

FOR 444
Applied Forest Restoration and Wood Utilization
Autumn and Spring Semester
3 Credits

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Schedule: Lecture: 08:30 – 10:00 hrs. Saturday in Stone 105

Laboratory: 12:00 to 17:00 hrs., Saturday at Lubrecht Experimental Forest. Some exercises may require return to Lubrecht on Sunday or other day of week to complete the exercise

Supplied Texts: US Forest Service *S-212 Chainsaw Training Course* Textbook

Learning Outcomes:

Student will show competence in:

- Timber felling production and efficiency
- Ability to determine proper merchantable lengths for logs manufactured from student-felled timber
- Felled timber skidding production and efficiency
- Ability to maintain and safely operate various pieces of logging, skidding and milling equipment
- Ability to conduct a lumber recovery factor analysis Ability to conduct a lumber quality control analysis
- Ability to prepare slash for burning and plan burning operations

Week

TOPIC=====

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- 1 Introduction; Chainsaw terminology, maintenance and repair. Laboratory: Field techniques in saw maintenance and repair, hand-felling, limbing. Commercial log manufacture. Grapple skidding, hot and cold decking. Training will follow the S-212 Fireline Chainsaw Safety and Operations Course syllabus
- 2 Introduction to forest operations equipment. Laboratory: Individuals' familiarization with Skid-steer loader, 4wd tractor w. log grapple, articulated loader with log forks and 2 cu. yd bucket. Practice with operation of equipment. Exercise held at School's sawmill at Lubrecht Experimental Forest.
- 3 Timber felling/ skidding-loading equipment/ sawmill equipment operation training, Week #1. Exercises held at dedicated felling areas and sawmills located at Lubrecht Experimental Forest. 1/3 of class at each activity area.
- 4 Timber felling/ skidding-loading equipment/ sawmill equipment operation training, Week #2. Exercises held at dedicated felling areas and sawmills located at Lubrecht Experimental Forest. 1/3 of class at each activity area. Timber felling/ skidding-loading equipment/ sawmill equipment operation training, Week #3. Exercises held at dedicated felling areas and sawmills located at Lubrecht Experimental Forest. 1/3 of class at each activity area.
- 5 Quality control procedures and report production for forest restoration operations. Student teams of 2-3 will work on their first of the three principal activity topics (see 3,4 & 5 above) with evaluation

of overall skill, safety and reporting.

- 6 Quality control procedures and report production for forest restoration operations. Student teams of 2-3 will work on their second of the three principal activity topics (see 3, 4 & 5 above) with evaluation of overall skill, safety and reporting.
- 7 Quality control procedures and report production for sawmill operations. Student teams of 2-3 will work on their third of the three principal activity topics (see 3, 4 & 5 above) with evaluation of overall skill, safety and reporting.
- 8 Class project area defined and teams assigned tasks according to each of the three principal activities: Planning/harvest, skidding and deck(s) management, milling/drying/storage.
- 9 Project work on assigned tasks according to each of the three principal activities: Planning/harvest, skidding and deck(s) management, milling/drying/storage (cont.)

Project work on assigned tasks according to each of the three principal activities: Planning/harvest, skidding and deck(s) management, milling/drying/storage (cont.)

Logging slash and residuals management. Residues sorting and marketing (bark, green slabs and edgings vs. dry residual values).

Logging slash and residuals management (cont.).

- 10 Burning of slash piles, preparation of roads and mill yards for intersession between Autumn and Spring semesters (Intersession and early Spring semester). Final evaluation of students' skills and project area evaluations by peers and instructor(s). Students' evaluation of instructors, course objectives and outcomes. Discussion of improvements to course. Students are to have the following equipment and clothing for all class activities:

- All-leather boots of at least 6" height
- All-leather gloves
- Full-brim hardhat (plastic or metal)
- Cotton jeans, shirt and jacket

Chainsaw chaps, hearing and eye protection will be provided for all activities. **APPROPRIATE USE OF PERSONAL PROTECTION EQUIPMENT IS MANDATORY!!!**

Class will meet at 08:30 on Saturday mornings and return to campus between 17:00 and 20:00 hrs., depending on week of semester. Some weeks will require additional periods on Sunday and/or Monday

Grades: Attendance is required at 5 complete class meetings for each credit received), mandatory participation in training and planning process for group, compliance with class safety and equipment operation regulations, completion of exercises (see below) and overall participation and cooperation exhibited during exercises and activities. The following exercises are each worth approximately 20% of the final grade, at least two of which will be completed by each student:

- Timber felling production and efficiency 100 pts. Grade based on safe operating practices, tree felling rate, log production rate, log quality all based on instructor(s)' control rates.
- Felled timber skidding production and efficiency 100 pts. Grade based on ; Average turn time v. Instructor control; Observation of operator approach, hook-up, skid trip, unhooking , log placement and overall safe operations
- Lumber recovery factor analysis 100 pts. Grade based on Average lumber recovery compared to Scribner scale and historic recovery factor for sawmill and log species.
- Lumber quality control exercise 100 pts. Grade based on thoroughness, accuracy and final evaluation as compared to instructor's control evaluation.

Student Conduct Code

- All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University.
- All students need to be familiar with the Student Conduct Code. The Code is available for review online at http://life.umt.edu/vpsa/student_conduct.php.

Students with Disabilities

- The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students (DSS). If you think you may have a disability adversely affecting your academic performance, and you have not already registered with DSS, please contact DSS in Lommasson 154 or 406 243 2243. I will work with you and DSS to provide an appropriate modification.

Grading Option

- Course grades will be assigned as follows:

A=90%+; B=80%+; C=70%+; D=60%+; F< 60%

- At UM, grading options for courses are traditional letter grade only (T); credit/no credit only (CR/NC), or student option/preference (O). The latter means students can choose to take a course either as traditional letter grade or as credit/no credit. For these letter courses, some students wish to exercise this option at the end of the semester. Some colleges at UM (e.g., CHS) prefer faculty to offer classes as “student preference.” However, most CFC classes are offered Traditional letter grade only. If you offer your class for a letter grade only, you may experience fewer student requests on this issue at the end of the semester if you include the following statement:
- **Please note, this class is offered for traditional letter grade only, it is not offered under the credit/no credit option**

Drops, Withdraws, Change of Grade Status

Important Dates Restricting Opportunities to Drop a Course Spring 2022 (See also [Spring 2022 Official Dates and Deadlines](#) calendar):

Deadline	Description	Date
To 7 th instructional day	Students may add classes via CyberBear without consent of instructor	26 January-last day
To 15 th instructional day	Students can drop classes on CyberBear with refund & no “W” on Transcript. Refunds where applicable	7 February-last day
16 th to 45 th instructional day	A class drop requires a form with instructor and advisor signature, a \$10 fee from registrar’s office, student will receive a ‘W’ on transcript, no refund.	8 February - 29 March

Deadline	Description	Date
Beginning 46 th instructional day	Students are only allowed to drop a class under very limited and unusual circumstances. Not doing well in the class, deciding you are concerned about how the class grade might affect your GPA, deciding you did not want to take the class after all, and similar reasons are not among those limited and unusual circumstances. If you want to drop the class for these sorts of reasons, make sure you do so by the end of the 45 th instructional day of the semester. Requests to drop must be signed by the instructor, advisor, and Associate Dean (in that order) and a \$10 fee applies. Instructor must indicate whether the individual is Passing or Failing the class at the time of request.	30 March – 6 May

Accommodations for Students

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you have a disability that adversely affects your academic performance, and you have not already registered with the [Office of Disability Equity](#) (ODE) (formerly Disability Services for Students). ODE, 406-243-2243, will work with the student and their advisor on a case-by-case basis. I will work with you and Disability Services to provide an appropriate modification. Only students registered with ODE will be considered for accommodation during exams. Please contact me *one week before* each exam if you require any service through ODE.

Academic Calendar: To help you plan your spring break trip to Utah
- <https://www.umt.edu/provost/academiccalendar/>

Final Exam Schedule: Please use this calendar to figure out your final exam date- <https://www.umt.edu/registrar/students/Finals%20Week%20Schedules.php>

Student Conduct Code: Please reach out to your Chair/PD and me if you need assistance on any conduct code issues- <https://www.umt.edu/student-affairs/community-standards/default.php>

Class Attendance Policy

- Students who are registered for a course but do not attend the first two class meetings may be required to drop this course. This rule allows for early identification of class vacancies to permit other students to add classes. Students not allowed to remain must complete a drop form or drop the course on the Internet (<http://cyberbear.umt.edu>).
- Students are expected to attend all class meetings and complete all assignments for this course. Student may be excused for brief and occasional absences for reasons of illness, injury, family emergency, religious observance or participation in a University sponsored activity. (University sponsored activities include for example, field trips, ASUM service, music or drama performances, and intercollegiate athletics.) Students shall be excused for military service or mandatory public service.
- Students incurring an excused absence will be allowed to make up missed work when done in a manner consistent with the educational goals of this course.