



PaperClassroom offers

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Dr Steven Mann is an accredited training provider with the National Skills Academy, and a member of the Institute for Learning:



SHORT COURSES

1 DAY Introduction to Papermaking	2 DAY Appreciation of Papermaking	3 DAY COURSE
Brief history of papermaking	Brief history of papermaking and global production volumes	Brief history of papermaking, global volumes and grades
Sources of fibre used in papermaking	Fibres: Sources, Hardwoods softwoods and non-woody Difference between chemical and mechanical pulps Chemical composition of wood	As for 2-day plus more detail on fibre structure and the inter-relationship between fibre properties and sheet properties.
Sources of water	Water: Sources and contaminants	As for 2-day plus methods of treatment
Types of chemicals used in papermaking	Difference between Process aids and Functional aids	As for 2-day plus a more detailed look at the chemicals used
Wet end equipment	Stock preparation equipment, fibre dispersion and refining Contamination removal in the approach flow.	As for 2-day plus development of refiners and mechanisms of refining. Measurement of flow and consistency
Flow box and wire The dandy	Flow box evolution Single, multi-wire and vat machines. The dandy Tissue machines	As for 2-day plus manifold evolution, drainage mechanism on the forming table
Why and how we press	Types of press Camber Importance of press Felts	As for 2-day plus cleaning of press felts
Drying on cylinders Resistance to heat flow	Anatomy of a drying cylinder Resistance to heat flow Siphons Pocket ventilation The size Press	As for 2-day plus single tier verses double tier drying. Dryer felts. Efficient use of steam.
Cutting sheets and slitting rolls	Off machine processes Calendaring Coating Corrugating Slitting/Sheeting Printing processes Basics of Process Control	As for 2-day plus more detail on calendaring and testing of paper

Participants of the 1 and 2 day courses will receive an Attendance Certificate from the National Skills Academy.

Participants of the 3 day courses will have the option to receive an Attendance Certificate or an Achievement Certificate, should they wish to take an end of session test.

EXTENDED COURSES

These courses, delivered on site, usually 1 week per month, are written in conjunction with the mill, and are appropriate for those wishing to take the exam for the Level 2 or Level 3 Certificate in Paper Technology.

The course is designed to cover the syllabus of the Certificate, but is written around the equipment and activities of the mill. Wherever possible, examples from the mill will be used, such as photographs, raw materials and mill procedures.

The course content will include extensive use of the FOCUS learning materials, other videos, practical activities where possible, and 'mind mapping' exercises.

Between the sessions participants will be given an in-mill task to complete.

There are progress tests throughout the study period and there are revision exercises on the PaperClassroom website.

LEVEL 2 UNITS

Unit No.	Unit Name	Credit Value
PT2.01	The History of Papermaking	3
PT2.02	Basic Science for Papermaking	3
PT2.03	Fibres used in Papermaking	3
PT2.04	Process Water and Chemical Additives used in Papermaking	3
PT2.05	Wet End Processes in Papermaking	3
PT2.06	Dry End Processes in Papermaking	3
PT2.07	Plant Services in Papermaking	3

LEVEL 3 UNITS

Pathways

Papermaking Processes - Paper

Unit No.	Unit Name	Credit Value
PT3.01	Sheet Formation of Paper in Papermaking	3

Papermaking Processes - Board

Unit No.	Unit Name	Credit Value
PT3.02	Sheet Formation of Board in Papermaking	3

Papermaking Processes - Tissue

Unit No.	Unit Name	Credit Value
PT3.03	Sheet Formation of Tissue in Papermaking	3

Optional Units

Learners must achieve 4 Optional Units.

Unit No.	Unit Name	Credit Value
PT3.04	Pulping Processes in Papermaking	3
PT3.05	Processing New Fibres in Papermaking	3
PT3.06	Processing Recycled Fibres in Papermaking	3
PT3.07	Pressing Water from Paper and Board	3
PT3.08	Drying Paper and Board	3
PT3.09	Coating and Surface Modifications used in Papermaking	3
PT3.10	Paper and Board Finishing	3
PT3.11	Wet End Chemistry in Papermaking	3

PICK & MIX COURSES

In response to requests from the industry, PaperClassroom is pleased to offer this new short course format.

<p><u>INTRODUCTION</u> History of paper from the wasp to the web. Includes recent statistical data</p>		<p><u>FIBRES</u> Wood and non-wood sources. Fibre architecture and composition.</p>		<p><u>PULPING</u> An overview of the main pulping processes</p>
	<p><u>BASIC CHEMISTRY</u> Atomic structure, valence and bonding</p>		<p><u>FIBRE DISPERSION</u> HC/LC pulping Drum Pulping Dispersers & Deflakers</p>	
<p><u>WORKING ON FIBRES</u> From the hammer mill to the disc. Refining strategy, mechanisms and evaluation.</p>		<p><u>SCREENS & CLEANERS</u> Developments and operation of pressure screens and centrifugal cleaners</p>		<p><u>CONSISTENCY MEASUREMENT</u> Measuring devices, techniques and problems</p>
	<p><u>FIBRES</u> Wood and non-wood sources. Fibre architecture and composition.</p>		<p><u>FLOWBOX</u> Evolution of the manifold and flow box. Effects of efflux ratio and other variables</p>	
<p><u>FOURDRINIER</u> Sheet formation on a single wire. Effects of shake, drainage elements and fabric</p>		<p><u>MULTI-WIRE MACHINES</u> Twin wire formers and Fourdrinier. Multiwire board machines</p>		<p><u>VAT MACHINES</u> Their evolution from the vat to the pressure former</p>
	<p><u>TISSUE</u> From the Fourdrinier to the Crescent former and the complex chemistry of the Yankee</p>		<p><u>THE SIZE PRESS</u> Evolution and operation of the size press</p>	
<p><u>PRESSING</u> Press types and their evolution. Clothing and its maintenance.</p>		<p><u>CONTACT DRYING</u> The ins and outs of the drying cylinder section</p>		<p><u>PIGMENTED COATING</u> Pigments, binders and additives. Basic coating techniques</p>
	<p><u>RETENTION</u> An introduction to retention mechanisms and zeta potential</p>		<p><u>CHEMICAL ADDITIVES</u> Functional aids, and process aids. Their properties and use.</p>	

+ more

These courses are delivered in-house according to the following schedule.

09.00-09.15	Introductions
09.15-10.00	Session 1
10.00-10.45	Session 2
10.45-11.00	Break
11.00-11.45	Session 3
11.45-12.30	Session 4
12.30-13.15	Lunch
13.15-14.00	Session 5
14.00-14.45	Session 6
14.45-15.00	Break
15.00-15.45	Session 7
15.45-16.30	Session 8
16.30-16.45	Feedback and close

- ✓ Up to EIGHT modules can be delivered each day
- ✓ Up to TWELVE people per session
- ✓ Full text notes provided
- ✓ FOCUS Multimedia used
- ✓ Other video as appropriate

If there is something else **you** want, but it is not listed, PLEASE ASK.

PaperClassroom works with and supports the following organisations

- | | |
|------------------------------------|--|
| ✓ TWA People Development | tw@twapeopledevelopment.com |
| ✓ Paper Technics | mail@papertechnics.com |
| ✓ Level2Level | terryhowell.level2level@hotmail.co.uk |
| ✓ PAA\ VQ-SET | info@paa-uk.org |
| ✓ FOCUS Multimedia Training | http://www.focustraining.eu/ |
| ✓ IMD Consulting | IMCLDAVIS@aol.com |
| ✓ Papierzentrum Gernsbach | http://www.papierzentrum.org/ |

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