Fall 9-1-2001

FOR 340.01: Timber Harvesting and Forest Products Manufacturing

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COURSE OUTLINE
FOR 340--TIMBER HARVESTING AND FOREST PRODUCTS
Autumn Semester
4 Credits

Instructor: Ed Burke (Products)
Office: Journalism 105 Phone: 243-5157

Course Schedule: Lecture Tuesday , 7 pm.to 10:00 pm, FOR 301
Laboratory Wednesday and Thursday, 2:10 to 5:00, Meet in Journalism 102 (Wood Lab)
Texts: Logging Practices by Conway
Forest Products by Haygreen and Bowyer, 2nd. Ed.

The course will be broken into two components, Timber Harvesting during the first half of the semester and Forest Products during the second. Field trips and exercises showing different forest product manufacturing and timber harvesting operations will be conducted during laboratory periods, throughout the semester. Some laboratory exercises will also be held in the classroom and in the Wood Science Laboratory, Journalism 107. Specific details of these laboratory sessions will be announced in class.

PART 1
Timber Harvesting
Weeks 1-8

Week #	TOPIC
1	Introduction: Hand Felling and Bucking. Laboratory: Felling, bucking and scaling exercises at Lubrecht Forest.
2	Machine felling. Laboratory: Tour of facilities and equipment at Jones Equipment in Missoula.
3	Ground skidding and forwarding systems. Laboratory: Tour of ground skidding logging operations in Missoula area.
4	Examination #1 covering weeks 1-3. Introduction to cable yarding systems. Laboratory: Tour of cable yarding logging operations in Missoula area.
5	Cable yarding operations (cont.). Laboratory: Set up of model yarder in laboratory setting.
6	Road design and layout; log transportation systems. Laboratory: road layout exercise in Pattee Canyon area.
7	Road design and layout (cont.); logging plan criteria. Laboratory: logging sale layout exercise, to be completed and returned by Week #8's laboratory session.
8	Examination #2 covering weeks 4-6. Laboratory: Turn in logging plans.

PART 2
FOREST PRODUCTS
Weeks 9-16

Week #	TOPIC

9 Introduction; Lumber production Wood properties; Density, Shrinking and Swelling. Laboratory: Lumber milling exercise at School's sawmill at Lubrecht Forest.

10 Veneer and plywood. Laboratory: Tour of Stimson Forest Products Plywood Plant . Rough draft of first lab's report due.

11 Examination #3. More wood properties, weights and densities . Holiday on Thursday, no lab this week.

12 Lumber production continued; Laboratory: Tour of Stimson Forest Products' sawmill in Bonner.

13 Thanksgiving break; Class meeting time and place to be announced

14 Composites and Engineered Structural beams. Laboratory: Tour of Louisiana-Pacific particleboard plant in Missoula.

15 Paper and specialty products. Laboratory: Tour of Smurfit-Stone's Missoula plant.

16 FINALS WEEK--**2-Hour lecture final**; **1-hour laboratory final** to identify and answer questions about various product specimens covered during the semester. Final reports on laboratory tours due at beginning of period.

Laboratory exercises for the forest products component will consist of field trips to local industrial plants. Hard hats will be furnished by the School and **WORN** at all times when on plant grounds and buildings.

A flow chart and floor plan of the plant (except Smurfit-Stone) indicating raw material handling, processing and final fabrication will be made. In addition, a simple evaluation of the plant's facilities, labor and product are to be included. The best way to approach these reports is to assume you have been retained by an out-of-state forest products corporation interested in purchasing plants in the Missoula area. This corporation wants you to obtain the preliminary data needed to acquire the companies. As with all reports of this nature, thoroughness, brevity, clarity and accuracy are of utmost importance. Several 3 1/4" x 4 1/4" or 4"x 5" color photos of the different phases of all operations are the mark of a good report. The first report, Lubrecht Forest sawmill, will be typed and submitted the next lab period after the first field trip. This report will be edited and returned for correction and final submittal with the remainder of the reports. The entire package of individual plant assessments will be submitted as a unit at the beginning of the final exam period.

Course grading will be as follows:

(1) 1-hr. lecture examination in Timber Harvesting section	100
(1) 2-hr. lecture final examination in Timber Harvesting section	200
(1) Logging Plan	100
(1) 1-hr. lecture examination in Products section	100
(1) 2-hr. lecture final examination in Products section	200
(1) Final laboratory examination in Products section	100
(1) Final Laboratory Report	100
Total for Course	**900 pts.**

A = 810-900 pts.
B = 720-809 pts.
C = 630-719 pts.
D = 540-629 pts.
F <540 pts.