

PRESENTER



R. DRU LAWS, industry leader and operations expert, graduated from Brigham Young University with a BS in Mechanical Engineering, and a minor in Mathematics. He graduated top of his class with distinction (honors) from the Queens University of Belfast in Northern Ireland with an

MSc in Polymer Engineering, emphasizing in Rotational Molding.

Laws has several polymer process related patents and has guest-lectured at several universities on the subject. He has directed Chroma Corporation's Rotational Molding Center of Excellence, managed the operations for Rotonics Manufacturing, and led Seljan Company's entire plastics division.

He has served as a Counselor for the SPE Rotational Molding Division, and has spent the last decade on ARM's Board of Directors (currently past president). Laws regularly contributes articles to plastic publications and participates as a presenter at conferences worldwide. He conducted and hosted several process workshops, helping manufacturers around the world better understand the principles of Polymer Foaming & Process Control. He published a 53-page technical resource guide on Rotational Foam Molding, which is now in its second edition.

Laws is currently CEO of Halltech Systems, as well as a senior member of the executive team for Titan Fuel Tanks & Tango Manufacturing.



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

PIRC, Dept. 26
Pennsylvania College of Technology
One College Avenue
Williamsport, PA 17701
570.321.5533 • pirc@pct.edu • pct.edu/pirc

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, SEKISUI KYDEX, Toyota, West Pharmaceutical Services, and many more.

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.

PC 1502 11/21

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

One College Avenue | Williamsport, PA 17701-5799



ROTATIONAL MOLDING & ADVANCED MATERIALS WORKSHOP



PENNSYLVANIA
COLLEGE OF
TECHNOLOGY

PRESENTED BY
R. Dru Laws

MAY 11 & 12, 2022
WILLIAMSPORT



Sponsor: M. Holland

**PLASTICS INNOVATION & RESOURCE CENTER
& ASSOCIATION OF ROTATIONAL MOLDERS**

WORKSHOP DETAILS

Shell Polymers Rotational Molding Center of Excellence

was established in 2019 at Pennsylvania College of Technology to support applied research and development in the rotomolding industry.

The Rotational Molding & Advanced Materials Workshop

is an opportunity for industry professionals to take advantage of the resources at the Center while boosting their skillset with advanced training and collaborating with others in their field.

This two-day workshop offers specialized hands-on lessons in rotational molding, led by industry leader and operations expert R. Dru Laws. The workshop will highlight the connection between material preparation, molding, and final part quality. Participants will explore the latest materials and industry advancements. Designed for supervisors, lead operators, technicians, and engineers, this specialized offering will encourage networking to allow professionals to share industry experience.

NEW MACHINE

A new STP Rotomachinery Inc. LRM 1500 Laboratory In-Line Gas Shuttle is used in this workshop.



“This workshop has given me the knowledge and tools to be able to troubleshoot issues at my company. It was extremely useful coming from a non-plastic background.”

Sean Mazuchowski, Quality Engineer
Dutchland Plastics, Oostburg, WI

“Great course. Not only learned a lot during the course from the instructors, but also through discussion with others in the class as well.”

Jeremy Groves, Master Mold Maker,
CFS Brands, Oklahoma City, OK



CLASSROOM

SESSION 1

- Rotational molding
- Developments in molding technology

SESSION 2

- Molding from inside the mold (process controls and in-mold videos)
- Bubble formation and removal (material properties, venting, and pressure)
- Cooling methods and their effects on properties

SESSION 3

- Basic mechanisms of shrinkage and warpage
- Contributing factors to shrinkage and warpage
- Control factors (before, during, and after molding)

STRATEGIC PARTNERS



Association of Rotational Molders (ARM) promotes rotational molding worldwide and provides the tools to make good rotomolders and their suppliers great. The association provides sales and marketing assistance, holds annual and regional meetings, distributes technical publications and newsletters, and much more. For information on ARM, visit www.rotomolding.org.



The **SPE Rotomolding Division** is comprised of a prestigious group of scientists, engineers, educators, and professionals who continually advise the industry.

WORKSHOPS

SESSION 1

Material Preparation and Testing

- Features of grinding equipment and producing rotomolding powders
- Grinding parameters and their influence on quality
- Methods of evaluating powder quality

SESSION 2

Molding Parameters

- Benefits of mold temperature measuring system
- Effects of internal mold pressure on cross-section and surface finish

SESSION 3

Part Testing

- Low temperature (-40°F) drop-dart impact testing
- Impact tests and calculation on under-cured, good-cured, and over-cured parts
- Other test methods such as tensile, wall thickness, and density

SESSION 4

Multi-Layer Molding and Advanced Materials

- Range of material available for rotomolding and new developments (classroom session)
- Multi-layer molding with two-layer solid and foam cross sections (demonstration)

CANCELLATION

Penn College reserves the right to cancel a seminar. Registrants will be notified in case of cancellation. Penn College is not responsible for penalty fees or any costs incurred by the registrant due to cancellation of a seminar.

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

PLATINUM SPONSOR



REGISTRATION

Pre-registration is required, and includes course instruction with handout materials, morning refreshments, and lunch for two days. A complimentary networking dinner will be held day one. **Registrants are responsible for all other meals and lodging.**

Registration is limited and on a first-come, first-served basis. **Please wait for confirmation of enrollment before booking your flight.**

LOCATION

Pennsylvania College of Technology
Breuder Advanced Technology & Health Sciences
Center (ATHS), Room E140
206 College Avenue, Williamsport, PA 17701

DATES & TIMES

May 11 & 12, 2022

Wednesday & Thursday, 8:30 a.m.–4:30 p.m.

COST & REGISTRATION

\$1,095 (\$995 if registered by April 4, 2022)

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.

HOTELS

Registrants are responsible for making their own lodging arrangements. Registrants will receive a confirmation email with information on hotel room blocks with discounted rates at participating hotels.

AIRPORTS

The **Williamsport Regional Airport (IPT)*** provides commuter air service via American Airlines through Philadelphia, PA. Free shuttle service will be provided to and from the Williamsport Regional Airport, hotel, and College by our preferred hotels. A car rental (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

APPROPRIATE DRESS

Casual business/jeans attire is recommended for plastics processing and testing lab. Safety glasses will be provided.

*Present airline operation may vary.