



## Introduction to Wood Science and Forest Products Course

*February 28 – March 2, 2017*

**Mississippi State University  
Department of Sustainable Bioproducts  
Franklin Center  
201 Locksley Way, Starkville, MS 39759**

### Agenda

(Topics and Instructors subject to change)

#### Day 1 - Tuesday, February 28

Time	Topic	Instructor
7:30 am	Refreshments and coffee	
8:00 am	Introduction to Wood Products: Provides a brief overview of wood products from the forest, through production and utilization	Rubin Shmulsky
	Forest Management: Discussion of various objectives and obstacles associated with growing trees for timber production	Misty Booth
	Timber Harvesting: Provides information on how standing trees/forests are sustainably harvested and delivered to sawmills or other timber conversion facilities; followed by replanting and reforestation	Misty Booth
9:45 am	Break	
10:00 am	Wood anatomy and properties: Overview of the many anatomical differences between and among trees. Information on how anatomy and structure can influence strength, coatings, gluing, preservative treating, and other factors	Mike Barnes
11:00 am	Density and Specific Gravity: The nature of wood density. Why some woods are heavier than others. How this property influences many others such as strength, stiffness, pulp yield, etc.	Rubin Shmulsky
12:00 pm	Lunch	
1:00 pm	Wood and Water: Relationship between wood and its affinity for water. How it adsorbs and desorbs moisture with the atmosphere throughout its service life, bound and free water in wood	Rubin Shmulsky



2:00 pm	Dimensional change: The nature of shrinking and swelling in response to environmental moisture and humidity changes. How dimensional change can impact things like gaps in flooring and cause cupping in deck boards	Rubin Shmulsky
3:00 pm	Break	
3:15 pm	Lumber Production: Presentation of the typical sawing processes used to convert round logs into rectangular boards for both hardwoods and softwood	Rubin Shmulsky
4:45 pm	Adjourn for the day – Dinner on your own	

### Day 2 - Wednesday, March 1

Time	Topic	Instructor
8:00 am	Bus Leaves from Franklin Center for mill tour	
9:00 am	Tour of Shuqualak Lumber in Shuqualak, MS	
11:00	Lunch at Wagon Wheel in Macon, MS	
12:45	Group Picture	
1:00 pm	Wood Drying: Air and kiln drying overview. Why it is necessary to remove water from wood, how water is typically removed, along with kiln operations	Rubin Shmulsky
2:30	Break	
2:45 pm	Mechanics & Design Values: Bending strength and stiffness; compression, shear, and tensile strength. How we evaluate the strength of wood and how that is used to design safe structures.	Rubin Shmulsky
4:15 pm	Adjourn for the day – Dinner on your own	

### Day 3 – Thursday, March 2

Time	Topic	Instructor
7:30 am	Coffee and refreshments	
8:00 am	Importing and exporting lumber products	Frank Owens
9:00	Engineered Wood Products: Overview of the many families of wood composite products, their similarities and differences, and various performance characteristics of each	Hui Wan
10:20	Break	
10:30	Wood Durability and Protection: How and why wood decays and steps that are commonly taken to protect and preserve wood in an effort to enhance its service life.	Mike Barnes



11:30	University Outreach with Industry & Commerce	Rubin Shmulsky
12:00	Lunch and Adjourn	