

About Your Instructors

Montgomery T. Shaw, Ph.D. Chemistry, Distinguished Professor of Chemical Engineering, University of Connecticut

After completing B.Ch.E. and M.S. degrees in chemical engineering at Cornell University, Dr. Shaw attended Princeton University, obtaining his Ph.D. in Chemistry in 1970. For the next six years he was associated with the R&D department of Union Carbide Corporation. In 1977 Dr. Shaw joined the faculty of the Chemical Engineering Dept. and the Polymer Program of the Institute of Materials Science (IMS) at the University of Connecticut. At the IMS he conducts research in the areas of polymer solution and blend thermodynamics, polymer rheology and processing, and composites for biomedical and fuel cell applications.

Robert A. Weiss, Ph.D. Chemical Engineering, Distinguished Professor of Chemical Engineering, University of Connecticut

Dr. Weiss received a B. S. degree in chemical engineering from Northwestern University and a Ph.D. in chemical engineering from the University of Massachusetts in 1976. From 1975-1981, he worked as a research engineer for Exxon Chemical Co. and Exxon Research and Eng. Co. In 1981, he joined the faculty of the Chemical Engineering Dept. and the Polymer Program of the Institute of Materials Science (IMS) at the University of Connecticut. At UConn, he has served as the Director of the Polymer Program and the Associate Director of the IMS. Dr. Weiss is the Editor-in-Chief of *Polymer Engineering & Science* and *Polymer Composites*. His research interests involve the structure-property relationships for complex polymer systems, including ionomers, blends, block copolymers, conductive polymers, hydrogels and liquid crystalline polymers.

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Return Services Requested

Introduction to Polymers



*A Short Course for
Engineers, Scientists,
Materials Specialists,
Designers and Quality
Assurance Managers*

Monday, June 12 and
Tuesday, June 13, 2006
9:00 a.m. - 5:00 p.m.

Sponsored by:

Institute of Materials Science &
IMS Associates Program
University of Connecticut
Storrs, Connecticut

The objective of this course is to provide the attendees with an understanding of the basic relationships between polymer structure and the behavior of the polymer, both during processing and in its ultimate application. We will discuss key aspects of polymer structure including molecular weight, chain stiffness and configuration, branching of the chains and crosslinking. The influence of these variables on the physical states of the polymer will then be explored. Concepts such as glass transition, degree of crystallinity, liquid crystallinity and crystallization kinetics will be covered. We will delve into the rheological, viscoelastic and mechanical properties of neat polymers, as well as their blends and composites, including nanocomposites. Service of a polymer involves exposure to diverse environments which may be harmful. We will discuss in this connection oxidative degradation and environmental stress cracking. Methods of fabrication of polymers will be briefly reviewed.

Who should attend

Engineers and scientists wishing to increase their understanding and proficiency with polymers and their application.

Course Location and Schedule

The course will be offered on the Storrs campus of the University of Connecticut, School of Business Building, Room 202 on June 12 and 13, 2006.

Registration

The registration fee of \$600 includes workshop attendance, textbook (*Introduction to Polymers, 2nd ed.*, Young & Lovell), set of course notes, lunch and coffee breaks each day. Registration for this course closes on May 26, 2006.

Discounts Available

Participants from firms employing 30 people or fewer receive a \$100 discount per participant (\$500). Companies employing more than 30 people can receive a \$100 discount per participant (\$500) by sending more than one participant to the course.

Refund and Cancellation Policy

The registration fee is refundable, less \$30.00, prior to the first day of the course only if you notify Pro-

fessional Studies: 800-622-9905 or 860-486-3231. Participants who do not attend and fail to cancel are subject to the full fee. Participant substitutions may be made. The Institute of Materials Science reserves the right to change instructors and cancel or re-schedule the course in the event of insufficient enrollment or unforeseen circumstances.

Further Information

Questions regarding the course should be directed to Mark Dudley at 860-486-2256 (voice), 860-486-4745 (fax) or mark.dudley@uconn.edu. To register, you may mail or fax the registration form to Professional Studies or you may call them at 800-622-9905 or 860-486-3231.

IMS Associates Program

The IMS Associates Program assists companies with short term projects in research and development. The Program also assists with manufacturing projects where comparable expertise or facilities are not readily available from the private sector.

For more information about the Institute of Materials Science or the IMS Associates Program see www.ims.uconn.edu/ims/

Course Highlights

- Polymer structure
- Synthesis methods
- Physical states
- Blends and composites
- Properties, including rheological, viscoelastic and mechanical
- Application problems and solutions
- Polymer processing

Schedule # 1012 Introduction to Polymers

June 12 and 13, 2006

Registration Form

Name _____

Title _____

Company _____

Business Address _____

Phone _____

Fax _____

E-mail _____

Please let us know if you require special services or arrangements due to a disability.

Registration

- \$600 Registration
- \$500 Registration for firm with 30 or fewer employees - or - if more than one person from a firm of over 30 employees
- \$200 One Registration for IMS Associates Program member (additional registrations \$500)

Method of Payment

- Check or Money Order (payable to UConn)
- P.O. # _____
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VISA, MasterCard, Discover or Diners Int'l orders, please provide the following:

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