

REGISTRATION

- Registration is limited and on a first-come, first-served basis.
- Pre-registration is required and includes instruction with handout materials, refreshments, and lunch. Classes with sponsors will include a complimentary network dinner(s) except for the last day of class. **Registrants are responsible for all other meals and lodging.**
- The registration fee may be paid by check, MasterCard, Visa, Discover, purchase order, or authorization to invoice your company.
- **Register online** at pct.edu/pirc or call 570.321.5533.

ADDITIONAL INFORMATION

LOCATION/FACILITIES

All workshop activities are held on the main campus of Pennsylvania College of Technology, an affiliate of The Pennsylvania State University, in Williamsport, PA. The College is located in central Pennsylvania with easy access off Interstate 180.

APPROPRIATE DRESS

Casual business/jeans attire is recommended, appropriate for plastics processing and testing lab. Safety glasses are required.

HOTELS

Registrants will receive a confirmation email with discounted rates at participating hotels. **Participants are responsible for making their own lodging arrangements.**

AIRPORTS

The **Williamsport Regional Airport (IPT)** provides commuter air service via American Airlines through Charlotte, NC. Free shuttle service will be provided to and from the Williamsport Regional Airport and College from our preferred hotels, so a car rental is not necessary (before 11 p.m.). Other airport options, with approximate driving times (rental car needed):

- University Park (SCE) – 1 hour
- Wilkes-Barre/Scranton International (AVP) – 1.5 hours
- Elmira/Corning (NY) Regional (ELM) – 1.5 hours
- Harrisburg International (MDT) – 2 hours
- Philadelphia International (PHL) – 3 hours

Please wait for enrollment confirmation before booking your flight.

CANCELLATION POLICY

Cancellations will be accepted and full refunds issued when notified at least two weeks prior to the class start date. Within two weeks of the class start date, the company is responsible for the full cost. Company may substitute alternate personnel for paid seats at any time.

The PIRC may cancel or postpone any course because of insufficient enrollment or other unforeseen circumstances. If a program is canceled or postponed, PIRC will refund registration fees, but cannot be held responsible for any other related costs, charges, or expenses (including cancellation/change fees assessed by airlines or travel agencies).



PLASTICS INNOVATION & RESOURCE CENTER (PIRC)

The PIRC is one of the top plastics technology centers in the nation for research, development, and education related to injection molding, extrusion, blow molding, rotational molding, and thermoforming.

Partnering with the PIRC gives plastic manufacturers the opportunity to increase productivity while decreasing capital expenditures, operating costs, and development costs.

Services offered to plastics manufacturers include:

- New product development
- Material selection
- Testing and analysis
- Custom compounding
- Process technology
- Education and training

PIRC clients have access to:

- Industrial-scale process equipment and extensive material testing laboratories
- World-class training programs (including customized, on-site training programs, workshops, online courses, and national seminars)
- Expert consulting staff, including Penn College faculty
- Student interns and graduates that bring education and experience to the workplace

Penn College is one of only six colleges in the nation offering plastics degree programs accredited by the Engineering Technology Accreditation Commission of ABET.

B.S. – Plastics & Polymer Engineering Technology
A.A.S. – Plastics & Polymer Technology

Penn College graduates are in high demand for positions in manufacturing operations, process technology, supervision, research and development, product and machine design, and more. Companies that employ our graduates include: Becton Dickinson, Berry Global, Currier Plastics, First Quality, General Cable, Google, Greiner Packaging, Honda, Johnson & Johnson, Mitsubishi Chemical Advanced Materials, Toyota, West Pharmaceutical Services, and many more.

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Penn College encourages qualified persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, please contact Disability Services at 570.320.5225, TTY: 570.321.5528, or fax 570.327.4501 in advance of your participation or visit.

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**Pennsylvania
College of Technology**
A Penn State Affiliate

One College Avenue | Williamsport, PA 17701-5799



2021 NATIONAL PLASTICS WORKSHOPS



**PENNSYLVANIA
COLLEGE OF
TECHNOLOGY**

- Color Science & Weathering
- Extrusion Seminar & Hands-On Workshop
- Injection Molding Processing Series
- Plastic Materials, Processing, and Testing
- Rotational Molding & Advanced Materials Workshop
- Thermoforming, Heavy-Gauge/Cut-Sheet
- Thermoforming, Thin-Gauge/Roll-Fed



PLASTICS INNOVATION & RESOURCE CENTER

2021 WORKSHOP SCHEDULE

Injection Molding Processing I

Instructor: Tim Weston
Location: Advanced Technology & Health Sciences Center, Room E127 & Plastic Labs

May 3 & 4
8 a.m.-5 p.m.
\$995 / \$100 Early Bird Discount if registered by April 5

This workshop covers scientific or systematic molding method set-ups, operation, and injection molding process control. All molders should master the principles of decoupled molding to produce consistent product in the most efficient way. Leaving this course, participants should be able to set up cycles on various injection molding machines with identical results. Mastery of the decoupled molding process assures all molders will achieve the same process results.

"The Injection Molding Processing Workshop has given me new and scientific ideas of how to address issues in my site. The methods learned are highly valuable since it will increase the up-time of the machines, process wise, and will decrease defects and scrap along the way."

Lireny Figueroa Ortiz, Technoplastics Inc.
Anasco, Puerto Rico

PLATINUM SPONSOR

ENGEL

Injection Molding Processing II & Troubleshooting

Instructor: Tim Weston
Location: Advanced Technology & Health Sciences Center, Room E127 & Plastic Labs

May 5-7
8 a.m.-5 p.m.
\$1,195 / \$100 Early Bird Discount if registered by April 5

This workshop covers the science of injection molding and is ideal for advanced individuals looking for solutions to the toughest molding problems. Learn how the machine, mold, and plastic material all play a role in the molding of plastic parts. The hands-on component follows the pellet from start to finished product and will highlight how to make a consistent, quality molded part. Controlling part dimensions and defects will be discussed in terms of how the part was produced during its travel. Day three is for troubleshooting real-world problems. Each participant will bring a molding issue that will be analyzed and the class will solve the problem while the instructor acts as a facilitator.

"If you thought you knew injection molding, take these courses. I have now learned what I need to further study to get a fuller understanding of the total process. The practical lab work drives home the many points."

John Keefe, B. Braun Medical
Allentown, PA

PLATINUM SPONSOR

ENGEL



Color Science & Weathering

Instructor: Jack Ladson
Location: Thomson Professional Development Center, Mt. Laurel Room

May 4-6
8:30 a.m.-4:30 p.m.
\$1,195 / \$100 Early Bird Discount if registered by April 5

Day 1 – The Coloring of Plastics reviews the critical parameters and considerations for coloring plastic materials.

Day 2 – Color Science includes the introduction to color, appearance assessment, objects interaction with light, illuminants, the human observer, color order systems, spectrometers, samples, tristimulus systems, color difference equations, metamerism, statistics, and industrial color control.

Day 3 – Weathering of Plastics is designed to teach the fundamentals of weathering, weathering technology, and evaluation methodologies for plastic materials.

"The addition of the weathering curriculum to the color science program shows that PIRC is listening to what the industry is asking for."

Lane Van Wagner, Yeti Coolers
Austin, TX

Rotational Molding & Advanced Materials Workshop

Instructor: R. Dru Laws
Location: Advanced Technology & Health Sciences Center, Room E140 & Plastic Labs

May 11 & 12
8:30 a.m.-4:30 p.m.
\$1,095 / \$100 Early Bird Discount if registered by April 5

This workshop features Shell Polymers Rotational Molding Center of Excellence to give participants hands-on experience in combination with the classroom training led by Dru Laws on higher-level technology in rotational molding. This two-day workshop will focus on developing the connection between materials preparation, molding, final part quality, and review the latest advances in materials available in the industry. Target audience: supervisory, lead operators, technicians, and engineers. It allows participants to network and share experiences with other staff facing similar day-to-day issues.

"Being new to rotational molding, I thought the course gave a very good overview of the practice in general. Dru and the staff at Penn College walked us through many of the steps and processes to be successful in the roto-molding trade."

Shane Poole, Envicor Enterprises
Smithfield, NC

PLATINUM SPONSOR

MHolland

WHY PENN COLLEGE?

BENEFITS OF INDUSTRIAL TRAINING

- Learn how the right choice of plastics materials can make a difference in your product's performance.
- Learn key factors that make plastics processes profitable and reduce quality errors.
- Learn successful fabrication techniques in molding, extrusion, forming, etc. addressing your problems on the plant floor.
- Produce more informed, efficient, and motivated employees.
- Train hands-on with a large array of equipment.
- Receive individualized instruction.
- Network with other attendees.
- Discuss real-world challenges.

Extrusion Seminar & Hands-On Workshop

Instructors: Dr. Chris Rauwendaal & Dr. Kirk Cantor
Location: Advanced Technology & Health Sciences Center, Room E140 & Plastic Labs

June 8-10
8:30 a.m.-4:30 p.m.
Day 3 ends at 3 p.m.
\$1,295 / \$100 Early Bird Discount if registered by April 5

Dr. Rauwendaal presents course topics in a multimedia format supplemented by printed materials. Dr. Cantor leads hands-on training (approximately 50% of the course) including use of extrusion industry equipment: single-screw extruder, twin-screw extruder, blown film line, injection molder, melt indexer, and tensile tester.

"Excellent course. Great balance between theory and workshop. Having world-class experts such as Kirk and Chris is extremely valuable. They provide great insight and practical ideas to take back to our organizations in our journey of continuous improvement."

Ryan Antoniadis, Plastifab Industries
Saint-Laurent, Quebec, Canada

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THE AZEK COMPANY

Plastic Materials, Processing, and Testing

Instructor: Joshua Rice
Location: Advanced Technology & Health Sciences Center, Room E140 & Plastic Labs

June 15-17
8:30 a.m.-4:30 p.m.
\$1,195 / \$100 Early Bird Discount if registered by April 5

This workshop provides fundamental knowledge of plastics (polymers), how they are processed, tested, and characterized. Gain skills in how plastic material testing can improve plastic product design and processing considerations. Fundamentals of polymer structure and its effect on polymer properties is covered. Hands-on sessions show how certain data sheet properties, such as melt index, tensile strength, and impact resistance are determined. Included are introductions to polymer processing techniques such as injection molding, extrusion, rotational molding, vacuum forming, and extrusion blow molding.

"Fantastic class. Perfect blend of classroom instruction and hands-on work with the equipment and materials that we discussed in class. Excellent instructor!"

Frank Aponte, Thermo Fisher Scientific
Millersburg, PA



Hands-On Thin-Gauge/Roll-Fed Thermoforming

Course Leader: Mark Strachan
Location: Advanced Technology & Health Sciences Center, Room E140 & Plastic Labs

June 22-24
8:30 a.m.-4:30 p.m.
\$1,295 / \$100 Early Bird Discount if registered by April 5

Mark Strachan will lead the workshop with special guest speakers to be announced. Topics include advances in raw materials and sheet extrusion, heating and cooling sheet, forming, trimming, and downstream handling of parts. Advanced session on raw materials, rheological properties, specialty sheet, part, mold and plug assist design, heating technology, advanced forming techniques, trimming technology, and diagnostic tools. Hands-on sessions include thermoforming process techniques and troubleshooting, materials testing, and sheet extrusion basics.

"Good balance of theory and practical. Very well structured and organized."

Anvit Gupta, ExxonMobil Chemical
Baytown, TX

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AWD
AMERICAN WICK DRAIN



Hands-On Heavy-Gauge/Cut-Sheet Thermoforming

Course Leader: Jay Waddell
Location: Advanced Technology & Health Sciences Center, Room E140 & Plastic Labs

June 13-15
8:30 a.m.-4:30 p.m.
\$1,295 / \$100 Early Bird Discount if registered by April 5

Jay Waddell will lead the workshop with special guest speakers to be announced. Topics include advances in raw materials and sheet extrusion, heating and cooling sheet, forming, trimming, and handling parts. Advanced session on raw materials, rheological properties, specialty sheet, part, mold and plug assist design, heating technology, advanced forming techniques, trimming technology, assembly methods, and diagnostic tools. Hands-on sessions include thermoforming process techniques and troubleshooting, materials testing, and sheet extrusion basics.

"The Thin and Heavy-Gauge Workshop is information packed and well presented. Attending this workshop has given us a better understanding of what we do."

Ralph Huihui, Jamestown Plastics, Inc.
Brocton, NY

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