

FNR 31110 – Structure, Identification and Properties of Woody Biomaterials

Instructor:

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Professor

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Learning Objectives for Students:

At the end of the course, students will be able to:

1. Identify macro characteristics of commercially important woody bio materials (color, odor, cellular arrangement, grain patterns, character marks, etc.) through laboratory exercises and field trips.
2. Know the cellular structure of woody bio materials.
3. Understand some manufacturing characteristics and uses of woody bio materials. With the knowledge gained from 1 and 2 above, students will be able to identify commercially imported North American hardwood and soft woods species on sight.

Required Materials:

Textbook: Identifying Wood by R. Bruce Hoadley, The Taunton Press:

http://www.amazon.com/Identifying-Wood-R-Bruce-Hoadley/dp/0942391047/ref=pd_bxgy_b_text_b

Hand Lens – A 10 to 14x lens, available at the bookstore, is absolutely needed.

Cutting Tools – Sharp and stable cutting tools are required. Some students have used a pocketknife, but I find that an ample supply of single edge razor blades is the easiest. About one or two cuts and the blade is discarded.

Optional Materials - Textbook of Wood Technology, Vol. I by Panshin and De Zeeuw, 4th edition.

Attendance:

You are expected to attend every session and be on time. There will be some handouts. **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.

Otherwise, working together to learn is encouraged. See:

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

Quizzes & Exams:

Pop quizzes may occur at any time. Major exams include a mid-term and final practical exam. Your absence from any of these will result in a score of “0”.

Grade Policy:

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

Quizzes (twenty points each with a minimum of 5 and a maximum of 10 wood ID quizzes given. You will be awarded points from your five highest scores) (100 points)

Lab ID work ^{1/2}	(120 points)
Hardwood ID Practical (40 term, 80 ID)	(120 points)
Softwood ID Practical (30 term, 30 ID)	(60 points)
TOTAL	400 points

A = 360+ points

B = 320-359

C = 280-319

D = 216-279

F = < 216

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.

^{1/2}Lab ID work. During the course of the semester you will identify a minimum of 8 boxes of hardwoods and a minimum of 4 boxes of softwoods. Each box will be worth 20 points (prorated on number of samples). One-half of your lowest scores for each species group will be discarded.

Penalties: Failure to attend scheduled field days will result in the forfeit of 50 points.