COURSE OUTLINE
FOR 342--WOOD ANATOMY, PROPERTIES AND IDENTIFICATION
3 Credits

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Course Schedule: Lecture: Tuesday and, 12:10-2:00 pm plus one extra 3-hour session near end of semester for presentation of test data and/or reports on specially assigned projects.

Laboratory: Thursday, 12:10-2:00 pm plus one all-day laboratories at Lubrecht Forest and Wood Science Laboratory for selecting, felling and sawing a tree into test specimens for mechanical testing, and one 3-hour lab for destructive testing of green, clear wood specimens taken from the trees.

Suggested Texts: Understanding Wood by Hoadley and Identifying Wood by Hoadley. Both by Taunton Press and should be available through the bookstore or Amazon.com. Another excellent text, Textbook of Wood Technology by Panshin and DeZeuuw (McGraw-Hill), is currently out of print. Copies of the 1980 editions (recommended) are available online. Google “Textbook of Wood Technology” to see listings. I have copies of the identification keys from this book for your use.

Supplies: 10-15X hand lens, available at bookstore; an X-ACTO knife (the fountain-pen type has a screw-on cap w. clip and is in the art supplies area on second floor. Get a package or two of #11 blades. You will also need a package of Gillette or Shick double-edged razor blades for cutting microscope sections. These can be obtained from drug and variety stores like Wal-Mart, K-Mart, Osco or Albertson’s.

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<th>Week</th>
<th>TOPIC</th>
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<td>1</td>
<td>Introduction; The tree stem (pgs. 11-30); color, figure, weight; Rhytidome (pgs. 30-54). Order the Hoadley books so you can have them for week three or sooner.</td>
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<td>2</td>
<td>No class this week. Burke out of town. read about woody cell origin &amp; development (pgs. 55-84)</td>
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<td>3</td>
<td>Introduction to gymnosperm wood structure (pgs. 127-160) (Thursday).</td>
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<td>5</td>
<td>Examination (Tuesday); Gymnosperm wood features and ID. Microscopic identification using keys.</td>
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Gymnosperm wood features and ID. Microscopic identification using keys.

Gymnosperm wood features and identification (pgs. 127-160; 407-501). Gross and microscopic identification using keys. Burke will be in Tennessee and Virginia teaching shortcourses in structural grading of houselogs and sawn round timbers.

Examination-Gymnosperm structure (Tuesday) Lab quiz- slides & block ID (Thursday)

Angiosperm structure and gross identification using keys (Pgs. 161-200; 502-643).

**SPRING BREAK**

Angiosperm gross and microscopic identification using keys (pgs. 161-200; 502-643).

Examination-Angiosperm structure (Tuesday); Lab quiz- slides & block ID (Thursday).

Non-mechanical properties (pgs. 201-220); Gross and microscopic ID. Extra mechanical testing specimen tree cutting laboratory to be held this week (6 hours @ Lubrecht forest and Wood Science Laboratory).

Mechanical properties (pgs. 220-239); Gross and microscopic ID. Extra mechanical-testing laboratory to be held this week.

Growth-related defects; Wood and wood product pathology; Defect and species ID quiz. Extra afternoon or evening session (3 hrs) for presentation of projects to be held this week.

FINALS WEEK- lecture and lab finals over entire semester during 2-hour period.

Students are required to have a 10-15X hand lens, razor-sharp knife (blade less than 4” in length; X-acto’s work well); the textbook and the willingness to work long and hard at learning about the most wondrous creation, short of man, to be found on Earth. We will hold class in Journalism 112, Wood Science Laboratory (JOUR 109), the Sawmill @ Lubrecht and even local lumberyards. You will study at home with wood blocks and key and will develop knowledge and skills lacking in all but the finest natural resource managers.

**Writing and Oral Communications Requirement**

Prior to Spring Break, you will be given a set of qualitative and quantitative data and evidentiary objects and photographs pertaining to a “real world” wood science problem. Your task will be to write a report presenting and interpreting the facts, forming an expert opinion and conveying that opinion to the court/client. The case studies used will be from or modeled after actual criminal prosecutions and civil litigations, as well as consulting activities carried out within the wood products industry. You will turn in a final draft for me to edit and correct prior to turning in the finished report. The rough draft is due on 19 April, and will be edited, corrected and returned by 26 April. Photographs and micrographs should be electronically incorporated into the report, and your 12-15 minute oral presentation should be also electronically prepared using Powerpoint or other presentation graphics package. Be prepared to defend
your work as you would in court or to a board of directors of a large corporation. The final copy of the report is due at the time of your oral presentation of the case or problem to the class, referees and visitors, which will be held during week 15 of the semester. You will be expected to produce a product suitable for use in court or corporate boardrooms.

A great deal will be demanded of you, but no more than what you are capable of (much more than you probably think you can do). This class will be an enjoyable challenge because of the attitude with which it will be taught. I love teaching people about wood. “Real-world” experience is the foundation of the information and techniques you will use and learn, and we will use this experience to make the challenge and rigor of this course purposeful. I look forward to this semester!

Upper Division Writing
This course is one of three courses needed to satisfy the upper division writing requirement for CFC majors. Each student is required to achieve satisfactory scores on a sophomore-level writing course (FOR 220/WBIO 245 or equivalent). The successful completion of one of these courses plus the writing proficiency exam will be prerequisites for completion of the upper division distributed writing requirement.

Assessment of student writing will be on the basis of the following criteria:
1. A clear statement of purpose (hypothesis or question or goal) within the scientific context of the specific discipline.
2. The development of effective logical arguments using evidence and/or theory from the discipline or supporting disciplines.
3. Writing meets discipline-specific writing conventions including the proper citation of sources of information.
4. Demonstrate appropriate English language usage.

Course grading will be as follows:

2 1-hour lecture exams @ 100 pts. each 200
1 Written Report of findings – Forensic Wood Science Investigation 200
1 Oral Report of Findings - Forensic Wood Science Investigation 50
3 Lab quizzes @ 25 pts. each—microscopic and gross identification 75
1 Final Lab Exam @ 100 pts. —microscopic and gross identification 100
1 Final Lecture Exam @ 100 pts. 100
Total Points for the Course 725

Approximate grading scale will be:

A = 100-93%; A- = 90-92.9%; B+ = 87-89.9%; B = 83-86.9%+; B- = 80-82.9%; C+ = 77-79.9%;
C = 73-76.9%; C- = 70-72.9%; D+ = 67-69.9%; D = 63-66.9%; D- = 60-62.9%; F < 60%