

FOR WHOM

The course is open to everyone who wants to learn about the technology behind digital textile printing and specific application requirements. We welcome printers, print service providers, textile manufacturers, suppliers, developers, chemists and all those impacted by the shift to digital production processes. Participants will receive insights in the procedure of inkjet printing on textile materials and the workflow will be shown in a Textile Microfactory environment. The participants will be able to decide if and to what extent inkjet printing technologies can be applied in their own production. Participants do not need to have any special previous knowledge.

DATE

6-9 October 2020

LOCATION

Laboratories and conference rooms of the German Institutes of Textile and Fiber Research (DITF), Denkendorf.

NUMBER OF PARTICIPANTS

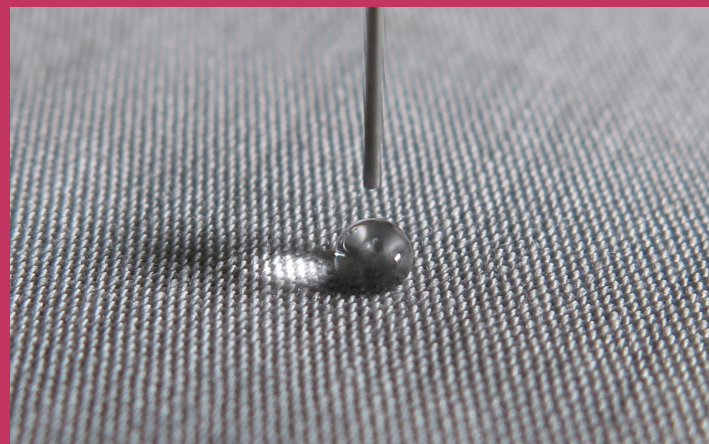
17-21. The maximum number of participants is limited due to the number of laboratory stations and rooms.

FEE

2,150 EUR



DIGITAL PRINTING ON TEXTILES HANDS-ON TRAINING AND BASIC PRINCIPLES WITH CERTIFICATE



TUTORS

- Dr Reinhold Schneider, DITF-ITCF
- Dieter Stellmach, DITF MR
- Alexander Artschwager, DITF-MR

ESMA CERTIFICATE

Participants will receive a certificate after attending all theoretical and practical sessions.

FURTHER INFORMATION

Location
DITF
Building G, Room 233
Körschtalstrasse 26
73770 Denkendorf



Recommended accomodation
the niu Timber hotel
Otto-Bayer-Str. 8
73730 Esslingen

Register online
[www.esma.com/
academy-tex](http://www.esma.com/academy-tex)

6-9 OCTOBER 2020, DENKENDORF

DITF
DEUTSCHE INSTITUTE FÜR
TEXTIL+FASERFORSCHUNG

ESMA
Driving Print Excellence

CONTACT: INFO@ESMA.COM

CONTENT OF THEORY BLOCKS

MATERIALS: Textile substrates, dyestuffs, textile auxiliaries, thickeners, fixation of dyes.

TEXTILE CHEMISTRY: Chemical textile pre-treatment, alkaline treatment, beaching, mercerisation, wetting, thermofixation, finishing.

PRE-TREATMENT: Influence on print quality, surface tension, hydrophobic and -philic finishing, binders, thickeners, cationic chemicals, dye specific pre-treatment.

POST-TREATMENT: Drying and fixation with heat, steaming, calendar, UV and LED fixation.

INKS: Ingredients, pigment grinding, dispersions, particle size, viscosity, rheology, surface tension, additives, formulation, degassing, filtration, functional inks.

CHARACTERISATION: Surface tension and contact angle, suction velocity, bending rigidity, colour measurement, contour sharpness, fastness properties.

COLOUR MANAGEMENT: Colour space, colour correction, calibration dessin, automated measurement, colour management software.

WORKFLOW AND MICROFACTORY: Dessin setup, software, colour calibration, print and cut simulation, fixation, sewing and assembling.

PROGRAMME

TUESDAY, 6 OCTOBER 2020

Afternoon

Material science	1h15
Textile chemistry	1h00
Inkjet pre-treatment	1h15

WEDNESDAY, 7 OCTOBER 2020

Morning

Inks and ink formulation	1h15
Printing and inkjet parameters	1h00
Post-treatment	1h00

Afternoon

Practical blocks 1 and 2	4h30
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CONTENT OF PRACTICAL BLOCKS

TEXTILE PRE-TREATMENT: Bleaching, alkaline treatment, thermofixation.

INKJET PRE-TREATMENT: Hydrophobic and hydrophilic treatment, treatment with water absorbing agents.

PRINTING: Printing with different inks on differently pre-treated textiles, printing of functional inks.

POST-TREATMENT: Thermofixation, steaming, UV-fixation, washing and rinsing of several imprinted textiles.

CHARACTERISATION: Measuring of surface tension and contact angle, suction velocity, bending rigidity, colour measurement, image analysis of printed substrates.

MICRO FACTORY: Manufacturing of an imprinted t-shirt, workflow demonstration.

THURSDAY, 8 OCTOBER 2020

Morning

Characterisation of textiles and textile prints	1h30
Colour management and calibration	1h30

Afternoon

DITF tour	1h15
Practical block 3	2h45

FRIDAY, 9 OCTOBER 2020

Morning

Workflow in the Micro Factory	1h15
Practical block 4: Micro Factory	1h45

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