

Courses



TAPPI Introduction to Pulp and Paper Technology Course

January 7-10, 2008 St. Petersburg, Florida, USA

Special Benefits for Participants

- ▶ Get a comprehensive overview of the entire pulping and papermaking process
- ▶ See how one part of the mill affects another
- ▶ Learn from Dr. Mike Kocurek, one of the industry's leading instructors
- ▶ Find out how different processes affect paper properties
- ▶ Get personalized answers to specific questions and operating problems

"Being a control technician, it has been very helpful in understanding the processes better."
— Previous Course Attendee

TAPPI Introduction to Pulp and Paper Technology Course

January 7-10, 2008 • St. Petersburg, Florida, USA

► Who Should Attend?

This course is ideal for anyone new to the pulp and paper industry, suppliers and mill professionals seeking an overview of the industry, operators seeking more fundamental knowledge, and non-technical personnel in areas such as administration, finance and management.

► Benefits of Attending

Attend this comprehensive, four day course and gain increased confidence in understanding the pulp and paper processes. Learn to interact more knowledgeably with process engineers and operators. Increase your ability to contribute to improving mill operations.

► Course Overview

This comprehensive course delivers a broad overview of pulping and papermaking technology, and the entire pulping and papermaking process, from raw materials and wood preparation, to pulping and paper mill operations. Participants will discover:

- how the process affects paper & board quality and properties
- how one part of the mill affects the other parts of the mill

This course is unique by providing information on how one part of the mill influences another, and how the raw materials, pulping, and papermaking processes affect paper and board properties.

One of TAPPI's most popular courses, the Introduction to Pulp and Paper Technology Course has kept up with modern practices and the needs of today's professionals, and remains one of TAPPI's best-rated courses. The last time this course was offered, 93% of the participants said the course quality was excellent or good, and 96% said it would be useful in their work.

► Learning Outcomes

After successfully completing the course, participants should be able to:

- Demonstrate knowledge of a comprehensive overview of the pulp and paper industry, mill operations, products, process variables, equipment, and terminology.
- Describe how one part of the mill affects another.
- Explain the importance of thinking on a mill wide basis.
- Discuss how the pulp and paper processes affect product properties, in order to improve product quality and troubleshoot variations in quality.
- Recognize the complex environmental challenges associated with pulp and paper manufacturing.

"The course gave me a better knowledge of the processes and terms they use in the paper mills. I use the resources from the course all the time to help my clients"

— Previous Course Attendee

Paper Technology Course

Preliminary Course Schedule

MONDAY, JANUARY 7 PULPING TECHNOLOGY

SESSION 1: 8:00 A.M. - 12:00 P.M.

OVERVIEW OF INDUSTRY

- Industry trends, statistics and information sources

WOOD AND FIBER RAW MATERIALS

- Discuss wood and fiber sources
- Differences between hardwoods and softwoods, and important fiber properties that affect paper properties

PREPARATION OF WOOD AND CHIPS FOR PULPING

- Woodyard operations including debarking, chipping, screening, storage, and recovery

SESSION 2: 1:00 P.M. - 5:00 P.M.

OVERVIEW OF PULPING

- Primary categories, including chemicals and cooking conditions
- General pulping terminology
- Common pulp properties and tests

KRAFT PULPING

- Major types of equipment used in pulping
- Overview of primary operations in the digesters
- Major pulping variables
- Overview of some major kraft pulping trends

MECHANICAL AND SEMI-CHEMICAL PULPING

- Primary mechanical pulping processes
- Mechanical vs. chemical and hybrid pulp properties

5:00 P.M.

- Networking Hour with Refreshments

TUESDAY, JANUARY 8

SESSION 3: 8:00 A.M. - 12:00 P.M.

PULP PROCESSING

- Overview of fiber line pulp processing
- Major equipment types and key operating variables

BLEACHING

- Bleaching trends, equipment, chemicals, bleaching reactions
- Identify generally process variables for the major bleaching sequences

SESSION 4: 1:00 P.M. - 5:00 P.M.

RECYCLING

- Categories of recycled paper and board
- Types of contaminants associated with recycled paper and the problems they cause
- Overview of the different operations and equipment involved with contaminant removal

CHEMICAL RECOVERY

- Overview of the major recovery operations, including evaporation, combustion, and recausticizing
- Composition and properties of black liquor and what happens in the evaporators and recovery units
- How pulping liquor is regenerated in recausticizing
- Lime kiln operations at an overview level

WEDNESDAY, JANUARY 9 PAPER TECHNOLOGY

SESSION 5: 8:00 A.M. - 12:00 P.M.

INTRODUCTION TO PAPER GRADES AND PROPERTIES

- Important paper and board properties and tests, including strength, optical and printing properties

PAPER MILL STOCK PREPARATION

- Refining process, primary effects on fibers, and the effects of refining on paper machine operations and paper properties
- Primary additives used in paper, including strength adhesives, pigments, sizing, and retention aids

SESSION 6: 1:00 P.M. - 5:00 P.M.

PAPER MACHINE WET END OPERATIONS

- Stock approach system operations prior to the paper machine
- Two main types of Headboxes used in papermaking and their internal operations
- Sheet forming process, slice operations, fiber orientation, formation, microturbulence, dewatering, and sheet structure variations
- Sheet forming operations and paper properties
- Forming fabrics

THURSDAY, JANUARY 10

SESSION 7: 8:00 A.M. - 12:00 P.M.

PRESSING

- Different types of press section configurations and what happens in a press nip
- What happens to the sheet during pressing
- Pressing variables and trends

DRYING

- Drying operations at an overview level, including dryer can internal operations with steam and condensate, major water removal rate differences, and major equipment & operating variables that affect rate of drying
- How drying and sheet shrinkage affect paper and board properties; and the role of felts, draw, and sheet restraint
- Overview of tissue machine yankee drying and creping operations

CALENDERING AND WINDING

- Different types of calenders
- Sheet properties and examination of the major calendaring variables
- Winding and roll finishing operations

SESSION 8: 1:00 P.M. - 3:00 P.M.

SURFACE TREATMENTS

- On machine size press operations, including equipment types and the variables that affect starch pick up in the size press
- Primary components in a coating, including pigments, adhesives, and additives
- Differences between roll, air knife, and blade coaters
- Drying of coating, equipment and mechanism

EFFLUENT TREATMENT

- Overview of primary and secondary effluent treatment

Course Instructor

Michael J. Kocurek, Ph.D., has been teaching TAPPI's Introduction to Pulp and Paper Technology Course for more than 30 years. Dr. Kocurek is Head of the Wood and Paper Science Department at North Carolina State University. Prior to joining North Carolina State University, he served as director of the Herty Foundation in Savannah, GA for ten years.



Kocurek also served as chairman of the Paper Science and Engineering Department at the University of Wisconsin/Stevens Point and as a Professor of Paper Science. Dr. Kocurek is a TAPPI Fellow and TAPPI's 1992 Distinguished Service Award winner.

Course Materials

Course participants will receive a set of course notes containing materials to supplement presentations made during the course. The cost of the course notes is covered in the registration fee.

CEUs

The Education Project Center of TAPPI has been reviewed and approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1620 I Street, NW, Suite 615, Washington, DC 20006. TAPPI will award 2.6 CEUs to participants who attend at least 80% of the educational sessions and complete a final program evaluation.



Save by Registering Early!

Save by registering early! Fees are \$1395 for TAPPI Members and \$2095 for non-members who register by December 10, 2007. Three or more TAPPI members from the same location who register together can register for \$995 each. After December 10, 2007 fees are \$2330 for TAPPI members and \$3495 for non-members. To register, use the attached form or register online at www.tappi.org. For more information or to register by phone, please call the Registration Department at 1 (800) 332-8686 (US), or +1 (770) 446-1400. You can also Fax your form to +1 (770) 209-7206. By mail: TAPPI, P.O. Box 933644, Atlanta, GA USA 31193-3644.

Hotel

The Introduction to Pulp and Paper Technology Course will be held at the Hilton St. Petersburg Bayfront, 333 1st Street South, St. Petersburg, FL, 33701. Please contact the hotel by phone: 1 (800) 445-8667 or +1 (727) 894-5000 or fax: (727) 823-4797 or online at www.stpetehilton.com to make your room reservations. Be sure to reserve your room by December 14, 2007 to take advantage of TAPPI's special room rate of \$124 plus tax per night, single or double occupancy.

Delta Air Lines - TAPPI's Official Airline for Conferences, Meetings and Events

TAPPI events. For Special Rates, book your flight online at the course web page at www.tappi.org. Simply scroll to the bottom of the webpage and click on the Delta Logo.



Discounted Car Rental

Both Hertz and Avis offer discounted car rental rates to course participants.

Avis offers special discounts off regular rates for course participants. To reserve your car, call 1 (800) 831-8000 and refer to the code AWD: #U226600.



Save \$5 a day up to \$25 off your rental car during the course. This special offer is valid one week before through one week after the January 7-10, 2008 course dates. Make your reservations online at www.hertz.com using your CDP #1752380 and Promotional Code #105825. Or, call 1 (800) 654-2210 in the U.S.



5 Easy Ways to Register

Registration

- 1 Mail**
TAPPI, P.O. Box 933644
Atlanta, GA 31193-3644, USA
- 2 Online**
Go to www.tappi.org
- 3 Fax** completed registration form to +1 (770) 209-7206
- 4 Phone**
1 (800) 332-8686 (US)
1 (800) 446-9431 (Canada) or
+1 (770) 446-1400 (Worldwide)
- 5 Wire Transfer**
Call +1 (770) 446.1400 for details!

GENERAL INFO & GUARANTEE

Expenses for continuing education taken to maintain or improve professional skills may be tax deductible. Certain restrictions apply. Check with your accountant for details. At TAPPI, we stand behind the quality of our courses. If you are not completely satisfied that the course delivered what was promised, we will refund your registration fee.

CANCELLATIONS

If you find that you have to cancel, your full registration fee will be refunded if TAPPI's Registration Department receives written notification (fax acceptable at +1 (770) 446-6947 by (December 17, 2007).

Please Note: There will be a 50% refund for all written cancellations made after (December 17, 2007) but no later than 5 business days prior to the start of the course (December 31, 2007). Understandably, after this time, no refunds can be issued. Substitutions, however, will be accepted any time without a penalty.

INFORMATION

Last Name _____
First Name _____ Middle Initial _____
Name for Badge _____
Job Title _____
Company _____
TAPPI Membership Number _____
Street Address _____
City _____ State _____
Zip _____ Country _____
Work Phone _____ Fax _____
E-mail address _____

REGISTRATION FEE (Check Only One)

| | By December 10 | After December 10 |
|------------------------------------------------------------------------------|----------------|-------------------|
| <input type="checkbox"/> Member | \$1395 | \$2330 |
| <input type="checkbox"/> Non-Member | \$2095 | \$3495 |
| <input type="checkbox"/> Multiple Registrants* (3 or more: TAPPI members) | \$995 | \$1980 |
| (3 or more: non-members) | \$1570 | \$2970 |

*registrants must be from the same company and all registrations must be submitted together to qualify for this rate.

TAPPI Membership Fee

- Renew my membership for 12 months \$174
 Join TAPPI now \$174

Add applicable GST or HST tax for Canadian membership

PAYMENT OPTIONS

- I have enclosed my check for the full amount. (If you are not paying by credit card, please return this form with a check)
- Bill my credit card. (Complete credit card information below)
- AMEX Diner's Club Visa MasterCard Discover

Card # _____

Exp. Date _____

Signature _____

- Check here if you have special requirements, and we will contact you. 

The contact information you provide may be used by TAPPI or its business associates to notify you of items that may be of interest to you. I understand that under certain laws and regulations, TAPPI must have my written permission in order to communicate with me via fax or email. I hereby give TAPPI, TAPPI's business associates, the TAPPI Foundation, and TAPPI's Local Sections written permission to communicate with me via:

- fax and/or email

Signature and date _____

Please photocopy this form as necessary for multiple registrants.