

Advanced Light RTM Tooling September 12 - 15, 2016

Only 20 Spots Available - Register Today!

Register online via the link below or email
your registration form to
rachel.menges@compositesone.com.

<http://goo.gl/forms/f1aGaeVGol1tYW622>

See registration form for payment details.

Location:

Formashape
A Division of Whitewater Composites
9505 Haldane Road
Kelowna, BC, V4V 2K5

Cost:

\$500 USD per person
(Lunch and Graduation
Dinner Included)

Hotel Accommodations:

Holiday Inn Express
2429 Highway 97 North
Kelowna, BC, V1X4J2
\$125.00 - 2 Queens

www.tinyurl.com/KelownaWorkshopHolidayInn

Four Points by Sheraton

5505 Airport Way
Kelowna, BC, V1V 3C3
1-855-900-5505
\$139.00 - 2 Queens
\$139.00 - 1 King

www.tinyurl.com/KelownaWorkshopFourPoints

PARTICIPANTS UNDERSTAND THAT THEY WILL
RECEIVE CONFIDENTIAL INFORMATION AND USE OF
LIGHT RTM MOLDS AND THEY WILL NOT COPY SUCH
INFORMATION IN WHOLE OR IN PART.

Schedule of Events

Monday, Sept. 12 - 9:30 AM - 4:30 PM

- Economics of Light RTM
- Product Design for Process and Flange
- Light RTM Injection Demonstration
- A-Side Mold Construction
- Steps in LRTM Mold Building
- Light RTM Demonstration
- Light RTM Injection Demonstration

Tuesday, Sept. 13 - 8:00 AM - 4:30 PM

- Waxing Techniques
- Waxing Demonstration
- Design First Layer of Wax
- Light RTM Injection Demonstration
- Waxing First Layer

Wednesday, Sept. 14 - 8:00 AM - 4:30 PM

- Second Layer of Wax
- Light RTM Injection Demonstration
- Waxing Flange Details
- Start Lay-Up on B-Side
- Graduation Dinner

Thursday, Sept. 15 - 8:00 AM - 4:30 PM

- More Laminates on B-Side
- MVP Equipment
- Light RTM Injection Demonstration
- Supplier Presentations
- Finish Wax and Laminate on B-Side
- Gel Coating, Glass Loading, and Troubleshooting
- Mold Repair and Maintenance
- Questions and Answers

ClosedMold Alliance

Composites One • MVP
RTM North Technologies

Advanced Light RTM
Composites Tooling Training

4-DAY HANDS ON TRAINING

September 12-15, 2016

**Kelowna, BC
Canada**



Hands On RTM Composite Tooling Training

You will learn the basics of Light RTM Tooling including:

WHY RTM?

- Advantages and other options

PATTERN DESIGN AND PREPARATION

- Flanges, draft angles, and undercut considerations

BUILDING THE FACE TOOL

- Materials, their properties, and temperature controls
- Designing, building, and attaching the back-up frame
- Accurate location clamping and attachment system

DEFINING THE PART TO BE BUILT

- Working with dimensional wax
- Designing product cut-offs, vents, and peripheral seals
- Injection port location, multiple injection ports, and sensors
- Designing for ribs, cores, inserts, etc.
- Handling complicated shapes, undercuts, etc.

HOW TO ENSURE PART ACCURACY

- Controlling the problem of laminate shrinkage

BUILDING THE BACK TOOL

- Designing the frame and locking accuracy

TOOL LIFE AND CARE

- Replacing the tool faces

FINISHING AND PREPARATION OF THE TOOL

- Preparing the tool surface
- Release agents and their application
- Installing the mold seal
- Reinforcement materials replacement

GETTING STARTED

- Materials and resources

COSTING TOOLS AND PARTS

- Materials, wastage rates, and formulas for costing

RESIN SYSTEMS AND REINFORCEMENTS

- Review of available resin systems and properties
- Review of reinforcement applications and sources

FILLERS AND THEIR EFFECTS

- Impact on surface finish, part cost, and fire retardant
- Surface finish requirements

INJECTION MACHINES

- Features and benefits
- Catalyst and cure systems, production rates
- Preform materials, manual to fully automated

FLEX MOLDING

- Review of silicone bag systems
- Features and benefits
- Materials and start-up



Registration Form

Advanced Light RTM Composite Tooling Training

September 12 - 15, 2016

\$500 per registrant - Full payment is required with registration prior to

September 2, 2016

Name: _____ Title: _____

Company: _____

Address: _____

City: _____ Province: _____ Area Code: _____

Phone: _____ Fax: _____

Products currently being manufactured: _____

Please circle one: Fabricator Supplier Distributor Other

Registration and Payment Due Sept. 2, 2016

You may register online via the link below or email your registration form to rachel.menges@compositesone.com
<http://goo.gl/forms/flaGaeVG01tYW622>

Please send payment to:

RTM North
Attn: Doris Smith
43 First Avenue
Vaughan, ON N0M1L0

Please make checks payable to RTM North. Full payment is required with this registration. Registration will not be considered final until payment is received. All cancellations made ten working days prior to the commencement of the workshop will receive a full refund. Cancellations made less than ten days prior will be subject to a refund if there is a confirmed alternate. All cancellations must be made in writing.