

# Tissue 101: Properties & Processes Virtual Course *Overview*

*May 19th – June 23rd, 2021*



## **Topics Presented**

- Introduction to tissue business and products, particularly relevant for anyone considering switching to tissue
- The latest information available and greater detail on structured tissue
- Web-fiber networks and physical properties test methods
- Fibers and furnishes, stock preparation and control
- Wet-end chemistry and control
- Forming, water removal and drying processes
- Pressing fabrics, creping
- Dry-end processes and chemical additives
- Sheet and roll handling, and converting

## **Learning Objectives**

- Identify the basics of tissue sheet structure and properties, and how the manufacturing process affects performance and design.
- Discuss the effects of fiber raw materials on tissue structure and properties, and how to select and apply them to achieve product goals.
- Describe the functions of chemicals in tissue manufacture and how to apply them to increase machine/product performance.
- Explain how each tissue machine process creates/effects tissue structure and properties.
- Describe the most important variables controlling product quality/variability.

## Course Requirements

- Abide by TAPPI's Antitrust
- Sign in, interact, and join the Zoom discussion sessions.  
**Zoom Discussions**– 12pm eastern standard:
  - May 19th, 26th
  - June 2nd, 9th, 16th, 23rd
    - Upon course registration, you will receive an email invitation and Zoom link for each weekly live discussion
    - You are encouraged to keep your camera on for interaction and engagement purposes during the Q&A portion
- **Complete all 14 lectures**
  - Watch all lectures in the LMS
  - Answer all assessment questions
  - Complete the course survey, which will be available at the conclusion of the course

The course certificate will be emailed to you by **Friday, June 25th**

## TAPPI Anti-Trust Policy

TAPPI is a professional and scientific association organized to further the application of the sciences in the paper and related industries. Its aim is to promote research and education in the areas of interest of its members. TAPPI is not intended to, and may not, play any role in the competitive decisions of its members or their employers, or in any way restrict competition in the paper and related industries. Learn more:

<https://www.tappi.org/menus/functional-navigation/About-Us/our-organization/antitrust-policy/>

## TAPPI Academy's Learning Management System (LMS) [learning.tappi.org](https://learning.tappi.org)

Steps to get started:

- Your LMS user name and temporary password will be sent to your email upon registration
- Once you log in to the LMS, click on **Go to Your Learning Center > Tissue 101: Properties and Processes Course > Launch**
- The red dot next to **Discussion** indicates a new discussion question has been posted
- All sections of the module must be completed **before** moving on to the next module
  - Lecture Video
  - Assessment Questions

If you have any questions, please contact Shannon Warchalowsky:

**swarchalowskyetappi.org** or **470-330-6587**

## Course Instructors



**Bruce W. Janda, Course Chair**  
**Senior Consultant**  
**Fisher International**



**Lucyna M. Pawlowska,**  
**Senior Application Expert**  
**Kemira North America**



**Jeff Peters**  
**Tissue Applications Manager**  
**BTG Americas**



**Calvin Hayden**  
**Tissue Application Manager**  
**Voith Paper Fabrics & Roll Systems, Inc.**

**Instructor bios can be found on the course webpage.**

## Course Schedule

### Week 1 – May 19th – May 26th

#### Live Discussion > Welcome, Introduction, and Overview

- **Live Session:** Wednesday, May 19th at 12pm eastern standard time
- **Topics:** Course introduction & overview, schedule, assessments
- **Duration:** 1 hour 30 minutes
- **Access to Lectures 1-4:** Wednesday, May 19th at 3pm eastern standard time

#### Lecture 1 *Tissue Basics and Product*

- **Presenter:** Bruce Janda
- **Lecture Duration:** 45 minutes
- **Assessment Questions:** 5

#### Lecture 2 *Tissue Paper Structure*

- **Presenter:** Bruce Janda
- **Lecture Duration:** 45 minutes
- **Assessment Questions:** 5

#### Lecture 3 *Tissue Fiber Properties*

- **Presenter:** Bruce Janda
- **Lecture Duration:** 45 minutes
- **Assessment Questions:** 5

#### Lecture 4 *Consistency Measure and Control*

- **Presenter:** Jeff Peters
- **Lecture Duration:** 60 minutes
- **Assessment Questions:** 5

#### Live Discussion> Lectures 1-4

- **Live Session:** Wednesday, May 26th at 12pm eastern standard time
- **Duration:** 1 hour 30 minutes
- **Topics:** Q&A, Comments
- **Access to Lectures 5-7:** Wednesday, May 26th at 3pm eastern standard time

## Week 2 - May 26th - June 2nd

### Lecture 5 *Chemical Additives*

- **Presenter:** Lucyna Pawlowska
- **Lecture Duration:** 90 minutes
- **Assessment Questions:** 5

### Lecture 6 *Stock Prep and Refining*

- **Presenter:** Bruce Janda
- **Lecture Duration:** 30 minutes
- **Assessment Questions:** 5

### Lecture 7 *Forming and Headbox Operations*

- **Presenter:** Bruce Janda
- **Lecture Duration:** 45 minutes
- **Assessment Questions:** 5

### Live Discussion > Lectures 5-7

- **Live Session:** Wednesday, June 2nd at 12pm eastern standard time
- **Duration:** 1 hour 30 minutes
- **Topics:** Q&A, Comments,
- **Access to Lectures 8-11:** Wednesday, June 2nd at 3pm eastern standard time

## Week 3 - June 2nd - June 9th

### Lecture 8 *Forming Fabrics*

- **Presenter:** Calvin Hayden
- **Lecture Duration:** 60 minutes
- **Assessment Questions:** 5

### Lecture 9 *Pressing and Press Fabrics*

- **Presenter:** Calvin Hayden
- **Lecture Duration:** 75 minutes
- **Assessment Questions:** 5

## Week 3 (continued)

### Lecture 10 *Drying Systems*

- **Presenter:** Bruce Janda
- **Lecture Duration:** 45 minutes
- **Assessment Questions:** 5

### Lecture 11 *Creping Chemistry*

- **Presenter:** Lucyna Pawlowska
- **Lecture Duration:** 75 minutes
- **Assessment Questions:** 5

### Live Discussion> Lectures 8-11

- **Live Session:** Wednesday, June 9th at 12pm eastern standard time
- **Duration:** 1 hour 30 minutes
- **Topics:** Q&A, Comments
- **Access to Lectures 12-14:** Wednesday, July 9th at 3pm eastern standard time

## Week 4 - June 9th - June 16th

### Lecture 12 *Creping and Blade Geometry*

- **Presenter:** Jeff Peters
- **Lecture Duration:** 60 minutes
- **Assessment Questions:** 5

### Lecture 13 *Structured Tissue*

- **Presenter:** Bruce Janda
- **Lecture Duration:** 45 minutes
- **Assessment Questions:** 5

### Lecture 14 *Winding and Converting*

- **Presenter:** Bruce Janda
- **Lecture Duration:** 45 minutes
- **Assessment Questions:** 5

### Live Discussion> Lectures 12-14

- **Live Session:** Wednesday, June 16th at 10am eastern standard time
- **Duration:** 1 hour 30 minutes
- **Topics:** Q&A, Comments

## Week 5 - Course Wrap Up *June 23rd*

### Live Discussion> Course Wrap Up

- **Live Session:** Wednesday, June 23rd at 12pm eastern standard time
- **Duration:** 1 hour 30 minutes
- **Topics:** Q&A, Comments, Follow-up questions
- **Survey and Assessments Due:** Friday, June 25th at 3pm eastern standard time
- **LMS Access Ends:** Friday, June 25th at 3pm eastern standard time