

Our list of Paulson Certification Seminars taught by expert instructors in a city near you or virtually in a live cast. Want us to come to you? All Paulson seminars are available for customized instruction at your plant. Call us to learn more. Training is the pathway to profitability.



ProMolder 1™ 4 Days

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| January | 16-19 | Virtual Seminar |
| March | 11-14 | Charlotte NC |
| April | 16-19 | Virtual Seminar |
| June | 10-13 | Germantown WI |
| July | 22-25 | Markham ON |
| August | 20-23 | Chicago IL |
| September | 23-26 | Rocky Hill CT |
| November | 12-15 | Virtual Seminar |
| December | 03-06 | Virtual Seminar |

ProMolder 2™ 5 Days

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| February | 12-16 | Virtual Seminar |
| May | 20-24 | Virtual Seminar |
| August | 12-16 | Charlotte NC |
| October | 21-25 | Germantown WI |

ProMolder 3™ 5 Days

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| June | 24-28 | Charlotte NC |
| September | 09-13 | Charlotte NC |
| December | 09-13 | Rocky Hill CT |

ProMolder Troubleshooting 4 Days

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| February | 26-29 | Virtual Seminar |
| October | 08-11 | Virtual Seminar |

Profitable Molding for Managers 3 Days

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| January | 23-25 | Virtual Seminar |
| July | 16-18 | Virtual Seminar |
| November | 19-21 | Germantown WI |

ProExtrusion™ 5 Days

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| March | 04-08 | Virtual Seminar |
| November | 11-15 | Charlotte NC |

ProEx Blow Molding™ 3 Days

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| April | 02-04 | Charlotte NC |
| October | 15-17 | Big Rapids MI |

ProThermo Thin Gauge 3 Days

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| August | 12-17 | Virtual Seminar |
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Note: Please note that this schedule is subject to change. Please call Paulson at 860-526-3099 to confirm dates and locations prior to making travel arrangements.

***Discounts available:** Any company sending multiple attendees from one company to the same class is eligible for \$100 off for every additional person from the company who attends. Visit the Paulson website at www.paulsonplasticsacademy.com for additional terms and conditions or call us at 860-526-3099 for more information.

Paulson Certification Details: *Paulson Training Programs has an excellent reputation for developing highly qualified injection molding personnel who are sought after by the industry. To maintain this quality, we test each student at the end of the course with a written exam. Grades above 85% will earn a Gold Certificate of Achievement; 75% - 85% a Silver Certificate of Achievement; all others earn a Certificate of Completion.*

ProMolder 1: A 4-day classroom course includes a machine demonstration reviewing basic machine operations on either an Injection Molding Machine or Paulson's powerful injection molding machine SimTech™.

This Course is for: Technicians, Setup, Quality Personnel, and anyone with a need to improve their skill and understanding of injection molding.

Attendance Pre-requisites: None. There will be a short pre-assessment quiz before the class begins.

Course Summary: ProMolder 1 is an ideal class for anyone who wishes to understand the fundamental principles of injection molding or wants a scientific background on the molding process. There are no pre-requisites for this class, and it will cover the following topics with a written test at the end for certification.

- Molding Economics
- What are Plastics?
- The Molding Machine
- Molding from the Plastic's Point of View
- Mold Fundamentals
- Machine Operating Controls
- Molded Part Defects - Causes & Solutions
- Injection Molding Simulation with SimTech

Cost to attend: \$1,795* USD

ProMolder 2: A 5-day classroom and hands-on injection molding technology course

This course is for: Technicians, Setup Personnel, Lead Persons, Foremen, Process Engineers, and others who are, or will become, key production personnel in the future. *This course is designed for production personnel who:*

1. Need to understand the relationship of the molding machine controls to the plastic conditions in the mold and the resultant molded part properties.
2. Will benefit from practice in setting machine controls, observing the results, and solving molded part problems.

Attendance Pre-Requisites: A prerequisite to take this course is satisfactory completion of the *ProMolder 1 course* or passing grade of 80% or better of the pre-assessment test, *ProMolder 1 Proficiency Exam* provided by Paulson.

Course Summary: ProMolder 2 is a two-part course. The first part explains the plastic properties and behavior that affects part quality, the scientific basis, and the technology of molding. This is followed by a detailed analysis of common molded part defects, their causes, and solutions (attendees may bring molded part

examples their plants for analysis). The second part is hands-on molding practice using both the Paulson injection molding simulator* to provide each student hands-on practice in setting and observing the effects of each machine control on the plastic and the molded parts and problem-solving. This is followed by a molding laboratory on an actual machine to demonstrate some of the information previously taught and shown.

Class size – Limited to 16

Tuition: \$2,395* USD

ProMolder 3: An intensive 5-day hands-on injection molding technology course that includes time with Paulson's innovative injection molding simulator SimTech™. This is Paulson's most advanced scientific injection molding course.

This course is for: Technicians, Setup Personnel, Lead Persons, Foremen, Process Engineers, and others who are, or will become, key production personnel in the future. *This course is designed for production personnel who:*

1. Need to understand the relationship of the molding machine controls to the plastic conditions in the mold and the resultant molded part properties.
2. Will benefit from practice in setting machine controls, observing the results, and solving molded part problems.

Attendance Pre-Requisites: A prerequisite to take this course is satisfactory completion of the *ProMolder 1&2 courses*.

Course Summary: ProMolder 3 is a rigorous week-long course incorporating 80% of the time spent on machines and utilizing Paulson's injection molding simulator SimTech™. Topics covered include detailed explanations of plastic properties and behavior that affects part quality, the scientific basis and the technology of molding. This is followed by a detailed analysis of cycle optimization and advanced problem solving including in-depth discussions on common molded part defects, their causes and solutions (attendees may bring molded part examples from their plants for analysis). The majority of the class will be spent practicing classroom concepts on actual injection molding machines plus practice using SimTech™ in setting and observing the effects of each machine control on the plastic and the molded parts and problem-solving.

Class size – Limited to 16

Tuition: \$3,195* USD

Profitable Molding for Managers: A 3-day seminar teaching the business of Profitable Molding for Managers

This course is for: Mid-level managers such as Molding Managers, Production Managers, Supervisors, and anyone else with production and quality responsibilities.

Course Summary: The primary focus is on identifying, monitoring, and controlling the cost drivers of an injection molding plant. Cost drivers are those items which dictate how much profit is made. Managers of molding plants are swamped daily with a myriad of issues, many of the "immediate" variety. Those daily fires can obscure the important metrics by which success will be measured and achieved. A sampling of the important topics to be covered are:

- What cost drivers should I be monitoring?
 - Effective throughput
 - What does it mean?
 - How is it monitored?
 - What reports have the most meaning to the company's success?
 - Production data collection tools

- Material conservation
- Labor Content & Team Building
- Material content
- Machine and mold maintenance
- Establishing machine rates
- Quoting plastic parts
- Daily report summary
- Earnings estimator
- Basic Lean Manufacturing for a “Job Shop Environment”

Cost to attend: \$2,995* USD

ProMolder Troubleshooting: A 4-day virtual, live-streaming class, complete with hands-on SimTech Injection Molding Simulation Lab Lessons.

Attendance Pre-Requisites: A prerequisite to take this course is satisfactory completion of the *ProMolder 1 course* or passing grade of 80% or better of the pre-assessment test, *ProMolder 1 Proficiency Exam* provided by Paulson.

Course Summary: Paulson’s brand-new virtual seminar is designed to train production personnel to recognize and analyze injection molded part problems and defects from a scientific molding point of view.

Paulson’s instructors will teach injection molders, mold designers, and part designers how to identify and correct 11 of the most common and costly molded part problems: Voids, Sink Marks, Short Shots, Flash, Weld (Knit) Lines, Splay (Silver Streaks), Jetting, Burn Marks, Warp, Cracks and Part Breakage, and Controlling Molded Part Dimensions. Part defects are described and analyzed to show how each develops, including an explanation for the cause and affect method of problem analysis – a very valuable technique for analyzing and solving all types of production and management problems.

In addition, each participant will be engaged to solve specific part problems in a hands-on, interactive lab lesson using Paulson’s powerful injection molding machine simulation tool SimTech. This virtual, four-day seminar will give you the critical skills necessary to solve and troubleshoot any plastic part problem.

Cost to attend: \$1,795* USD

ProEx 1

There is something in this 5-day seminar for every level of experience. Whether you are an extrusion operator or an extrusion engineer, novice, or seasoned veteran, you will gain practical application and understanding with the principles taught in this seminar.

Course Summary: ProEx 1 is an ideal class for anyone who wishes to understand the fundamental principles of extrusion or wants a scientific background on the extrusion process. There are no pre-requisites for this class, and it will cover the following topics with a written test at the end for certification. Grades above 85% will earn a Gold Certificate of Achievement; 75% - 85% a Silver Certificate of Achievement; 70% -74% a Certificate of Achievement; all others a Certificate of Completion.

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| <ul style="list-style-type: none"> ● The Single Screw Extruder: Parts and Operation ● The Structure of Plastic Raw Materials | <ul style="list-style-type: none"> ● The Characteristics of Plastics for Extrusion ● Effects of Pressure, Temperature, and Flow |
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- Optimizing Extruder Controls
- Safety, Pre-Start, and Start-up Procedures
- Steady-State Operation, Shutdown, and Maintenance Procedures
- Single Screw Extruder Troubleshooting
- Plant Management Topics
- Sheet Extrusion Line Coextrusion
- Roll Stack Operation

Cost to Attend: \$2,095* USD

ProEx Blow Molding

ProEx 1 Blow Molding is a 3-day seminar for anyone who needs to understand blow molding technology. The course teaches the fundamentals of extrusion blow molding, including all of the knowledge that personnel must understand in order to make informed decisions on the production floor, and delivers advanced concepts using a scientific blow molding methodology.

ProEx Blow Molding offers Certification on Day 3. Three levels of Certification are awarded based on final scores – Gold level, Silver level and a Certificate of Achievement. Paulson Certification is the recognized standard in the plastics industry.

The main topics covered during this intensive 3-day seminar include:

- The Blow Molding Process and Equipment
- Plastic Behavior
- Extrusion Blow Molding Operating Controls
- Operating Procedures – Start-Up, Operation & Shutdown
- Part Quality and Problem Solving
- Parison Programming

Each day there is time set aside for team discussion, problem solving, and one-on-one with the instructor.

Cost to Attend: \$1,695* USD

ProThermo Thin Gauge: A 3-day seminar taught by thermoforming expert Mark Strachan.

This course is for: Operators, Setup personnel, Process Technicians, Maintenance Technicians, Process Engineers, Project Engineers

Course Summary: Thermoforming is one of the most common processes for making a wide variety of consumer and industrial plastic parts. It's also one of the fastest growing of the plastics manufacturing industries and employs thousands of personnel. While simple in concept, thermoforming is a complex process requiring knowledgeable and skilled personnel at all levels in the plant.

Through these six lessons, your personnel will learn the fundamentals of the thermoforming process, how to quickly solve problems and will develop advanced troubleshooting skills. You'll receive complete training on all aspects of day-to-day thermoforming production. The main topics covered in this seminar include:

- Shows and describes each step in the thermoforming process using actual in-plant footage and High-Definition 3D animation.
- Describes the behavior of the molten plastic and its effects on part properties.
- Explains the effects on the formed parts of each step in the process: heating, forming, and trimming.
- Covers extrusion and sheet extrusion fundamentals.
- Teaches how to optimize control settings, safety around the thermoforming machinery and thermoforming for maximum efficiency and profit.

Cost to attend: \$1,695* USD