



A new Fogra training option:
Expert knowledge in dialogue.

Sessions 2020/21

Fogra | **Web
Academy**

Fogra delivers up to the minute training worldwide that is totally focused on industry practice:

15 sessions in 2 blocks of Fundamentals or Specials.

- English language online courses
- Every Monday (from September 2020 onwards) at 9 a.m. and 5 p.m. CET / CEST
- Focus: Fundamentals of printing and media technology or a Special industry topic

Dialogue is a particular feature.

Participants will not just follow the presentation on their screens but will be able to ask questions and engage in live discussions with the course leader.

The flat rate covers the 2 blocks.

The flat rate price for all employees of a company depends on the company's size, starting from €495 (Fogra members) or €707 (non-members).

Your achievement will be recognized.

Attendance certificate: if an employee takes part in at least half the sessions.

Graduation certificate: if participants pass a test at the end of each block they will receive a Fogra Graduate Fundamentals or Fogra Graduate Specials certificate. As further recognition, all graduates will be listed on the Fogra Graduates platform.

Booking: www.fogra-shop.com/Fogra-Web-Academy



Dr Uwe Bertholdt
Security Applications



Jürgen Gemeinhardt
Head of Printing Technologies



Florian Hirschhalmer
Security Applications



Dr Andreas Kraushaar
Head of Prepress Technologies



Dr Marco Mattuschka
Prepress Technologies



Berthold Oberhollenzer
Prepress Technologies



Dr Philipp Stolper
Head of Materials & Environment



Ludwig Zins
Printing Technologies



Monika Lohmaier
Manager Academy

Do you have any questions?

Send an email to info@fogra.org or call us at +49 89 431 82 - 0

Fogra | Web Academy 2020

07.09.	14.09.	Session 1	
09:00	17:00	What you see is what you measure: CIELAB & ΔE	F
17:00	09:00	Speaking the same "language": communicate colour	S
21.09.	28.09.	Session 2	
09:00	17:00	What you see is what you get: colour measurement	F
17:00	09:00	Handling complaints in offset printing	S
05.10.	12.10.	Session 3	
09:00	17:00	From fiber to paper	F
17:00	09:00	Standardization in offset printing I: standards, workflow & optical measurements	S
19.10.	26.10.	Session 4	
09:00	17:00	From pigment to ink	F
17:00	09:00	Hello future: digital transformation of the printing industry	S
02.11.	09.11.	Session 5	
09:00	17:00	Mastering colour reproduction	F
17:00	09:00	Create - Print - Check: from Power Point to print ready files	S
16.11.	23.11.	Session 6	
09:00	17:00	How-to: sheet fed offset	F
17:00	09:00	Special effect inks: colorimetry	S
30.11.	07.12.	Session 7	
09:00	17:00	How-to: web offset	F
17:00	09:00	Standardization in offset printing II: aim values & tolerances	S

F Fundamentals S Specials

Fogra | Web Academy 2021

11.01.	18.01.	Session 8	
09:00	17:00	Be prepared: typical failures of heatset-printed products	F
17:00	09:00	Standardization in offset printing III: mastering influences on process parameters	S
25.01.	01.02.	Session 9	
09:00	17:00	How-to: digital printing	F
17:00	09:00	Printing the Expected: ProcessStandard Digital (PSD)	S
08.02.	15.02.	Session 10	
09:00	17:00	How-to: gravure	F
17:00	09:00	LED the future start: UV curing	S
01.03.	08.03.	Session 11	
09:00	17:00	How-to: flexo & screen printing	F
17:00	09:00	Standardization in offset printing IV: CTP & modern screenings	S
15.03.	22.03.	Session 12	
09:00	17:00	Packaging printing: rigid & flexible	F
17:00	09:00	Colour management essentials for digital printing	S
29.03.	06.04.	Session 13	
09:00	17:00	The beauty of perfection: print finishing	F
17:00	09:00	Standardization in offset printing V: certification according to PSO (ISO 12647)	S
12.04.	19.04.	Session 14	
09:00	17:00	Bookbinding: taking the bind out of binding	F
17:00	09:00	Colour goes 3D: capture, processing & printing	S
26.04.	03.05.	Session 15	
09:00	17:00	Tips & tricks for colour reproduction	F
17:00	09:00	Campaign printing: matching colours from press to press	S

What you see is what you measure: CIELAB & ΔE

The colour space CIELAB is the link between our visual perception and technical means to generate colour. Having coordinates for colour is nice-to-have but colour difference measures are of even greater importance.

In this session you will learn:

- How CIELAB is defined
- How to evaluate colour and colour differences
- Does and Don'ts when defining spot colours

Who should attend?

Everyone who wants to gain or refresh knowledge of colour specification basics.

Dates: 07.09. at 9 a.m. CEST and 14.09. at 5 p.m. CEST | Course leader: Dr Andreas Kraushaar

Speaking the same "language": communicate colour

A printed product always starts with an idea of colour. We show how to communicate safely through a modern, automatized workflow so that the colour of the finished product matches the idea – as accurate as possible. Learn also why colour sometimes cannot be reproduced as expected, and how to handle this.

In this session you will learn:

- How to define your print jobs in an unambiguous way
- The standards and technical terms you need to know
- Colour reliable workflows
- Communication of spot colours

Who should attend?

Brand owners, print buyers and print professionals on the production site who like to have an overview, gain a better understanding and improve their colour communication.

Dates: 07.09. at 5 p.m. CEST and 14.09. at 9 a.m. CEST | Course leader: Berthold Oberhollenzer

What you see is what you get: colour measurement

Colour is a human perception. Since we are unable to see in the dark, light plays a key role for colour perception and influences the colours we see. Colorimetry is the symbiosis of measurement and visual perception.

In this session you will learn how:

- Objects, light and the human eye interact
- How to measure prints and displays
- How a spectrum becomes a colour

Who should attend?

Everyone who wants to gain or refresh knowledge of colour specification basics.

Dates: 21.09. at 9 a.m. CEST and 28.09. at 5 p.m. CEST | Course leader: Dr Andreas Kraushaar

Handling complaints in offset printing

Print shops, paper and ink manufacturers or other parties involved in the production chain often face complaints by their customers. No matter if the issue is paper or ink related or caused by the printing process itself, metrological evaluation methods can serve as an objective basis for solving the problems.

In this session you will learn:

- What is necessary for handling complaints
- The influence of paper/ink combination on the print result
- How to test and identify critical materials
- Best measures to overcome the problems

Who should attend?

Everyone who handles complaints: print buyers, suppliers and print shops.

Dates: 21.09. at 5 p.m. CEST and 28.09. at 9 a.m. CEST | Course leader: Ludwig Zins

From fiber to paper

After 2000 years of existence paper is still the most important substrate to print on. Paper is responsible for at least 50% of the cost of printed matter and has excellent recyclability.

In this session you will learn how:

- Fibers form paper
- Paper effects printed colour
- Paper effects print run efficiency

Who should attend?

Everyone who wants to gain or refresh knowledge of paper aspects in printing.

Dates: 05.10. at 9 a.m. CEST and 12.10. at 5 p.m. CEST | Course leader: Dr Uwe Bertholdt

Standardization in offset printing I: standards, workflows & optical measurements

The session is the 1st part of a series called "Standardization in offset printing", which is made up of five parts altogether. It teaches all relevant fundamentals needed for an economic print production with reliable colour rendering. Starting points are the ProcessStandard Offset (PSO) and the ISO 12647-2.

In this session you will learn:

- Which standards are relevant for offset printing
- How a basic workflow with ICC profiles looks like
- How to measure solid tone colours and tone value increases

Who should attend?

Print personnel, technical employees and executive staff, for whom process control is an essential tool to achieve high quality and stable production in offset printing.

Dates: 05.10. at 5 p.m. CEST and 12.10. at 9 a.m. CEST | Course leader: Jürgen Gemeinhardt

From pigment to ink

Ink is essential for the colours of print. In addition, ink must meet different printing requirements (i.e. for news print and food packaging), be technical resistant and enable special optical effects.

In this session you will learn how:

- Ink is made
- Ink dries after printing
- Ink is tested

Who should attend?

Everyone who wants to gain or refresh knowledge of ink aspects in printing.

Dates: 19.10. at 9 a.m. CEST and 26.10. at 5 p.m. CET | Course leader: Dr Uwe Bertholdt

Hello future: digital transformation of the printing industry

Digital transformation has reached the printing industry. Established ways of thinking and working are being turned upside down. Innovative companies secure their market position while others disappear from the scene. Learn the basics to digitize your own processes.

In this session you will learn:

- What "Industry 4.0" stands for
- Data Mining: overview of methods of data analysis
- Basics of Artificial intelligence (AI)

Who should attend?

Everyone who is involved in the realisation of a company's digital transformation.

Dates: 19.10. at 5 p.m. CEST and 26.10. at 9 a.m. CET | Course leader: Dr Marco Mattuschka

Mastering colour reproduction

It is not necessary to print every colour of an image to achieve good colour reproduction. The less different inks are necessary, the more effective is print. We show the mechanism of colour mixing in print.

In this session you will learn how:

- Colour reproduction for CMYK-based printing is mastered
- Printing conditions are characterized
- Spot colours and optical brightening are used

Who should attend?

Everyone who wants to gain or refresh knowledge of colour reproduction basics in print.

Dates: 02.11. at 9 a.m. CET and 09.11. at 5 p.m. CET | Course leader: Dr Uwe Bertholdt

Create – Print – Check: from Power Point to print ready files

While everybody is talking about Industry 4.0, many colour and print related problems are caused by non-printable or non print ready data, often at a great expense. We show how to create and check print ready data from applications like MS Office and present automatized solutions helping you to cut costs and regain colour confidence.

In this session you will learn how to:

- Analyze and check files to see if they are printable or not
- Convert from application formats like MS-Office into print-ready files
- Automatize in order to cut costs

Who should attend?

Prepress professionals and everyone who wants to know more about print ready data and automatization.

Dates: 02.11. at 5 p.m. CET and 09.11. at 9 a.m. CET | Course leader: Berthold Oberhollenzer

How-to: sheet fed offset

Sheet fed offset printing (lithography) is still the most powerful sheet fed printing process. The print quality is outstanding and the bench mark for all other printing processes. Substrates, inks, presses and other consumables are manifold.

In this session you will learn how:

- Lithography is working
- Paper, ink, fountain solution, blankets and presses interact
- Modern presses are designed in principle

Who should attend?

Everyone who wants to gain or refresh knowledge of sheet fed lithography basics.

Dates: 16.11. at 9 a.m. CET and 23.11. at 5 p.m. CET | Course leader: Dr Uwe Bertholdt

Special effect inks: colorimetry

"Eye-catching" is an established method for advertising. Non-standard optical perceptions are used to gain our attention and to highlight prints.

In this session you will learn how:

- Metallic appearance is caused
- Fluorescence works
- Metallic and fluorescent effects might be characterized

Who should attend?

Specialists in colour measurement, package printers and security printers.

Dates: 16.11. at 5 p.m. CET and 23.11. at 9 a.m. CET | Course leader: Dr Uwe Bertholdt

How-to: web offset

Web offset printing combines good print quality and high productivity. Most of our advertisements and volume magazines are produced with this printing technique.

In this session you will learn how:

- Heat set web offset works
- News print is performed
- End consumer products are produced directly from the press

Who should attend?

Everyone who wants to gain or refresh knowledge of web offset printing basics.

Dates: 30.11. at 9 a.m. CET and 07.12. at 5 p.m. CET | Course leader: Dr Uwe Bertholdt

Standardization in offset printing II: aim values & tolerances

The session is the 2nd part of a series called "Standardization in offset printing", which is made up of five parts altogether. It teaches all relevant fundamentals needed for an economic print production with reliable colour rendering. Starting points are the ProcessStandard Offset (PSO) and the ISO 12647-2.

In this session you will learn:

- How to implement PSO and ISO 12647-2 in printing practice
- How to classify printing papers
- Aim values and tolerances for solid tone colours and tone value increases

Who should attend?

Print personnel, technical employees and executive staff, for whom process control is an essential tool to achieve high quality and stable production in offset printing.

Dates: 30.11. at 5 p.m. CET and 07.12. at 9 a.m. CET | Course leader: Jürgen Gemeinhardt

Be prepared: typical failures of heatset-printed products

Typical for heatset web offset is its active ink drying process. This "heat treatment" also has an impact on the printing paper. It causes a lot of effects and failures, the print shops and/or customers have to deal with.

In this session you will learn:

- Typical failures of heatset print products
- How to avoid/minimize these effects
- How to test paper for its heatset printing suitability

Who should attend?

Everyone who handles complaints and wants to get a deeper understanding of the drying-related side-effects of heatset printing: print shops, suppliers and print buyers.

Dates: 11.01. at 9 a.m. CET and 18.01. at 5 p.m. CET | Course leader: Ludwig Zins

Standardization in offset printing III: mastering influences on process parameters

The session is the 3rd part of a series called "Standardization in offset printing", which is made up of five parts altogether. It teaches all relevant fundamentals needed for an economic print production with reliable colour rendering. Starting points are the ProcessStandard Offset (PSO) and the ISO 12647-2.

In this session you will learn:

- The main influences on tone value increases
- About colour changes during ink drying
- How varnishing influences the process parameters

Who should attend?

Print personnel, technical employees and executive staff, for whom process control is an essential tool to achieve high quality and stable production in offset printing.

Dates: 11.01. at 5 p.m. CET and 18.01. at 9 a.m. CET | Course leader: Jürgen Gemeinhardt

How-to: digital printing

Digital is king? Improved quality and speed, trends for smaller production runs and individualization paved the way for the growing share of digital printing technologies over 10 years. We show the interplay between press, paper and front end (digital printing conditions) and how all this is addressed in standardization.

In this session you will learn:

- Basics of digital printing technologies
- Importance of digital printing conditions ("combinations")
- Process control and quality assurance: Fogra ProcessStandard Digital (PSD)

Who should attend?

Everyone who wants to gain a deeper knowledge of digital printing technologies, standards and use cases for which digital printing is really king.

Dates: 25.01. at 9 a.m. CET and 01.02. at 5 p.m. CET | Course leader: Dr Andreas Kraushaar

Printing the Expected: ProcessStandard Digital (PSD)

For almost a decade PSD is the standard tool in digital printing. We show how to work according to PSD, cut costs through standardized workflows, control quality and print the expected.

In this session you will learn:

- Concept and benefits of PSD
- How to incorporate PSD in your daily quality routines
- How to improve quality control
- Possibilities to certify according to PSD

Who should attend?

Everyone who wants to dive deep into the world of standardized digital printing.

Dates: 25.01. at 5 p.m. CET and 01.02. at 9 a.m. CET | Course leader: Berthold Oberhollenzer

How-to: gravure

Gravure printing is the most productive of all printing processes, but requires cost and time consuming preparations. Magazines of variable size can be produced on every press. The print quality is outstanding.

In this session you will learn how:

- Gravure printing is performed
- Printing cylinders are engraved
- Gravure printing quality is achieved

Who should attend?

Everyone who wants to gain or refresh knowledge of gravure printing basics.

Dates: 08.02. at 9 a.m. CET and 15.02. at 5 p.m. CET | Course leader: Dr Uwe Bertholdt

LED the future start: UV curing

The technology of UV curing of printing inks has been known and established on the market for years. Nevertheless, there is often still uncertainty about the use of this technology, also due to the change in lamp technology.

In this session you will learn how:

- UV curing works ("conventional" and LED)
- Pros and cons of this technology can be evaluated
- The degree of curing is determined
- UV curing does not affect environment and health

Who should attend?

Everyone who wants to understand and use UV curing techniques for own benefit.

Dates: 08.02. at 5 p.m. CET and 15.02. at 9 a.m. CET | Course leader: Dr Philipp Stolper

How-to: flexo & screen printing

Flexo printing gains market share as its print quality has significantly improved. Screen printing is the traditional method for low volume prints. It stands out because of the large film thicknesses and is therefore ideal for functional printing.

In this session you will learn how:

- Printers introduce flexibility in their flexographic printing formes
- Printing forms (flexo & screen) are manufactured
- Presses (flexo & screen) are designed

Who should attend?

Everyone who wants to gain or refresh knowledge of flexo and screen printing basics.

Dates: 01.03. at 9 a.m. CET and 08.03. at 5 p.m. CET | Course leader: Dr Uwe Bertholdt

Standardization in offset printing IV: CTP & modern screenings

The session is the 4th part of a series called "Standardization in offset printing", which is made up of five parts altogether. It teaches all relevant fundamentals needed for an economic print production with reliable colour rendering. Starting points are the ProcessStandard Offset (PSO) and the ISO 12647-2.

In this session you will learn:

- How to correct tone value increases in the CTP RIP
- How to control your CTP adjustments
- Features of non-periodic and hybrid screenings
- How to implement modern screenings in printing practice

Who should attend?

Print personnel, technical employees and executive staff, for whom process control is an essential tool to achieve high quality and stable production in offset printing.

Dates: 01.03. at 5 p.m. CET and 08.03. at 9 a.m. CET | Course leader: Jürgen Gemeinhardt

Packaging printing: rigid & flexible

Rigid packagings are made from folding box board and corrugated board, flexible packagings are made from different flexible materials (e.g. foils, compounds). Folding and corrugated boxes are printed in flexography and sheet fed offset while flexible packagings are printed in either flexography or gravure.

In this session you will learn how:

- Different foils are printed
- Food packages are produced
- Different combinations of printing processes are used

Who should attend?

Everyone who wants to gain or refresh knowledge of packaging printing basics.

Dates: 15.03. at 9 a.m. CET and 22.03. at 5 p.m. CET | Course leader: Dr Uwe Bertholdt

Colour management essentials for digital printing

While in conventional printing colour management and printing were separated, in digital printing both parts are one unit – and were from the beginning. We show you the essentials of colour management you need to know in order to get the colour you want. We present practical examples from different digital technologies like electrophotography, high speed and large format inkjet printing.

In this session you will learn:

- Basics of colour management
- How to print the expected – get the colour you want
- How to establish quality control
- Data formats for digital printing

Who should attend?

Press operators, print shop owners and everyone who wants a deeper understanding of colour management for digital printing and improve colour reliability.

Dates: 15.03. at 5 p.m. CET and 22.03. at 9 a.m. CET | Course leader: Berthold Oberhollenzer

The beauty of perfection: print finishing

Print finishing with its many possibilities creates a high added value for print products. In this session an overview of varnishing, film lamination and foil transfer techniques is given – which technique is best for which product and where are the limits?

In this session you will learn how to:

- Decide for a print finishing technique
- Enable optimal print finishing results
- Identify errors
- Test varnished and film laminated sheets

Who should attend?

Everyone who wants to gain or refresh knowledge of print finishing basics.

Dates: 29.03. at 9 a.m. CEST and 06.04. at 5 p.m. CEST | Course leader: Florian Hirschhalmer

Standardization in offset printing V: certification according to PSO (ISO 12647)

The session is the 5th part of a series called "Standardization in offset printing", which is made up of five parts altogether. It teaches all relevant fundamentals needed for an economic print production with reliable colour rendering. Starting points are the ProcessStandard Offset (PSO) and the ISO 12647-2.

In this session you will learn:

- The benefits and requirements of a PSO certification
- How to become a PSO certified print shop
- The onsite test procedure

Who should attend?

Print personnel, technical employees and executive staff, for whom process control is an essential tool to achieve high quality and stable production in offset printing.

Dates: 29.03. at 5 p.m. CEST and 06.04. at 9 a.m. CEST | Course leader: Jürgen Gemeinhardt

Bookbinding: taking the bind out of binding

The more demanding a book project is, the more important is its optimal conception: selection of materials, production techniques and process control. We show the main steps from printed sheets to the finished softcover book in perfect binding.

In this session you will learn how to:

- Make the right decisions for a book project
- Use correct bookbinding terms
- Manufacture softcover books in principle
- Identify quality factors of a book

Who should attend?

Everyone who wants to gain or refresh knowledge of bookbinding basics.

Dates: 12.04. at 9 a.m. CEST and 19.04. at 5 p.m. CEST | Course leader: Florian Hirschhalmer

Colour goes 3D: capture, processing & printing

Full-colour 3D printing opens up new possibilities and markets. However, colorimetric capture, processing and printing in 3D is a challenge. In this session we show how colour management in 3D works.

In this session you will learn:

- Procedures for 3D data capture
- Data processing in 3D
- The full-color 3D printing process

Who should attend?

Everyone who wants to learn more about the possibilities of 3D printing.

Dates: 12.04. at 5 p.m. CEST and 19.04. at 9 a.m. CEST | Course leader: Dr Marco Mattuschka

F

Tips & tricks for colour reproduction

Theory will be reduced to an absolute minimum – we show how you can improve your colour reliability from the practical side: from the creation in Adobe CC to checking prints for conformance according to PSD and other standards.

In this session you will learn:

- Practical tips for Adobe CC
- The preflight of PDF files
- Calibrate monitor / softproofing / standardized viewing conditions
- Tips & tricks for colour measurements

Who should attend?

Everyone who wants to see a colour reliably workflow from the practical side.

Dates: 26.04. at 9 a.m. CEST and 03.05. at 5 p.m. CEST | **Course leader:** Berthold Oberhollenzer

S

Campaign printing: matching colours from press to press

A nightmare: A follow-up job has to be printed on a different press. The customer will almost certainly complain about the colour and all my profits are gone with this job. Or should I try this colour management magic thing? A situation, many print shops know too good. We show why this does not have to end up in a nightmare and that there is no magic needed to improve this situation.

In this session you will learn how to:

- Match colour on different presses
- Use standards, terms and all the tools you need
- Deal with physical limitations of this approach and how to handle them
- Implement a new concept: common colour appearance

Who should attend?

Everyone who wants to know more about matching colours on different presses.

Dates: 26.04. at 5 p.m. CEST and 03.05. at 9 a.m. CEST | **Course leader:** Berthold Oberhollenzer