TAPPI Academy can help get you there.
WHAT IS TAPPI ACADEMY?

TAPPI Academy is the premier technical education and training center of excellence for the worldwide pulp, paper, packaging, tissue and converting industries. This suite of training resources delivers:

- Access to Respected, Award-Winning, Subject-Matter Experts
- Most Comprehensive Curriculum Compared to Content Elsewhere
- Peer-Reviewed, Antitrust and Anti-Commercial Compliant Curriculum
- TAPPI’s Worldwide Credibility Derived from 100+ Years in Industry Service

We invite you to explore the many resources offered through TAPPI Academy. Where you have questions, we’re available to help!

Online: www.TAPPI.org/Academy
Email: training@TAPPI.org
Phone: 770-209-7222

Education and Training Today

Even in the best of times, manufacturing is often impacted by economic or demand fluctuations, regulatory changes or labor shortages. The COVID-19 pandemic is an event that’s challenging mills to approach daily operations differently by observing travel limitations, telework options and social distancing measures.

While face-to-face events may be on hold, training remains a critical business priority for long-term employee satisfaction and efficiency for the success of your organization. After all, with operations in many sectors continuing at peak production, employee and team training should, too!

TAPPI is the oldest and largest membership organization serving all sectors of the pulp, paper, packaging and converting industries worldwide. TAPPI.org/Membership
TO ADVANCE YOUR CAREER

TAPPI Academy resources are excellent stepping stones for your own career path. With so many options, choosing a first step or planning ahead may feel challenging.

Invest Time for Education
Set aside dedicated time to scan TAPPI Academy resources to find training resources that apply directly to your role at work. Many options are free with TAPPI membership, such as documents and articles found in eLibrary or convenient webinars that often take less than an hour to view. You can follow a sustained training path similar to the one below to integrate TAPPI Academy resources into a long-term educational plan.

Coordinate with Your Supervisor
Schedule a discussion with your manager about areas where you may need additional knowledge and skills to perform to the best of your ability. Ask about the growth potential with your position and what training or certifications you’ll need to get there. You may also want to share with your manager the research you’ve compiled using TAPPI Academy resources to identify other topics and products that would help you reach your goals.

Prepare Supporting Materials
Conferences and face-to-face training events may also have travel expenses to consider. TAPPI provides printable materials to help you justify costs and communicate the return on investment for specific training.

TO ADVANCE YOUR WORKFORCE

TAPPI Academy is an invaluable go-to if you assist others with employee training or manage workforce development within your organization.

We can help you plan and integrate a long-term process for training that can be tailored to fill shortfalls and reach objectives.

Consider a TAPPI Company Classroom for Customized Training
Many of TAPPI’s training courses can be tailored to fit your company’s specific needs, time and budget. A Company Classroom can be designed for one or multiple days, and delivered as blended learning, an online course or onsite at your location. You set the variables!

TAPPI.org/Company Classroom

Company Licensing Available for eLearning
TAPPI Academy eLearning resources provide excellent training options for your entire company or team. Site licenses are beneficial for groups of employees, extending the reach of the curriculum and allowing for training flexibility.

TAPPI.org/eLearning

Team Training Plan
As you get started, consider these steps for your organization:
1. Conduct a Needs Assessment Survey
   Ask managers to identify skills needed on their teams.
2. Analyze Staffing Changes
   Determine knowledge shortfalls from new hires, retirements, or performance evaluations.
3. Assess Training Options
   Match company training needs with learning outcomes, curriculum topics, and instructor expertise. TAPPI can walk you through this!
4. Outline Training Recommendations
   Summarize goals, time required, expenses and ROI. Reach out to training@tappi.org with your questions.
A co-worker told me about [the TAPPI Wet End Chemistry Course] and I wanted to gain a foundation in paper machine optimization and properties of starch and protein binders, materials, and equipment.

Introduction to Kraft Pulping and Bleaching Course

Kraft pulping mill operations and the effect of processes on kraft pulp quality

I have a better understanding of the answers.

Chemical Additives

Starch cooking and wet end chemistry

Paper Manufacturing Technology

Overview of papermaking technology, process variables, equipment, and terminology

Paper Properties & Testing

Paper and board physical tests, optical tests, strength tests, process testing

Stock Preparation

Stock prep to headbox, centrifugal cleaner, deaeration, thin stock screening, and more

Storage and Shipping

Preventing paper roll damage, storage and tracking, truck trailer loading, racking loading

Advances in Papermaking Application Technologies

This book describes the most important advances in papermaking wet end chemistry applications over decades. Highlights how recent progress in equipment, automation, and procedures are providing papermaking efficiency plus uniformity and end-use performance of products. Available at TAPPI.org/Bookstore

On Your Watch

TAPPI Academy webinars offer more than 80 webinars that are brief (typically one hour or less) and convenient wherever you are.

Work routines interrupted by the pandemic influenced a dramatic shift to remote training options in 2020. Access to TAPPI Academy webinars increased by more than 400 percent!

We thought you might be interested in the most-watched webinars this past year:

- The Benefits of a Risk-based Pressure Vessel and Storage Tank Inspection Program
- Paper Quality Measurement – Past, Present and Future
- Paper Properties and Testing Labs
- Paper Manufacturing Technology
- Paper Properties & Testing
- Stock Preparation
- Storage and Shipping
- Web Handling
- Wet End Chemistry
- Wet Pressing
- White Water and Filtrate Systems
- Pulp and Paper Technology
- Kraft Recovery Operations Course
- Paper Coating Technology
- Paper Machine Auxiliary Systems
- Paper Machine Dryers
- Paper Machine Operations Course
- Paper Machine Optimization
- Paper Properties & Testing Labs
- Stock Approach
- Stock Preparation
- Chemical Additives
- Converting
- Dry End Equipment
- Finishing
- General Papermaking
- Headboxes
- Introduction to Kraft Pulping and Bleaching Course
- Introduction to Pulp & Paper Technology
- Introduction to Printing Course
- Introduction to Wet End Chemistry Course
- Web Winding: Machines
- Wet End Chemistry
- Wet Pressing
- White Water and Filtrate Systems
- Web Handling
- Wet End Chemistry
- Wet Pressing
- White Water and Filtrate Systems
- Paper Education

Please go to TAPPI.org/Academy or TAPPI.org/Bookstore for more information.
Pulp Education

Bleaching
Alkaline extraction, bleaching equipment, recycling, oxygen delignification

Chemical Recovery
Chemical recovery operations, terminology, equipment and process variables

Evaporators
Black liquor evaporator operations, equipment, principles, testing

Environmental
CNCO and contaminated condensate systems, HVC, and wastewater systems

Environmental Control
U.S. environmental laws/regulations, air emission treatment and more

Fiber Supply
Fiber supplied to the pulping process: log handling, chip screening and testing and more

Introduction to Pulp & Paper Technology
Technology overview of how and why things happen in pulp and paper processes

Virtual Event TAPPI.org/INTRO

“TAPPI’s Kraft Recovery Operations Course gave me a better understanding of recovery overall. The reference materials were useful and the presenters were absolute experts in their field.”

Pulp Manufacturing Technology
Overview of pulping, pulp processing, bleaching technology, process variables, equipment

Pulp Properties & Testing Labs
Lists of procedures used to analyze raw materials, chips, pulp and more

Recaust
Dregs washing, electrostatic precipitators, exhaust gas scrubbers, green liquor clarifiers and more

Recovery
Fluidized bed boilers, recovery recovery boilers, baghouses

Technology and Science of Paper Recycling
Recycling processes: quality of the raw materials, environmental requirements, cost reduction and more

Supplemental and Recycled Fiber
OCC and supplemental and recycled fiber processes

Online

Brownstock Washing
Provides knowledge for pulp mill employees at any level. This book reviews current state-of-the-art methods for designing and operating brownstock washing systems. Available at TAPPI.org/Bookstore

Black Liquor Evaporation
Kraft pulp and black liquor production worldwide, properties relevant to evaporation, evaporation fundamentals, design principles and analysis for black liquor evaporation, auxiliary processes, scaling and fouling in black liquor evaporators, and terminology

Kraft Recovery Boilers, Third Edition
Covers chemical principles, black liquor properties, sprays and combustion/char bed characteristics, fouling, plugging, sootblowing, corrosion and cracking, emissions, safety, and control design principles. The book is coauthored by eight experts who have served as instructors for the Kraft Recovery Operations Course for many years. Available at TAPPI.org/Bookstore

Online

Introduction to Kraft Pulping and Bleaching Course
Kraft pulp mill operations; effect of processes on Kraft pulp quality

Virtual Event TAPPI.org/KPCB

“The Intro to Kraft Pulping and Bleaching Course helped me become more productive. The washing and bleaching sections were particularly appreciated. It’s good to reinforce what I already know and fill in the gaps.”

Pulp Property & Testing Labs
Labs of procedures used to analyze raw materials, chips, pulp and more

Chemistry Course
TAPPI.org/IWECC

“Face-to-Face Event TAPPI.org/BOOK/999

“Please go to TAPPI.org/Academy or TAPPI.org/Bookstore for more information.

Corrugated Education

Advanced Bonding Course
Increases understanding of corrugated bonding process, variables impacting bond performance, bonding settings, glue line analysis, combined board caliper, process centering

Face-to-Face Event TAPPI.org/ADV/BOND

Best Practices on the Corrugator Course
Supports achieving higher productivity for better product quality board, waste reduction, settings for peak performance, critical properties of raw materials

Face-to-Face Event TAPPI.org/BEST/CORR

Board Tests
Tests used to predict stacking performance of bases, performance during handling, tests used to monitor corrugating and converting operations at box plants, flat crush test (FCI), warp test, pin adhesion test

Online

Box Plant Equipment Basics
Common box plant equipment and processes, discusses equipment layout, material flows, storage considerations

Online

Corrugated Adhesives
Background of corrugating adhesives, describes purpose or function of ingredients in modern, starch-based adhesives

Online

Corrugated Packaging Box Basics
Fundamental overview of equipment, materials, and processes

Online

Corrugated Box Basics
Common industry terms, describes popular corrugated board and corrugated box styles, corrugated box usage considerations

Online

Corrugators
Corrugating process, wet end components, preconditioning, preheating, corrugating and pressure rolls, adhesive application, double face glue unit, hot plate section, dry end, stacker, and double, triple wall corrugators

Online

Die Cutters
Corrugated board and box making equipment, design and operation of rotary and platen die cutters, in-line sectional die cutter machines

Online

Flexo Folder-Gluers
Design and operation of the machine sections of a flexo folder-gluer, feed section, printing section, creaser-slotter, die cutter, glue lap unit, folding section, delivery end

Online

Introduction to Corrugated Course
Develops abilities in developing, understanding, and communicating common corrugated language to identify and resolve quality issues on the corrugator

Virtual Event TAPPI.org/INTROCORR

Other Box Plant Equipment
Design and operation of box plant equipment, printer slotters, folder gluers, stitchers, tapers, laminators, presses, 180°-laminators, bundles and palletizers

Online

Raw Materials
Wood fiber sources, chemical pulping, papermaking processes, and various glues, inks, and coatings used in the production of corrugated board and corrugated boxes

Online

Safety
Safe work behavior, equipment safety hazards, stored energy hazards, chemical hazards, emergency stops, vehicle and pedestrian hazards within box plants

Online

Corrugated Containers Manufacturing Process
Comprehensive textbook describes the entire process of manufacturing corrugated containers; provides in-depth content for professionals working in all areas of corrugated containers

Available at TAPPI.org/Bookstore

TAPPI utilizes the expertise of The Packaging School as an exclusive licensee of the professional packaging curriculum developed at Clemson University. Learn more about this valuable partnership at TAPPI.org/packagingschool

Additional titles include:

NEW! Packaging 101 Boot Camp
Corrugated Containers
Paperboard Cartons
Sustainable Packaging

Packaging Foundations
Packaging Laws and Regulations
Packaging Distribution
Packaging Design Workflow

Packaging Machinery
Packaging Printing
Glass Packaging
Metal Packaging
Polymers in Packaging

Packaging School.com

Please go to TAPPI.org/Academy or TAPPI.org/Bookstore for more information.
## Tissue Education

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Introduction to Tissue Converting Course</strong></td>
<td>Comprehensive overview of tissue converting line operations</td>
<td>Online</td>
</tr>
<tr>
<td><strong>Introduction to Tissue Packaging Course</strong></td>
<td>Offers an overview of tissue packaging operations</td>
<td>Online</td>
</tr>
<tr>
<td><strong>Tissue 101: Properties &amp; Processes Course</strong></td>
<td>Introductory training designed for anyone who needs a comprehensive overview of tissue manufacturing; increases students’ understanding of tissue performance properties and process effect on product performance</td>
<td>Online (TAPPI.org/TS101)</td>
</tr>
<tr>
<td><strong>Tissue 201: Operations &amp; Runnability Course</strong></td>
<td>Intermediate - to advanced-level course focused on improving tissue quality and consistency and understanding contributors to waste and downtime; covers reliability and maintenance best practices, troubleshooting</td>
<td>Online (TAPPI.org/TS201)</td>
</tr>
<tr>
<td><strong>Tissue Operations and Runnability Course</strong></td>
<td>Professional Certificate ensures demonstration of competency in critical tissue manufacturing knowledge</td>
<td>Exam for Certificate</td>
</tr>
<tr>
<td><strong>Tissue 202: Converting Operations Course</strong></td>
<td>Intermediate instruction on basic rolled products converting processes, tissue parent roll (jumbo reel/soft roll) quality and variability, and impacts the runnability of these complex lines; includes a tour and demonstration through a working pilot plant at Fabio Perini North America</td>
<td>Face-to-Face Event (TAPPI.org/TS202)</td>
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## Flexible Packaging Education

<table>
<thead>
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<tbody>
<tr>
<td><strong>Blown and Cast Film Extrusion Course</strong></td>
<td>Covers common resins and equipment used in blown and cast film applications; film extrusion technology, improving existing extrusion processes</td>
<td>Face-to-Face Event (TAPPI.org/BCFE)</td>
</tr>
<tr>
<td><strong>Extrusion Coating Symposium</strong></td>
<td>Intermediate-to-advanced course delivers basic resin and equipment technology (extruders, dies, and auxiliary equipment) for extrusion coating applications; covers common process problems in extrusion coating</td>
<td>Face-to-Face Event</td>
</tr>
<tr>
<td><strong>Extrusion Coating Manual, 5th Edition</strong></td>
<td>The most comprehensive, hands-on manual covering the extrusion coating process, materials, equipment, and products for engineers, technicians, operators, and managers. Available at TAPPI.org/Bookstore</td>
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</tr>
<tr>
<td><strong>The Ultimate Roll and Web Defect Troubleshooting Guide</strong></td>
<td>Considered an imperative guide for troubleshooting roll and web defects; a communication tool for suppliers and their customers to assist in the identification and elimination of roll and web defects. Available at TAPPI.org/Bookstore</td>
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## Tissue Manufacturing Technology

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td><strong>Tissue 101: Properties and Processes Course - Virtual</strong></td>
<td>IDCON Work Management Planning and Scheduling</td>
<td>May 19-June 23</td>
</tr>
<tr>
<td><strong>NCSU Workshop for Pulp &amp; Paper Basics</strong></td>
<td>June 7-11</td>
<td></td>
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<tr>
<td><strong>IDCON Root Cause Problem Elimination</strong></td>
<td>June 8-10</td>
<td></td>
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<tr>
<td><strong>Kraft Recovery Operations Course - Virtual</strong></td>
<td>June 16-21 July 1</td>
<td></td>
</tr>
<tr>
<td><strong>Introduction to Pulp &amp; Paper Technology</strong></td>
<td>August 2-5</td>
<td>TAPPI HQ in Metro Atlanta</td>
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<tr>
<td><strong>Best Practices on the Corrugator</strong></td>
<td>August 7-8</td>
<td></td>
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<tr>
<td><strong>Introduction to Kraft Pulping &amp; Bleaching - Virtual</strong></td>
<td>August 18-September 22</td>
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<tr>
<td><strong>NCSU Strategic &amp; Financial Analysis for the Industry</strong></td>
<td>August 24-26</td>
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<tr>
<td><strong>IDCON Shutdown Turnaround Optimization Process</strong></td>
<td>August 24-26</td>
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<tr>
<td><strong>Papermachine Operations Course</strong></td>
<td>September 21-23</td>
<td>TAPPI HQ in Metro Atlanta</td>
</tr>
<tr>
<td><strong>Tissue 201: Operations &amp; Runnability</strong></td>
<td>October 2-3</td>
<td>TAPPICon in Metro Atlanta</td>
</tr>
<tr>
<td><strong>Advanced Coating Materials &amp; Operations</strong></td>
<td>October 2-3</td>
<td>TAPPICon in Metro Atlanta</td>
</tr>
<tr>
<td><strong>NCSU Workshop for Pulp and Paper Basics</strong></td>
<td>October 4-8</td>
<td></td>
</tr>
<tr>
<td><strong>NCSU Strategic &amp; Financial Analysis for the Industry</strong></td>
<td>December 7-9</td>
<td></td>
</tr>
<tr>
<td><strong>Introduction to Pulp &amp; Paper Technology</strong></td>
<td>January 10-13, 2022</td>
<td>St. Petersburg, FL</td>
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<tr>
<td><strong>Kraft Recovery Operations Course</strong></td>
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Please note: Dates may be subject to change.

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**TAPPI Professional Certificate**

Earning the TAPPI Professional Certificate is the new standard of excellence in careers within the forest products industries. The seal ensures you demonstrate competency in critical knowledge and demonstrates you are ready to expertly manage demands at work. Exams are developed by industry practitioners who uniquely understand the technical knowledge and experience required for superior performance in the global forest products environment; TAPPI.org/Certificate
TRENDS IN WORKFORCE TRAINING

A few of the pandemic responses put in place this past year are expected to stick around for a while in the manufacturing industry, such as social distancing and remote learning, which is leading to emerging shifts in focus and delivery of continued education.

Training Remains a Priority

Workforce development and training are appearing to remain a steady focus within the pulp and paper industry as a whole because of the continued skills gap.

TAPPI President and CEO, Larry H. Montague, said that “one of our industry’s biggest challenges is finding, training and retaining good people. The retirement tsunami in the U.S. is a very, very big challenge for us, not only TAPPI, but also the entire industry.”

Training for Resilience Over Efficiency

Most operations focused sharply over the years on practices that streamlined roles and processes to increase efficiency, which worked efficiently so to speak, until the pandemic. Workflows and processes are being redesigned today for “resilience,” to allow for more flexibility when disruptions occur. Resilient operations, according to Gartner research1, are those that provide employees with varied, adaptive and flexible roles so that they acquire cross-functional knowledge.

Greater Interest in Virtual Learning

Instructor-led, face-to-face training is a preferred delivery method for many learners, according to research by Training Industry2. Virtual training led by subject-matter experts, eLearning and videos are also highly preferred formats among employees.

Research also shows that training programs that utilize multiple formats are more likely to meet learners’ preferences, which is the largest driver of training effectiveness.

Increased Training Investments

Many organizations are seeing the current climate as an opportunity to invest in training and upskilling staff, even with budgets reduced.3

A report recently found that many organizations plan to continue remote learning practices and invest in remote-working tools beyond the pandemic 4.

Pete Augustine, TAPPI Board Chair and President of Fabio Perini N.A. encourages its members “to use our online platform called TAPPI Connect where they can post questions for issues and have access to experts from around the world.” Augustine underscores that TAPPI has increased the number of webinars, eLearning and blended course options offered, including hosting virtual gatherings for groups, such as young professionals.

4 Source: How COVID-19 is Changing HR Technology Investment, by D. Zielinski; published by SHRM.

Stay in Touch

Sign up for the free TAPPI Academy newsletter for your continued education, training and career advancement. The newsletter provides updates on events, new releases, oppor

Please go to TAPPI.org/Academy or TAPPI.org/Bookstore for more information.
Sustaining Membership Benefits

1. Professional TAPPI membership for primary contact

2. TAPPI Journal subscription

3. TAPPI Journal Yearbook

4. Paper360° magazine subscription

5. Charitable donations of student memberships

6. Specialty e-newsletters

Sustaining Members get discounts on Company Classroom Training

Contact Shannon Warchalowsky at SWarchalowsky@tappi.org or +1(770) 209-7296 to discuss your company classroom needs.

Buyer’s Guide listing & a copy of the Buyer’s Guide

Discount on job postings to Career Center

$1,500 charitable donation tax credit

1 online license for TAPPI Standards & TIPs

Registration for a course or conference

$1,000 discount on development of a customized employee safety orientation course through TAPPISAFE

25,000+ technical papers and articles in the TAPPI e-Library

Discount on sponsorship & exhibiting 5%

For more information, contact Ilia Lockwood, Sustaining Member concierge, at +1(770) 209-7266 or lockwood@tappi.org

• Premium exhibit space at TAPPI-PIMA Student Summit
• Discounted TAPPI event registration for company employees
• Recognition plaque to display at TAPPI events for exhibitors