

FNR 30110 – Sustainable Forest Products Manufacturing

Instructor:

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Professor

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Course Description:

Sustainable wood processing methods for hardwood and softwood sawmilling; veneering; plywood; pallets; lumber drying; reconstituted products including particleboard, medium density fiberboard, and oriented strandboard; wood preservation including lumber, crossties, poles, and piling; secondary products including furniture, cabinets, millwork; and others; wood residues, woody biomass and others as appropriate will be covered. In addition to processing methods, the grading of material, including logs, hardwood and softwood lumber and consideration of applicable standards, and trade press and trade associations will be covered.

Learning Objectives for Students:

At the end of the course, students will:

1. Understand the many products made from timber and the processes which are used to sustainably convert round timber into consumer and industrial products. Emphasis will be on the hardwood industry.
2. Develop an adequate background in order to be employable by the wood manufacturing industry.

Required Texts:

¹**Wood Handbook: Wood as an Engineering Material.** Forest Products Laboratory General Technical Report FPL-GTR-190. 2010. This book is online at http://www.woodweb.com/Resources/wood_eng_handbook/wood_handbook_fpl_2010.pdf or can be purchased at https://netforum.avectra.com/eweb/shopping/shopping.aspx?site=fps&shopsearch=wood+handbook:+wood+as+an+engineering+material&prd_key=2ae9f734-a860-49be-b9b9-ad710e13094e, for \$63.99.

²**Manufacturing and Marketing Eastern Hardwood Lumber Produced by Thin Kerf Band Mills.** D. Cassens. Purdue University Cooperative Extension Service. 2011. This book is online at <http://www.na.fs.fed.us/pubs/werc/thin%20kerf%20band%20mills/FNR-435-manufacturing-marketing-thin-kerf.pdf> or can be purchased for \$44.00 from The Forest Products Society online Store (#7211) at: https://netforum.avectra.com/eweb/shopping/shopping.aspx?site=fps&shopsearch=manufacturing+and+marketing+eastern+hardwood&prd_key=9b542c3f-3efa-4073-8f73-ca4845062a80.

Plant Visit:

You will be asked to visit a wood manufacturing facility preferably in or near your hometown. You will need to initiate the visit and set up your own appointment. A PowerPoint report must be presented in class and by the dates to be announced before spring break.

Attendance:

You are expected to attend every session and be on time. There will be handouts in addition to the class notes. **If you are not present to get yours the first time, don't ask me for it!**

Cheating: Cheating on quizzes and exams will result in dismissal and class failure. See:

<https://www.purdue.edu/odos/welcome/academic-integrity/>

Electronic Devices:

No devices, phones, computer, calculator, etc. are to be on your desk during class time.

Quizzes & Exams:

Pop quizzes may occur at any time. Major exams include a mid-term and final. The final will cover material presented after the mid-term. Your absence from any of these will result in a score of "0".

Penalties:

Failure to attend any field day or complete any homework assignment will require you to complete and submit a 5-page report on why you did not meet your obligation. Failure to complete the report will result in the loss of 25 points.

Absence for professional activities or job interviews will require a one-page report on your experience. Failure to complete the report will result in a loss of 10 points.

Other absences will require a written, signed and dated statement for why you were absent. Failure to submit this statement will result in a loss of 10 points.

All statements will be submitted in hard copy.

Grade Policy:

Students are expected to complete all assignments, quizzes, and exams. No make-ups will be given on quizzes or exams.

On time class attendance (taken at random)	50 points
Quizzes <i>(Ten points each with a minimum of 5 and a maximum of 10 given. You will be awarded points from your five highest scores.)</i>	50 points
Plant scheduling, visit, and report completed on time	100 points
Provide two point contacts (Feb. 5)	10 points
Schedule one visit (Feb. 26)	10 points
Complete visit (March 24)	10 points
Deliver Power Point	70 points
Mid Term	100 points
Final Exam	<u>100 points</u>
Total	400

- A = 360+ points
- B = 320-359
- C = 280--319
- D = 240-279
- F = < 239

At the discretion of the instructor, final grades for the course may be based on a “curve” rather than upon the above grading scale. If a curve is used, it may improve your final grade (but it will not lower it) from what it would have been if the above grading scale had been strictly followed.

EMERGENCY PREPAREDNESS

Emergency preparedness is your personal responsibility. Purdue University is continuously preparing for natural disasters or human-caused incidents with the ultimate goal of maintaining a safe and secure campus. Let’s review the following procedures:

- To report an emergency, call 911.
- To obtain updates regarding an ongoing emergency, and to sign up for Purdue Alert text messages, view www.purdue.edu/ea
- There are nearly 300 Emergency Telephones outdoors across campus and in parking garages that connect directly to the Purdue Police Department (PUPD). If you feel threatened or need help, push the button and you will be connected immediately.
- If we hear a **fire alarm**, we will immediately suspend class, **evacuate the building**, and proceed outdoors, and away from the building. **Do not use the elevator.**
- If we are notified of a Shelter in Place requirement for a tornado warning, we will suspend class and shelter in the lowest level of this building away from windows and doors.
- If we are notified of a Shelter in Place requirement for a hazardous materials release, or a civil disturbance, including a shooting or other use of weapons, we will suspend class and shelter in our classroom, shutting any open doors or windows, locking or securing the door, and turning off the lights.
- Your course syllabus includes additional preparedness information as it might impact this class, including class suspension for severe weather or other emergencies. Please review the syllabus and the Emergency Preparedness website for additional information.
http://www.purdue.edu/ehps/emergency_preparedness/index.html”