FORS 444
Applied Restoration and Utilization
Autumn and Spring Semester
3 Credits

Instructor: Edwin J. Burke – Stone Hall 105 – 406 243-5157 ed.burke@umontana.edu (406) 396-0345

Schedule: Lecture and Laboratory times to be announced. 1-2 hrs. lecture at beginning of class each week; 6-8 hrs. laboratory exercises each week, generally on same day as lecture

Optional Text: US Forest Service S-212 Chainsaw Training Course Text

<table>
<thead>
<tr>
<th>Week#</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>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</td>
</tr>
<tr>
<td>2</td>
<td>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.</td>
</tr>
<tr>
<td>3</td>
<td>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.</td>
</tr>
<tr>
<td>4</td>
<td>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.</td>
</tr>
<tr>
<td>5</td>
<td>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.</td>
</tr>
<tr>
<td>6</td>
<td>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 &amp; 5 above) with evaluation of overall skill, safety and reporting.</td>
</tr>
<tr>
<td>7</td>
<td>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 &amp; 5 above) with evaluation of overall skill, safety and reporting.</td>
</tr>
<tr>
<td>8</td>
<td>Quality control procedures and report production for forest restoration operations. Student teams of 2-3 will work on their third of the three principal activity topics (see 3, 4 &amp; 5 above) with evaluation of overall skill, safety and reporting.</td>
</tr>
<tr>
<td>9</td>
<td>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.</td>
</tr>
</tbody>
</table>
10. 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 (cont.)

11. 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 (cont.)

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

13. Logging slash and residuals management (cont.).

14. Burning of slash piles, preparation of roads and mill yards for interim period between semesters (Christmas break or summer).

15. 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)
- 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. Grading will be based on attendance (attendance at 4 complete class meetings for each credit received), participation in training and planning process for group, compliance with class safety and equipment operation regulations, group project completion and overall cooperation.

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

Outcomes
Students will learn operate and maintain several pieces of small and vehicular equipment including steer-skid loader, front-end loader, 4-wheel drive tractor with grapple, Wood Mizer Sawmill and Mobile Dimension sawmill. In addition, chainsaw operation and maintenance, timber felling, harvest area layout and cutting sequencing, skidding, decking and hauling will be learned.

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.
### Important Dates Restricting Opportunities to Drop Course Autumn 2019:

<table>
<thead>
<tr>
<th>Days into Semester</th>
<th>Opportunities</th>
<th>Drop Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>To 7th instructional day</td>
<td>Last day for students to add Autumn classes via CyberBear without consent of instructor</td>
<td>4 September</td>
</tr>
</tbody>
</table>
| To 15th instructional day | Last day that students can:  
  - drop classes on CyberBear with refund & no "W" on Transcript  
  - withdraw from all classes with a partial refund  
  - add Autumn classes with electronic override on CyberBear  
  - change Autumn credits in variable credit courses  
  - change grade mode in CyberBear  
  - change grading option to or from Audit buy or reuse UM's student health insurance coverage | 16 September = last day |
| 16th to 45th instructional day | Drop requires form with instructor and advisor signature, a $10 fee from registrar’s office; student will receive a ‘W’ on transcript, no refund. | September 17 through October 28 |
| Beginning 45th instructional day |  
  - adds & drops require a Course Add/Change or Course Drop form with instructor’s & advisor’s signatures; $10 fee applies  
  - drops require a Course Drop form with instructor’s, advisor’s, & Dean’s signatures; $10 fee applies  
  - A ‘WP’ or ‘WF’ will appear on the transcript for dropped classes; No refunds  
  - Students can change variable credit amounts, or change grading options, (except audit) using a Course Add/Change form with instructor’s & advisor’s signatures | October 28– December 6 |

### 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: CyberBear.

- 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.

- Students expecting to incur excused absences should consult with the instructor early in the term to be sure that they understand the absence policies for this course.