



FordhamPlastics.com/Beaumont

AIM is home to our industry's only ANAB-Accredited training programs:

- Our unique Plastics Technology & Engineering (PTE) Certificate Program – the most comprehensive plastics training available outside of a university.
- Molders' Series training program – hands-on training for molders with three levels of education designed around a molder's roles and responsibilities within an organization.

AIM also offers:

- Online training options
- Subject-focused Development Courses
- Autodesk Moldflow training

PTE PROGRAM

Accredited, comprehensive plastics education for industry professionals

MOLDERS' SERIES

Accredited, hands-on training for processors

DEVELOPMENT COURSES

Subject-specific seminar courses

AUTODESK® MOLDFLOW®

Moldflow® courses for users of all levels

MOLD MAINTENANCE

A variety of maintenance courses providing education on specific topics

 American Injection Molding Institute

by  **Beaumont**

 Fordham Plastics

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(866) 467-0708

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DEVELOPMENT COURSES

Excellent resources for professionals seeking focused, subject-specific knowledge broken up over four half-day digital sessions.

- Plastic Materials
- Mold Design
- Injection Molding
- Part Design

AUTODESK MOLDFLOW COURSES

Build your Moldflow skills and work towards your Autodesk Certifications from your home or office.

Available Courses:

- Moldflow 101
- Autodesk Moldflow Insight: Fundamentals
- Autodesk Moldflow Insight: Advanced Flow
- Autodesk Moldflow Insight: Advanced Cool & Warp

PLASTICS BOOTCAMP

Introductory, core information needed to understand the basics of each function of the plastic injection molding industry.

Available Modules:

- Plastic Materials
- Mold Design
- Injection Molding
- Part Design
- Simulation Analysis

MOLDING MATH

A math course designed specifically for Molders to teach you the concepts needed for your job using realistic examples.

Course Highlights:

- Significant figures as applied to molding
- Clamp tonnage
- Shot size (weight & volume)
- Understanding molding graphs

RUNNER & GATING DESIGN STRATEGIES

Covering various aspects of plastic flow within an injection mold and covers design strategies for both hot and cold runner systems.

Course Highlights:

- Plastic Flow / Shrink / Warp
- Gate location & Sizing Strategies
- Calculating Shear Rate
- Hot & Cold Runner Systems & Strategies

FLOW GROUPING DIAGNOSTICS

Learn diagnostics methodology to identify the root cause of mold filling and part quality variations that occur during injection molding.

Course Highlights:

- Fundamentals Plastics Rheology
- Identify Flow Groups in Molds
- Analyzing Flow Grouping Data
- Applications for Hot Runner Molds

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AIM'S DEVELOPMENT COURSES

SUBJECT-SPECIFIC, FOCUSED 2-DAY SEMINARS

AIM'S Development Courses are an excellent resource for professionals seeking focused, subject-specific knowledge over a two-day period. Improve your understanding of the four key disciplines of the injection molding process and how each discipline impacts the final part.

PLASTIC MATERIALS

Better understand material properties and their relationship to the finished part

Course Highlights

- Review common root causes of shrink and warp, and strategies for reducing those issues
- Discussion of the relationships between material properties, including crystallinity and molecular weight, on part performance
- Recognizing pit falls of common part design guidelines and predicting/troubleshooting warp

MOLD DESIGN

Build your foundational knowledge of the 5 key systems of a mold and how each system affects final part quality

Course Highlights

- Hands-on mold tear down and reassembly
- Learn to identify common mold components and systems on mold prints
- Learn important questions to ask during a mold design review process and when troubleshooting a problem mold

INJECTION MOLDING PROCESSING

Learn the fundamentals of injection molding processing and strategies for optimizing process development and troubleshooting

Course Highlights

- Review mold bench test procedures and strategies for process development optimization
- Overview of various methods for identifying ideal fill times and shot sizes
- Review uses of simulation in process development
- Machine and lab demonstrations

PART DESIGN

Improve your ability to design for manufacturability and for performance over a product's life span based on its intended use

Course Highlights

- Review performance traits of plastic materials
- Discussion of the advantages and disadvantages of common part design guidelines
- Understand the relationship between part design, mold complexity, and product cost
- Application exercises: snap fits, press fits, and beams



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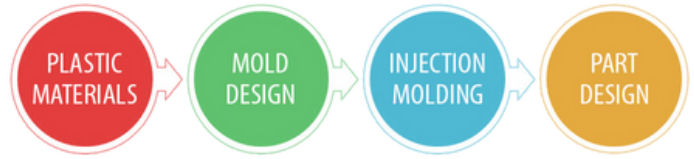
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PLASTICS 101

A 2-DAY INTRODUCTION TO THE INJECTION MOLDING INDUSTRY

Plastics 101 provides attendees with an overview of the four key pillars of the injection molding process, in addition to discussions on mold filling simulation and two hands-on labs.



COURSE OUTLINE

- Common industry terms & equations
- The history of plastics
- Plastic materials
- Material shrinkage
- Fundamentals of plastic flow
- Mold design
- Lab 1: mold tear-down and build
- Injection molding processing
- Common part defects and root causes
- Lab 2: Process Development
- Part Design
- Mold filling simulation

CONTINUING PLASTICS EDUCATION

Students can continue their education through AIM's higher-level courses:

DEVELOPMENT COURSES

Two-day, subject-specific seminars on Plastic Materials, Part Design, Mold Design and Injection Molding Processing.

PTE CERTIFICATE PROGRAM

Develop a comprehensive understanding of the complex interrelationship of each pillar and their influences on the final part.

MOLDERS' SERIES

This series of three courses is designed for processors of all experience levels. Students can earn the title of AIM Molding Engineer.

AUTODESK® MOLDFLOW® COURSES

Our series of courses can help both analysts and non-analysts improve their knowledge and understanding of Moldflow® software.

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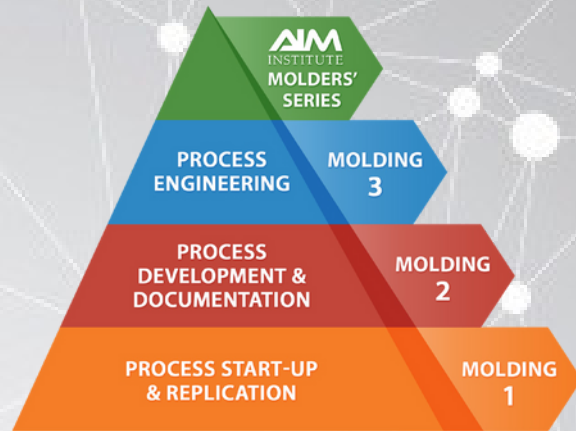
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MOLDERS' SERIES

HANDS-ON TRAINING FOR PROCESSORS

AIM's Accredited Molders' Series Program was designed to give molders the knowledge, confidence, and troubleshooting skills essential to be a successful molder, at any experience level. Each Molders' Series course mirrors a molder's roles and responsibilities within an organization.



MOLDING 1

Process Start-up and Replication

For employees new to processing

• WHAT'S COVERED?

- Safe start-up of a molding machine using a documented process
- Correctly restarting a molding process
- Recognizing common molding issues, including short shorts, flash, and moisture

• COURSE BENEFITS

- Decreased on-boarding time for new employees
- Reduced start-up and restart time
- Reduced scrap
- Reduced mold damage
- 5 days

MOLDING 2

Process Development and Documentation

For experienced processors

• WHAT'S COVERED?

- Fundamentals of injection molding mechanics, including the molding process and machine controls
- Standard knowledge of plastic materials, molds, part design, and their affects on processing
- Intermediate troubleshooting

• COURSE BENEFITS

- Ability to develop and document a molding process
- Enhanced ability to troubleshoot and solve more complex problems
- Two 1-week courses, separated by 8 weeks of online reviews

MOLDING 3

Process Engineering

For processors responsible for process development standards

• WHAT'S COVERED?

- Advanced knowledge of plastic materials, molds, part design, and their affects on processing
- Process transfers
- Applications of simulation
- Advanced troubleshooting

• COURSE BENEFITS

- Enhanced ability to solve complex problems
- Ability to communicate critical issues to and collaborate with cross-functional teams
- Improved efficiency and productivity
- Two 1-week courses, separated by 8 weeks of online reviews

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WHY CHOOSE FOR YOUR AUTODESK® MOLDFLOW® TRAINING?

• WE UNDERSTAND ALL ASPECTS OF SIMULATION

With our parent company Beaumont Technologies, we are the only location IN THE WORLD where you can find Autodesk® Moldflow® simulation services, material characterization, and software training under one roof.

• WE HAVE AN EXPERIENCED INSTRUCTOR TEAM

Our instructor team has decades of experience using simulation in the field. Our lead instructor is a Moldflow® and GM Certified Expert and regularly uses her analysis skills to help companies troubleshoot molding issues.

MOLDFLOW® INSIGHT FUNDAMENTALS

Learn fundamental features, functionalities, and workflows in Autodesk® Moldflow® Insight

- For new users of Autodesk®
- No prior analysis experience necessary
- Learn how to:
 - Complete Fill & Pack Analysis
 - Evaluate an injection molded part for manufacturability
 - Interpret the results of your simulation

MOLDFLOW® INSIGHT ADVANCED FLOW

Learn advanced features and complex analyses available in Autodesk® Moldflow® Insight

- Students must complete Moldflow® Fundamentals before registering
- Prior analysis experience required
- Learn how to complete analyses for:
 - Multiple gate locations & family tools
 - Insert overmolding and two-shot
 - Packing optimization
 - Design of experiments

MOLDFLOW® INSIGHT ADVANCED COOL & WARP

Learn advanced mold simulation aspects beyond those in Moldflow® Advanced Flow

- Students must complete Moldflow® Fundamentals before registering
- Prior analysis experience required
- Learn how to set up, run, and interpret:
 - Core deflection analysis
 - Cooling analysis
 - Warpage analysis
- Learn strategies for correcting warpage

MOLDFLOW® ADVISER

Learn features, functionalities, and workflows in Autodesk® Moldflow® Adviser

- For new users of Autodesk®
- No prior analysis experience necessary
- Learn how to:
 - Set up and run fill, cool, pack, and warp analyses
 - Create and evaluate runners and cooling lines
 - Interpret the results of your simulation

MOLDFLOW 101

FOR NON-USERS!
Understand the applications and limitations of simulation

- For the non-user looking to better understand simulation results
- Students will learn:
 - Applications & limitations of simulation
 - Identifying a poor simulation
 - Interpreting simulation results
 - Advanced simulation applications
 - The injection molding process

CUSTOM MOLDFLOW® COURSES

AIM will customize a Moldflow® course tailored to your workforce's current and desired skills

- Custom courses can be completed at AIM or held at your location
- Test prep for Associate and Professional Certifications available via Webex
- AIM also offers our catalog of Moldflow courses regularly at remote locations Visit AIM's website for the up-to-date course calendar

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MOLD MAINTENANCE, TROUBLESHOOTING & REPAIR

Learn a structured approach to mold maintenance, standard terminology, and more

Course Highlights

- Bench techniques such as which precision tools to use for a given situation
- How to clean molds efficiently (ultra-sonics, dry ice)
- The importance of defect position analysis to determine patterns and trends of maintenance issues • Basic mold types and terminology

HOT RUNNER TROUBLESHOOTING & REPAIR

Focus on how hot runner systems function, & various troubleshooting & repair techniques

Course Highlights

- Hot runner system designs, function, and key areas
- Troubleshoot, document, and layout out manifold systems using an ohmmeter
- Learning Ohm's Law and how it is applied during heater inspection
- How to wire, splice, repair, check resistance, heater verification, and replacement of various components

MOLD MAINTENANCE STRATEGIES

Ideal for personnel who are looking for ways to design, improve, and manage a busy mold repair shop

Course Highlights

- Effectively use computerized maintenance management software
- How to stop the "firefighting" culture
- How to utilize mold cleaning technologies
- Strategies for team building

MOLD COMPONENT WELDING, POLISHING, & REPAIR

Learn repair mold components, such as gate inserts and cores/cavities using a variety of welding and polishing techniques

Course Highlights

- Learn how to and perform laser welding
- Learn how to and perform TIG welding
- How to stone mold components
- The uses and issues of bluing and component fitting
- Considerations for polishing with hands-on labs

MOLD TEXTURE & REPAIR

Hands-on course entirely focused on mold texturing techniques

Course Highlights

- A deeper understanding of the texture and repair process in a hands-on educational manner
- How to address issues with Weld, EDM and HAZ
- How different steels and aluminum affect the texturing and repair process
- Functional and visual reasons for choosing a particular grain



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