west of New York City.

It is easily accessible by plane via the Lehigh Valley International Airport (formerly known as the ABE, Allentown-Bethlehem-Easton Airport), by car via the east-west Route 78 (22) and the north-south Northeast Turnpike Extension (I-476) and Routes 309 and 378, or by bus from New York City (Port Authority Terminal).

Driving Instructions to Rauch Business Center, Lehigh University:
<https://www1.lehigh.edu/about/maps-directions/rauch-business-center>

Driving Instructions to Farrington Square (on campus housing)
<http://www.lehigh.edu/campusmap/?mapitloc=Campus%20Square%20A-D>

Accomodations

Modern air-conditioned University dormitories are available within several blocks of the conference site. Linens are provided. *Single occupants will share a suite (living room and bathroom) with two (2) other course participants.* Each person will have a private bedroom. Please see the following site for a description of the Farrington Square dormitories:

<http://www4.lehigh.edu/housing/residencehalls/az/campussquare.aspx>

A processing charge (\$65.00) of one night will be deducted for housing cancellations after May 1, 2023.

A Continental Breakfast will be available to course participants at Rauch Business Center on June 5th only. Beverages only will be provided with breaks throughout the day. Lunches from Monday to Thursday are included.

Hotels/motels are for the most part far from campus and will require transportation. Hotel/motel reservations should be made by contacting the hotel/motel directly.

Please be sure to mention you are coming to Lehigh University and request the Lehigh University rate.

Holiday Inn Express Hotel & Suites

2201 Cherry Lane, Bethlehem, PA; 610-838-6110

Historic Hotel Bethlehem

437 Main Street, Bethlehem, PA; 610-625-5000

Hyatt Place

45 West North Street, Bethlehem, PA 18018; 610-625-0500

Lecturers

Michael Cunningham, Queen’s University, CANADA

Mohamed El-Aasser, Lehigh University, USA

Bedri Erdem, Rust-Oleum Corporation, USA

Andy Hollingsworth, New York University, USA

Peter Lovell, University of Manchester, UK

Ying-Yuh Lu, 3M Company (*retired*), USA

Bernd Reck, BASF, Germany

F. Joseph Schork, Georgia Institute of Technology, USA

Cesar Silebi, Lehigh University, USA

Donna Visioli, DuPont (*retired*), USA

Course Registration Form

Participants may reserve a space for the Short Course by completing the form, and either:

- (1)** Mail the registration form in, **along with a check payable to: Lehigh University**

Ms. Debra Hartzell Nyby
Lehigh University
111 Research Drive
Bethlehem, PA 18015-4732 USA
Telephone: (610) 758-3607
e-mail: debra.nyby@lehigh.edu

- OR (2)** Completing the form below and sending it as an e-mail attachment to Debra Hartzell Nyby at the e-mail address listed above and indicating whether you will be sending a check or if you would like to be sent an invoice.

- OR (3)** Registering on line at the short course’s website and pay by credit card.
<http://wordpress.lehigh.edu/inadvemu/>

Mr. Mrs./Ms. **– PLEASE PRINT**

Name _____
Last Name First Name Initial

Title _____

Organization _____

Street Address 1 _____

Street Address 2 _____

City State Zip Code

Country: _____

Telephone Fax

E-Mail Address: _____

Dates Attending (*please specify*) _____