***Reedley College*** *– Natural Resources/Forestry/Wildland Fire Technology*



**Course:** NR-133 - Section 51673-**Thurs. – 8:00 to 11:50**

**Title:** Intro to Chainsaw Operations

**Dates:** January 10, 2021 to March 11, 2022

**Room:** Dental 9 and off Campus Locations (personal transportation will be required)

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Syllabus**

**Instructor:** Adam Hernandez

**Office Telephone:** (559)638-0300 ex. 3496

**Email:** adam.hernandez@reedleycollege.edu

**Office Location:** FEM-10

**Office Hours: CANVAS, EMAIL or ZOOM:** TUESDAY- 15:00-16:00,WEDNESDAY- 15:00-16:00,THURSDAY- 12:00-14:00, FRIDAY 8:00-9:00.

**Drop Deadline: January 14th, 2022** – Last day to drop for full refund

**Final Exam:** TBD

# Laboratory Handbooks (Provided)

**Laboratory**

**Course Prerequisite:** Eligibility for ENGL 125, ENGL 126, and MATH 101. (A, CSU)

SPRING 2022 ACEDEMIC CALENDAR

**NR-133 Intro to Chainsaw Operations**

**Course Description:**

Provides introductory level training for the use of chain saws in the forestry and natural resources field. Emphasis is placed on defining and applying chain saw safety standards, maintenance and function of personal protective equipment (PPE), identification of chain saw parts, maintenance, tuning, and tactical application of techniques required for brushing, limbing, bucking, and falling trees. This class also strives to develop physical skills and stamina that is necessary for arduous work.

**Course Objectives:**

1. Demonstrate proper procedures for maintenance of a chainsaw.

2. Identify basic chainsaw parts nomenclature, maintenance, tuning, troubleshooting, and safety features.

3. List and define chainsaw safety standards outlined by Occupational Safety & Health Administration (OSHA).

4. Demonstrate field maintenance tasks required for chainsaw operation.

5. Know the approved use, maintenance, and function of personal protective equipment (PPE) required for safe chainsaw operation.

6. Demonstrate the tactical application of chainsaws in brushing, limbing, bucking, and falling wood material.

7. Recognize hazardous situations that occur in field operation of a chainsaw when felling, limbing, or bucking trees

**Student Learning Outcomes:**

**NR-133 SLO1: Apply chainsaw safety standard skills outlined by Occupational Safety & Health Administration.**

|  |
| --- |
| Assess current knowledge, skills, and abilities to further develop them and apply them to new situations. |
| Interpret various types of written, visual, and verbal information. |
| Organize ideas and communicate precisely and clearly to express complex thoughts both orally and in writing. |
| Employ critical and creative modes of inquiry to solve problems, explore alternatives, and make decisions. |
| Synthesize researched information obtained from accurate, credible, and relevant sources to support, advance, or rebut an opinion. |

**NR-133 SLO2: Demonstrate tactical chainsaw skills related to brushing, limbing, bucking, and felling operations**

|  |
| --- |
| Organize ideas and communicate precisely and clearly to express complex thoughts both orally and in writing. |
| Interpret various types of written, visual, and verbal information. |
| Employ critical and creative modes of inquiry to solve problems, explore alternatives, and make decisions. |
| Assess current knowledge, skills, and abilities to further develop them and apply them to new situations. |
| Synthesize researched information obtained from accurate, credible, and relevant sources to support, advance, or rebut an opinion. |

**NR-133 SLO3: Differentiate among basic chainsaw parts nomenclature, maintenance, tuning, troubleshooting, and safety features**

|  |
| --- |
| Employ critical and creative modes of inquiry to solve problems, explore alternatives, and make decisions. |
| Interpret various types of written, visual, and verbal information. |
| Organize ideas and communicate precisely and clearly to express complex thoughts both orally and in writing. |
| Assess current knowledge, skills, and abilities to further develop them and apply them to new situations. |
| Synthesize researched information obtained from accurate, credible, and relevant sources to support, advance, or rebut an opinion. |

**Online:**

 Portions of this class will be online and will be announced by the instructor. **CANVAS** **& REMIND APP** will be used for disseminating messages, information and assignments.

**Participation in Laboratory work:** Field exercises (labs) are scheduled regardless of weather. At times temperatures may be over 100 degrees or rainy conditions may be present. Students need to be prepared to operate and assist in chainsaw operations at a moderate pace under the weather conditions of the day. Students will learn and demonstrate how to use and maintain chainsaws to cut wood material. It is strongly recommended that students work to maintain good physical condition to perform arduous tasks. The intent of the field exercises is to prepare the students for what can be expected of them as a Forestry/Natural Resources employee both technically and physically.

For the safety of others, and yourself, you must perform in a responsible manner. You must have required PPE in order to participate in laboratories. **You will be charged an absence and not be allowed to participation if you are not prepared for field tasks.**

Your performance in the physical laboratory training is assessed for a grade. If you cannot safely carry out the tasks for any reason, including a health condition, you should notify the teacher. Consideration will be given to modify the requirements on an individual basis.

**Class Notification:** Class notifications will be made by your instructor through **REMIND APP** and or **CANVAS.** You are ***required*** to monitor these communications methods for course updates, information sharing and assignments.

**Cancelled Class Notification:** Communications for class cancellations will be made by your instructorthrough **the REMIND APP and or CANVAS.**

**Academic Dishonesty, Plagiarism and Cheating:**

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly obtained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences. Refer to the college catalog for further details surrounding actions that will be implemented regarding academic dishonesty.

Plagiarism is the adoption or reproduction of the ideas or words or statements of another person without due acknowledgment. Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers in an attempt to gain an unearned academic advantage. Cheating can take the form of the storing of information in graphing calculators, pagers, cell phones, and other electronic devices. Therefore, no items of any kind may be on the desktop, including water bottles, during testing. Students may not wear hats/caps during testing. Incidents of cheating and plagiarism may result in a variety of sanctions and penalties, which may range from a failing grade on a particular examination, paper, project, or assignment in question to a failing grade in the course at the discretion of the instructor and depending upon the severity and frequency of the incidents.

**Accommodations for students with disabilities**:

 If you have a verified need for an academic accommodation or materials in alternate media (e.g., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act please contact me as soon as possible. **A formal counseling assessment to determine the appropriate accommodation is required before any accommodation(s) can be made. The counseling center facilitates the process.**

**Field Trip**: Do Be Determined

**NR-133 Grading Policy**:

Grading will be based on the results of Operational Skills, Repair Skills, Laboratory Participation and Final Exam. Assignments must be submitted on the due date or earlier. **Assignments and exams will be based on lectures, in-class labs, and reading assignments. Please read all assigned readings!**

|  |
| --- |
| **Grade Distribution** |
| A = 90-100 Pts. | 90-100% |
| B = 90-89 Pts. | 80-89% |
| C = 70-79 Pts. | 70-79% |
| D = 60-69 Pts. | 60-69% |
| F = Below 60 Pts | Below 60% |

|  |  |
| --- | --- |
| **Assignment Type** | **Possible Points** |
| Repair Skills | 15 |
| Operational Skills | 15 |
| Final Exam | 25 |
| Participation  | 50 |
| Assignment (s) | 20 |
| **TOTAL Points Possible** | **125** |

**Student Required PPE for Field Activities NR-133:**

*Each student must have the following items during each class in order to be allowed to participate and earn credit for field going activities.*

**REQUIRED GEAR:**

- Hardhat

- Long Pants w/ Belt (no cuffs, NO HOLES)

- Long Sleeve Nomex Work Shirt (NO HOLES)

- Eye Protection

- Ear Protection

- Gear Bag sufficient to carry PT gear, hardhat, gloves, safety glasses, water, and food (needs to be in addition to your regular school backpack).

- Water container (1-quart canteens or water bottles)

- Leather Boots (minimum 8” high uppers, nonskid soles preferably Vibram, no steel)

**Behavioral Standard Operating Procedures:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***Respect and Common Courtesies:*** Students and teachers greatly appreciate attention to appropriate classroom courtesy. Please take care of personal needs (e.g., using the restroom, getting a drink, sharpening a pencil) before class begins. Foul language or disruption to the instruction will not be tolerated. All class attendees will treat and be treated with respect or will be asked to leave the class by the instructor. There will be no tobacco use in any building or school farm.

***Attendance and Punctuality:***I start class on time and take roll. Please do not be late. If you are late, it is your responsibility to ensure that you are counted for attendance **after** class. To be considered present, students should be in class, attentive, properly attired, and ready for classroom or field activities regardless of weather or other factors. ***Two tardies will count as one absence.* *Roll will be taken at each session and students will be dropped if two absences are accrued unless specific arrangements are made.*** Field trips/exercises missed cannot be made up.

Because the job of a Wildland Firefighter is inherently risky, you are expected to put forth nothing less than complete focus while you are in this class. As your instructor, I cannot permit distractions that takes focus away from the rest of the class as the concepts that we cover may one day keep you or others safe on the fireline. I will not allow any interruptions that take away learning opportunities from others. Students are allowed to miss only 10 hours of class *(equivalent to 2 class sessions plus a cushion)* during the semester including absences and tardies. Any absences beyond 10 hours will be grounds to be dropped from the program. If you have other commitments that may impact your ability to show up on time or will impact your ability to attend class, you may want to enroll at another time.

IF THERE IS ANYTHING I NEED TO KNOW: about your situation that may create challenges for you this semester you need to let me know as soon as possible, that way I can have awareness.

SLEEPING IN CLASS: If you are observed to be sleeping in class you will be excused until you can come back attentive. If you If you are tired while in class you may stand up at your discretion in order to maintain focus. If your tiredness becomes a problem/distraction, the instructor may excuse you for the day and you may be marked absent.

***Technological Gadgets:*** Please turn off or silence cell phones when entering the class.

PHONE USE WILL NOT BE ALLOWED IN CLASS: If you are observed using your phone during class time you will be asked to leave class, you will be marked as absent and will lose credit for the entire day. Phones will not be out while you are in the class room. All texting and electronic device activities must be done outside of class. You will get breaks on the hour, do what you need to do then outside of the class room. If you expect something to come up during class that requires phone use let me know and I will allow you to use/monitor it at my discretion.

***Assignments:***

WRITING ASSIGNMENTS: All writing assignments will require that you visit the Writing center in order to receive a full grade.

MODULE TAKE-AWAYS: After each class session you will be required to write down 5 main points that you took away from class.

YOU ARE REQUIRED TO TAKE NOTES, IT WILL BE A PART OF YOUR GRADE: Much of the concepts and information you will be required retain will be passed along through lectures. You must take good notes to ensure that you have the required material for study purposes. If you miss class you will need to find a class mate and obtain the notes for the day you missed. Lecture information will not always be formatted to be posted on canvas.

COMMUNICATION IS REQUIRED: Unless previously arranged with the instructor, if you miss a deadline on an assignment without contacting me ahead of time you will not get an opportunity to make it up, which means you will get a zero. You need to be a responsible adult; this program will not enable irresponsibility.

MISSED EXAM: In the event you are going to miss an exam OR assignment you must:

o Contact me at least 1 day ahead of time to let me know your special situation.

o Notify me ahead of time to not be penalized.

TEAM WORK: The only way we get through this is together. We need to help one another. Work as a team, pick each other up, help one another get through the academic and physical challenges, we need to have regular study groups, hold each other accountable and hold yourself accountable.

PERSONAL GROWTH AND EFFORT: You are here by choice and you are going to do it anyway, might as well do it right. Have some integrity to do the right thing when no is looking.

READING AND WRITING IS REQUIRED: During this course you should expect to have to communicate through reading, writing and oral briefings.

***Preparedness:***

YOU ARE RESPONSIBLE FOR YOUR LEARNING: If you don’t understand you need to ask. You are here by choice so, strive to do well. If you don’t ask, I cannot help you.

PARTICIPATION GUIDELINES: participation is considered active involvement in all class room or lab activities. Participation requires you to engage in lecture topics. You will be graded on your participation.

CLASS ROOM PREPAREDNESS: You will be docked preparedness/participation points for not having your required materials. You must always bring to class your Lecture/Lab Manuals

* YOU MUST ALWAYS BE PREPARED FOR CLASS:
	+ If you do not have your proper PPE you will be excused from class and will lose credit for the day.
	+ If you do not have your lab manual or notetaking materials you will be considered unprepared, will be excused from class and will lose credit for the day.
* Personal Protective Equipment (PPE) is mandatory for all field exercises. Safety rules must be strictly followed including the use of personal protective equipment (PPE) and cautious behavior. Students who fail to have in possession all PPE for field trip/exercises will not be allowed to participate, will be dismissed from the day’s exercise, and will be charged an absence for the day. ***SEE STUDENT REQUIRED PPE listed items at the end of this document.***
* ***Classroom Visitors:*** It is not acceptable to bring guests to class.
* ***Late Work:*** Work that is turned in late will lose 10% percentage grade points for each class session that is missed. (one class session late = -10% two class sessions late = -20%. Make up work ***will not*** be accepted after 3 missed sessions)
* ***Make-ups:*** Make up work will be accepted at the discretion of the instructor. All make up work must be discussed and approved by the instructor. Do not assume that make up work will be made available to you.
* ***Extra Credit:*** Extra Credit opportunities may be made available throughout the semester. Opportunities will be communicated as they arise.

SCHEDULES AND Course Outline (Schedules and outlines must remain flexible):

NR-133 Course Schedule

|  |  |  |
| --- | --- | --- |
| **Mastery SKILLS** | * **Chainsaw Operations**
* **Cleaning and Maintenance**
* **Trouble Shooting**
* **Wedging**
 | * **Tool Maintenance**
* **Saw Kit readiness**
* **Chainsaw Operations**
* **Cleaning and Maintenance**
* **Trouble Shooting**
* **Wedging**
 |
| **MODULE** | **TOPIC** | **SCHEDULE & ASSIGNMENTS** | **LEARNING OBJETIVES** |
| **1** | **Introduction****Equipment Work, Tools, Culture and Safety Practices****Terminology** | * **LECTURE 1:** Introduction to Chainsaw equipment and work culture and terminology
* **PPT-**
* **VIEW and DISCUSS**: \*\****YouTube***-
 | * Introduce the Chainsaw
* Gain an understanding of the various pieces of equipment needed for chainsaw operations
* Explore the culture and requirements for the job.
* Define common chainsaw operations terminology.
 |
| **2** | **General Work Protocols and** **Basic Starting and Operating Procedures** | * **LECTURE 2a:** General Work Protocols and Job Hazard analysis
* **LECTURE 2b:** Medical Planning
* **PPT-**
* **VIEW and DISCUSS:** \*\****YouTube*** –
 | * Identify components of worksite safety.
* Identify common Safety concerns for chainsaw operations.
* Understanding how to assess complete Job Hazard Analysis
* Understanding the physical demands of the job.
* Introduction to basic operating procedures.
 |
| **3** | **Risk Management****Binds, Bucking and Limbing** | * **LECTURE 3a:** Risk Management
* **LECTURE 3b:** Bucking and Limbing procedures, identifying binds
* **PPT-**
* **VIEW and DISCUSS:** \*\****YouTube***
 | * Define what risk management is.
* Define situational awareness
* Demonstrate proper assessment of binds.
* Identify the concepts of limb cutting sequences.
 |
| **4** | **Project Planning** **Chain Management** | * **LECTURE 3a:** Project Planning
* **LECTURE 3b:** Chain Maintenance
 | * Identify Project work Flow
* Identify Communication Protocol Link and check in procedures
* Develop and apply Medical evacuation protocols
* Utilize 9 line reporting system to communicate an emergency.
* Understanding of the parts of a Chain.
 |
| **5** | **Tree Felling Concepts****FIELD Practice** | * **LECTURE 5:** Introduction to Tree felling
* **PPT**-
* **VIEW and DISCUSS**: ***YouTube*** –
 | * Describe the procedure to properly fall a tree.
* Identify common falling difficulties
* Understand wedging protocols.
 |
| **6** | **FIELD Practice****Case Study-Dutch Creek Protocol** | * **LECTURE 6a:** Basic Concepts of Wildland Fire Behavior.
* **LECTURE 6b:** Topography Influences
 | * Describe the procedure to properly fall a tree.
* Identify common falling difficulties
 |
| **7** | **FIELD Practice****MID TERM REVIEW** | * **LECTURE 7:** FIELD
* **PPT-**
 | * Field repetitions
 |
| **8** | **FIELD FINAL** |  |  |
| **9** |  **WRITTEN FINAL** |  |  |