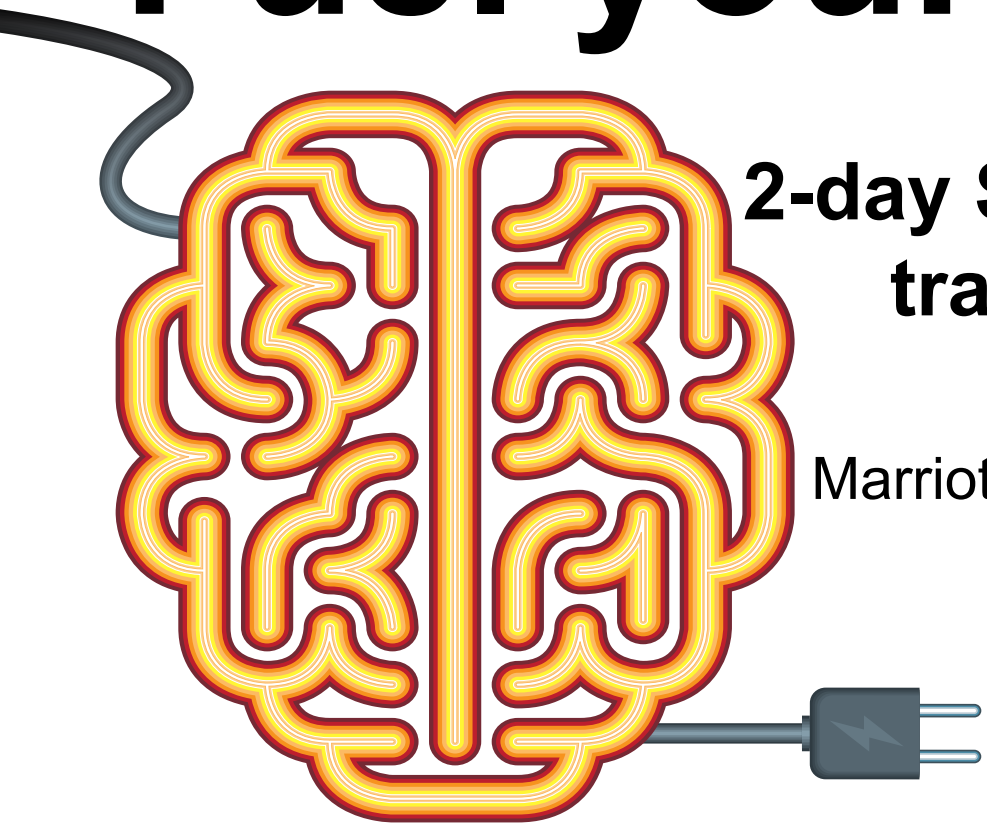
Fuel your brain



2-day SPE FastTrack training program

Produced by Plastic Technologies, Inc.

Marriott Copley Place Hotel
110 Huntington Ave.
Boston, Massachusetts, 02116
USA

May 4 - 5, 2011

Do you want to be up-to-date on the latest technology?

Can your company benefit from the latest plastic materials and processing knowledge?

Then the SPE FastTrack training program held in conjunction with ANTEC® 2011 is the place you need to be. Produced by industry thought-leader Plastic Technologies, Inc., the program has been designed to boost your knowledge via intensive one - or two-day courses offerings.

PTI
PLASTIC TECHNOLOGIES, INC.

ANTEC 2011
May 1 - 5, 2011
Hynes Convention Center
Boston, Massachusetts, USA

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May 4 - 5, 2011

Marriott Copley Place Hotel
110 Huntington Ave.
Boston, MA 02116

Seminars will be held at the Marriott Copley Place. Two-day and one-day Seminars are from 8a - 5p.

Course options include:

Seminar 1: Troubleshooting the Injection Molding Process - A Virtual Workshop
Dates: May 3 - 4, 2011 **Instructor:** Robert Beard
This seminar will be conducted on Tuesday and Wednesday

Seminar 2: Mold Design and Mold Building
Dates: May 4 - 5, 2011 **Instructor:** Bob Dealey

Seminar 3: Injection Molding: Advanced Concepts and Analyses
Dates: May 4 - 5, 2011 **Instructor:** Larry Schmidt

Seminar 4: Extrusion of Engineering Plastics - Simplified for Manufacturing and Process Engineers
Dates: May 4 -5, 2011 **Instructor:** Pravin Shah

Seminar 5: Snap Fits, Press Fits and Welding Of Parts
Date: May 4, 2011 **Instructor:** Jordan Rotheiser

Seminar 6: Fundamentals of Plastic Materials and Processes
Date: May 4, 2011 **Instructor:** Jean-Michel Charrier

Seminar 7: Scientific Approach to Injection Molding
Date: May 4, 2011 **Instructor:** Vishu Shah

Seminar 8: Thermoforming Technology Seminar
Date: May 4, 2011 **Instructor:** Robert Browning

Seminar 9: Purchasing and Quoting of Plastic Parts
Date: May 5, 2011 **Instructor:** Robert Beard

Seminar 10: Reheat Stretch Blow Molding Fundamentals
Date: May 5, 2011 **Instructor:** Scott Steele

Seminar 11: Plastic Component Failure Analysis: Methodology, Mechanisms and Case Studies
Date: May 5, 2011 **Instructor:** Jeff Jansen

Seminar 12: Thermoplastic Elastomers
Date: May 5, 2011 **Instructor:** Vivian Malpass

Seminar 13: Practical Screw Design Fundamentals
Date: May 5, 2011 **Instructor:** Tim Womer

Seminar 14: Profile Extrusion Design & Advance Processing
Date: May 5, 2011 **Instructor:** Daniel Cykana

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SPE Member Course Registration
1-day $795
2-day $1,295

Non-member Course Registration
1-day $904
2-day $1404
Fee includes 1 year SPE membership

How to Register:

Attending both ANTEC® 2011 AND FastTrack seminars?

Go online to www.ANTEC.ws. The seminars are listed under Programs/Sessions link.

Attending FastTrack seminars ONLY?

Call (419) 867-5413

Seminars will be held at the Marriott Copley Place. Two-day and one-day Seminars are from 8a - 5p.

Seminar 1: Troubleshooting the Injection Molding Process - A Virtual Workshop

Date: May 3 - 4, 2011 **Instructor:** Robert Beard

This seminar will be conducted on Tuesday and Wednesday

Who should attend:
Process engineers, mold engineers, QC inspectors, production managers, part designers and management

Prerequisite for this Seminar:
Attendee is familiar with the injection molding process

Seminar details

- Brief review of the basics of the injection molding process
- Explain the relationship of each control and the resultant effect and change in the process
- Will use Paulson Training Programs “SIMTECH” software program to simulate all the same machine controls as on an actual machine.
- Observe the part (and defects) that were molded under those settings in accelerated time.
- Class problems and discussion will center on “cause and effect” and “why.”
- Understand the latest tools for problem solving

Seminar 2: Mold Design and Mold Building

Date: May 4 - 5, 2011 **Instructor:** Bob Dealey

Who should attend:

Product, project, manufacturing and tool engineers, sales and management personnel

Seminar details

- Will provide detailed technical knowledge of the injection mold design and building process
- Learn the process of designing and building injection molds
- Understand the reasons how and why a mold is built
- Will provide visual aids and real world examples
- Define state-of-the-art mold design and building concepts

Seminar 3: Injection Molding: Advanced Concepts and Analyses

Date: May 4 - 5, 2011 **Instructor:** Larry Schmidt

Who should attend:

Process engineers, mold and product designers, and other personnel with direct responsibility for quality

Seminar details

- An in-depth look at injection molding
- Understanding of the injection molding process
- Learn about the interactions with sophisticated polymers and resin systems
- Understand the principles of the injection molding process
- Will provide special insights required to understand the connection between flows in the barrel and cavity, behavior of different polymers
- Case studies used to illustrate the commercial implementation of advanced design concepts for new product opportunities

Seminar 4: Extrusion of Engineering Plastics - Simplified for Manufacturing and Process Engineers

Date: May 4 -5, 2011 **Instructor:** Pravin Shah

Who should attend:

Plant managers, production and process engineers, extrusion supervisors and technicians

Seminar details

- Will provide a simplified and thorough treatment of the extrusion of the engineering plastics and exotic polymers
- Major emphasis on
    - How to select the right grade of polymer for extruding strip, tubing, profile, sheet and rod
    - How to develop critical process parameters from rheology data for optimizing the extrusion process
    - Will offer hands-on Seminar on how to reduce scrap and downtime, and improve the yield and output rates

Seminar 5: Snap Fits, Press Fits and Welding of Parts

Date: May 4, 2011 **Instructor:** Jordan Rotheiser

Who should attend:
Designers, engineers, managers, purchasing agents and others involved in plastic product design and development

Seminar details
- Advantages, disadvantages and other criteria used in determining the optimum joining method for an application
- Snap Fit Theory: Material selection; one-way and reopenable snap fit design; snap fit tooling
- Press Fit Theory: Material selection; creep; loadings; press fit design; design tips to permit looser tolerances; safety factors
- Laser Welding: Advantages and disadvantages; description of the laser welding processes; material limitations and selection; application and design details
- Ultrasonic Welding: Advantages and disadvantages; process description; application and design details for energy directors; shear joints; stakes; spot welds and swaging
- Hot Die/Fusion/Hot Plate, Hot Wire, Hot Gas, Vibration, Induction/Electromagnetic and Spin Welding: Advantages and disadvantages; process description; joint design; applications for each of these processes

Note: Attendees will receive the textbook titled "Joining of Plastics - Handbook for Designers and Engineers" (592 pages, 348 figures, 44 tables, hardcover, retail value $150) by Jordan Rotheiser which will be used as the seminar manual.

Seminar 6: Fundamentals of Plastic Materials and Processes

Date: May 4, 2011 **Instructor:** Jean-Michel Charrier

Who should attend:
Technical, scientific and engineering personnel, plastics sales, purchasing, marketing and management non-technical personnel

Seminar details
- Broad knowledge of materials, processing techniques and applications
- Will offer descriptive and practical applications
- General concepts associated with polymeric materials
- Classes of polymeric materials

Seminar 7: Scientific Approach to Injection Molding

Date: May 4, 2011 **Instructor:** Vishu Shah

Who should attend:
Engineers, technicians, and managers who design, fabricate and manufacture plastic injection molded components

Seminar details
- Discuss the scientific approach and science behind the factors of the injection molding process
- Learn how a cost driven world, every decision in the injection process can be substantiated by data
- Understand how to establish the molding variables that contribute to part quality and productivity
- Examine the relationship of the four critical components: Material, part design, tooling and processing
- Learn how to be more efficient and lowering costs resulting in improved quality and economics

Seminar 8: Thermoforming Technology Seminar

Date: May 4, 2011 **Instructor:** Robert Browning

Who should attend:

Engineers, technicians, and managers who design, fabricate and manufacture thermoformed molded components

Seminar details

- Overview of thermoforming technology and the development of products
- Provide a working understanding, including limitations and advantages, of all forms of thermoforming technology and techniques
- Understand thermoforming tooling, heating, materials and design
- Will provide real world examples and "case studies" of actual products and their development

Seminar 9: Purchasing and Quoting of Plastic Parts

Date: May 5, 2011 **Instructor:** Robert Beard

Who should attend:

Purchasing agents, salesmen, engineers and management personnel

Seminar details

- Learn and develop a industry standard plastics vocabulary
- This format combines lectures, case studies, and written exercises
- Understand how to estimate and analyze quotes, select a vendor, write purchase order, run a successful cost reduction program

Seminar 10: Reheat Stretch Blow Molding Fundamentals

Date: May 5, 2011 **Instructor:** Scott Steele

Who should attend:

Engineers, technicians, and managers who design fabricate, and manufacture plastic blow molded packaging components

Seminar details

- Provide an overview of the science behind RHSB of PET
- Learn the basics of preform design and injection molding
- Package and bottle design concepts are covered with practical examples
- Fundamentals of the preform heating process
- Explanation of the biaxial molecular orientation process and its relation to package & design
- Discussion of the competitive processes for forming PET containers

Register online at www.antec.ws or call (419) 867-5413 for more information on this training program.

SPE FastTrack training program - produced by Plastic Technologies, Inc.

Seminar 11: Plastic Component Failure Analysis: Methodology, Mechanisms and Case Studies

Date: May 5, 2011 **Instructor:** Jeff Jansen

Who should attend:

Engineers, scientists, technicians, and managers who design, fabricate, and manufacture plastic components

Seminar details

- Learn efficient and effective approaches to plastic component failure by performing a systematic failure analysis following scientific method
- Understanding of how and why a product has failed
- Learn how to more quickly respond to and resolve plastic component failure
- Allow for more effective and efficient work using internal or external testing laboratories in the analysis of plastic part failures
- Gain a better understanding on why plastic components fail
- Learn how to avoid future failures

Seminar 12: Thermoplastic Elastomers

Date: May 5, 2011 **Instructor:** Vivian Malpass

Who should attend:

Engineers, technicians, and managers who design, fabricate and manufacture plastic molded components

Seminar details

- Will provide a comprehensive overview of materials that make up thermoplastics
- Relate their chemistry, structure and morphology to properties , processing and applications
- The overall market for TPE's
- Review each type of TPE"s applications, products and producers
- Discuss recent developments

Seminar 13: Practical Screw Design Fundamentals

Date: May 5, 2011 **Instructor:** Tim Womer

Who should attend:

Engineers, technicians, and managers who design, fabricate, and manufacture plastic molded components

Seminar details

- Overview on the principals of extrusion and the design of extrusion systems
- Will cover the basics of rheology and the interactions of viscous flow with the science of melting polymers
- Understand the basics of screw design ia real world examples
- Be exposed to practical applications of extrusion
- Provide a troubleshooting guide and techniques for measuring screws, barrels and system performance

Seminar 14: Profile Extrusion Design & Advanced Processing

Date: May 5, 2011 **Instructor:** Daniel Cykana

Who should attend:

Process engineers, mold engineers, QC inspectors, production mangers, part designers and ` management

Seminar details

- Provide an overview of the principals of extrusion and the design of extrusion systems
- Cover the basics of rheology and the interactions of viscous flow with the science of melting polymers
- Learn the basics of screw design
- Provide lessons learned from real world examples
- Practical applications of extrusion
- Offer a troubleshooting guide and techniques for measuring screws, barrels, and system performance

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About the instructors (in alphabetical order)

BEARD, Robert

Robert Beard, P.E., is president of Robert A. Beard & Associates, Inc. which offers consulting services in product design and development, technical and manufacturing cost studies, computer simulations, product. specifications, process development, cost-reduction programs, and troubleshooting. He is a registered Professional Engineer Is a Fellow Member of SPE. Has worked in manufacturing, R&D, sales, engineering and general management for such companies as Durez Plastics, Budd Co., Singer Co., Dillon-Beck Manufacturing, Abbott Laboratories, and National Can Corporation. Has also been an assistant professor in the New York State University System, an instructor at Penn State University and the University of Wisconsin.

BROWNING, Robert

Robert Browning, of Atlanta, Georgia, has 25 years experience in the design and engineering of single sheet, twin-sheet, and pressure thermoformed products, tooling, and processes. He attended Mercer University, with a major in Business Management, and the Georgia Institute of Technology, with a major in Industrial Design He has had the opportunity to develop and refine new processes in thermoforming, and in the design of thermoforming tooling. He has six U.S. Patents. He is employed by Formex Manufacturing Company, one of the largest twin-sheet thermoforming companies in the U.S., as Director of Research, Development and Engineering. He is a specialist in the design and engineering of consumer products, his work includes most all aspects of thermoforming; electronic housing design; prototype models; tooling design; vendor coordination; material research and specification; and trouble shooting.

About the instructors (in alphabetical order)

CHARRIER, Jean-Michel
Dr. Charrier has been teaching at McGill University, Montreal since 1969. His first engineering degree is from E.N.S. Arts & Metiers in France. He has M.Eng. and Ph.D. from the University of Akron. He is a past President of the Quebec Section of the Society of Plastics Engineers His teaching and research interests in the properties and processing of polymeric systems have encompassed plastics, elastomers and composites. He has taught numerous industrial seminars on a variety of subjects associated with polymeric materials. He is the author of a comprehensive textbook on "Polymeric Materials and Processing – Plastics, Elastomers and Composites", and the developer of several educational softwares in this area. The textbook and the softwares are used in academic institutions as well as industrial environments.

CYKANA, Daniel
Daniel Cykana is the principal and Chief Consultant of Extrusion Solutions. Extrusion Solutions specializes in solving extrusion problems as well as training of engineers and setup technicians in the extrusion process and extrusion troubleshooting. With over 40 years of industry experience. Daniel is a Senior Member of Society of Plastics Engineers. He has been employed by Northland Plastics Inc. Director of Manufacturing, Bemis Manufacturing Co. as Director of Engineering and Market & Business Development- Consultant. He has taught numerous courses and presented internationally, Contributing author for "SPE Guide for Extrusion Technology & Troubleshooting", "SPE Extrusion Toolbox" Co-authoring " Practical Die Design" Co-Patent holder of 13 process & utility patents.

DEALEY, Bob
Bob Dealey has twenty-five years experience in the engineering, design, and building injection molds. He is a SPE Honored Member. He runs his own plastics management, marketing, and technical consulting firm. A graduate from the University of Wisconsin-Stout. He has held positions of Plastic Tool Engineer, Staff Tool Engineer, Manager of Tool Engineering and Director of Engineering. He authored the chapters on mold making and materials for the SPE Handbook and has presented at numerous conferences. He holds patents on runnerless molding.

JANSEN, Jeff
Jeffrey A. Jansen is the Engineering Manager at The Madison Group, an independent plastics consulting firm. Jeff specializes in failure analysis, material identification and selection, and aging studies for thermoplastic materials. He has performed over 900 failure investigations, both for industrial clients and litigation work. Jeff is a graduate of Carroll College and the Milwaukee School of Engineering. He has authored numerous articles and an ASM handbook chapter relating to failure analysis. Jeff has also taught several seminars on plastics failure analysis, chemical effects of plastics, and basic rubber technology.

MALPASS, Vivian
Vivian Malpass is President of Tek-Mark International Inc., a technical marketing consulting company for the plastics industry, he has 35 years in the plastics industry. He was past President of the Plastics Pioneers Association.He was Vice President and General Manager of Plasticolors,Inc., He also directed technology and product development at Furon Macromeric Division Previously, he directed the Corporate polymer and plastics research at Ferro Corporation He was also General Manager of Ferro's Engineering Thermoplastic Products Division Other areas of expertise include impact modifiers and rubber toughening of thermoplastics, alloying and compatibilization of polymers, melt rheology and structure-to-property relationships.

About the instructors (in alphabetical order)

ROTHEISER, Jordan
Jordan Rotheiser is a practicing plastics engineer and industrial designer with over 40 years of experience in the design of plastic products. He is an Honored Fellow of the Society of Plastics Engineers. Rotheiser owns his own company Rotheiser Design Inc. which specializes in plastic product design and been involved in over 2100 projects for several hundred companies, largely in the automotive, medical plastics and packaging fields. Besides his book, Joining of Plastics, he has authored the design chapter in the Modern Plastics Handbook and the plastics chapter in McGraw-Hill's Handbook of Materials for Product Design. He has had numerous articles published in "Plastics Decorating", "Plastics Design Forum", "Plastics Engineering", and other national publications and holds a B.S. in Engineering and a B.F.A. in Industrial Design, both from the University of Illinois. He worked for General Motors, Abbott Laboratories and Compagnie de l' Esthetique Industrielle in Paris before founding his own company and he holds nine patents. His expertise has been employed in a number of lawsuits.

SCHMIDT, Larry
Larry Schmidt is President of LR Schmidt Associates, a plastics consulting firm specializing in advanced process designs and product concepts, technology assessment and root-cause analysis. He is a Fellow of the Society of Plastics Engineers. Engineering degrees from Ohio University, Washington University and the University of Colorado, where his Ph.D. research was on polymer processing. He worked for General Electric for 22 years, including 11 years as manager of the polymer engineering programs in the Corporate Research and Development Center. Has published over numerous papers and presentations and holds several patents. His novel mold-filling visualization results are used worldwide.

SHAH, Pravin
Pravin L. Shah is president of Rheo-Plast Associates Inc., a consulting firm based in Reading, PA. Specializing in polymer rheology, material science, and extrusion and molding screw and die design. Pravin holds many patents to his credit and has published over fifty technical papers and has authored two major chapters on polymer rheology. Pravin has taught rheology and extrusion seminars at many industrial organizations and leading universities. More than 5000 students have graduated from his Practical Rheology Workshop.

SHAH, Vishu
Vishu H. Shah has 35 years of extensive practical experience in plastics development. He is President of Consultek Consulting Group, a consulting firm specializing in Business Growth strategic planning and new product/Technology strategy. Vishu is a graduate of UMass Lowell where he received B.S. and M.S. degree in Plastics Engineering.Industry experience includes President and co-founder of Performance Engineered Products, Senior Plastics Engineer of Rain Bird Corporation and Nibco Inc. He is the author of Handbook of Plastics Testing and Failure Analysis. Has taught various plastics related subjects throughout his career. Currently, he is teaching classes covering, Plastics Theory and Practice, Scientific Molding, Product Design and Tooling at CAL POLY, Pomona.

STEELE, Scott
Scott Steele, has 30 plus years experience in the plastic industry. He is a recognized expert in orientation stretch blow molding technology and in the design, development and manufacture of PET packaging and is currently a Corporate Vice President for PTI. He has managed several high profile projects , including the development of Coca-Cola's first PET Contour shaped plastic bottle and the successful development He was also instrumental in the first licensee of Phoenix Technologies' patented food grade recycling technology. Today packaging leader s routinely incorporates 25% recycled content into every PET bottle produced for the soft drink market. He is the author of 11 US and international patents. He received his B.S. degree in Chemical Engineering from the University of Toledo.

About the instructors (in alphabetical order)

WOMER, Tim

Tim Womer, is the President of TWWomer & Associates, LLC and career spanning over 35 years;. He was the 2006-2007 President of the Society of Plastics Engineers and a member of the SPE Extrusion Board of Directors for the past 20 years. He is also a member of the Plastics Pioneers Association and serves on the SPI Educational Committee. He has worked for other companies like Xaloy, Inc., Spirex Corporation, Conair Group and NRM Corporation. Numerous patents have been issued for his inventions of screws, mixers, processes and other products. He also has extensive knowledge and experience in heat transfer rolls used in the plastic sheet and paper laminating fields. He has spoken all over the world at various technical seminars and also private corporations, training individuals on processing techniques and fundamental applications of the screw technology. He has written numerous technical papers for SPE, TAPPI and the Wire Assoc. and has published several chapters in various books on screw design and screw manufacturing.