

Courses



TAPPI Introduction to Pulp and Paper Technology Course

January 11-14, 2010 *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

"I now have a better understanding of the production process which will allow for better troubleshooting in the future."

— Previous Course Attendee

TAPPI Introduction to Pulp and Paper Technology

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► 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. 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.

► Course Overview

This 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

One of TAPPI's most popular courses, the Introduction to Pulp and Paper Technology Course provides participants with an overall understanding of paper mill processes, and remains one of TAPPI's best-rated courses. The last time this course was offered, 100% of the participants said the course quality was excellent or good.

► Learning Outcomes

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

- Demonstrate increased knowledge of the pulp & 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 many of the complex environmental challenges associated with pulp and paper manufacturing.

"This course has given me a better overall understanding of paper mill processes. It helps put 'pieces' together."

— Previous Course Attendee

Paper Technology Course

Preliminary Course Schedule

MONDAY, JANUARY 11 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 12

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

PULP PROCESSING

- Overview of fiber line pulp processing including washing, screening and cleaning
- Major equipment types and key operating variables

BLEACHING

- Bleaching processes, including oxygen delignification, caustic extraction, peroxide, and others
- Bleaching equipment, chemicals, and reactions
- Trends and environmental issues

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 13 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 14

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 calendering 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

Dr. Michael Kocurek is Professor of Paper Science & Engineering at North Carolina State University. He is one of the most recognized educators in the paper industry. His teaching focus is on Pulp & Paper Technology, and Paper Properties. Since 1970, he has taught undergraduates, graduates, and in-mill courses for over 3,000 industry professionals and operators for over 50 paper industry corporations and government agencies. He has served as the sole instructor for this course since 1974, and brings extensive experiences to communicate to students.



Mike is the editor of 11 books and over 60 video modules on pulp & paper technology. He has served as Department Head at NC State, Executive Director of the Herty Foundation, an agency of the state of Georgia, and as Chairman and founder of the Department of Paper Science at the University of Wisconsin- Stevens Point.

He is a TAPPI Fellow and Distinguished Service Recipient. In 2005, he was inducted into the Paper Industry International Hall of Fame, an honor bestowed on those who have made preeminent contributions to the global pulp & paper industry.

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 15, 2009. Three or more TAPPI members from the same location who register together can register for \$995 each. After December 15, 2009 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: +1 (727) 823-4797 or online at www.stpetersburg.hilton.com to make your room reservations. Be sure to reserve your room by December 15, 2009 to take advantage of TAPPI's special room rate of \$139 plus tax per night, single or double occupancy.

Discounted Car Rental

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.



5 Easy Ways to Register

- 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 15, 2009.

Please Note: There will be a 50% refund for all written cancellations made after December 15, 2009 but no later than 5 business days prior to the start of the course January 4, 2010. Understandably, after this time, no refunds can be issued. Substitutions, however, will be accepted any time without a penalty.

Registration

Introduction to Pulp and Paper Technology Course • St. Petersburg, Florida, USA • January 11-14, 2010

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INFORMATION

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

REGISTRATION FEE (Check Only One)

	By December 15	After December 15
<input type="checkbox"/> Member	\$1395	\$2330
<input type="checkbox"/> Non-Member	\$2095	\$3495
<input type="checkbox"/> Multiple Registrants* (3 or more: TAPPI members) (3 or more: non-members)	\$995 \$1570	\$1980 \$2970

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

TAPPI Membership Fee

Renew/Join TAPPI - Annual Membership \$174

Non-US members please add US\$14 for postage fee

METHOD OF PAYMENT

(All fees must be paid in U.S. Dollars and must accompany registration forms)


Enclosed is check number _____ for the full amount of \$ _____
Please make checks payable to TAPPI in US Dollars
 and mail to: TAPPI, P.O. Box 933644, Atlanta, GA 31193-3644, USA

Wire Transfer: \$ _____ was wired as payment on _____ (date)

Please bill my credit card. (Complete credit card information below)

AMEX Diner's Club Visa MasterCard Discover

Credit Card # _____
 Exp _____
 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.

**Register by
December 15, 2009 and Save!**

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