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



**Course:** NR 98 – 58298-**M,T,W – 8:00 to 15:05**

**Title:** **Wildland Fire Basics-Academy**

**Dates:** August 8, 2022 to October 7, 2022

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

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**Syllabus**

**Instructor:** Adam Hernandez

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

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

**Office Location:** DENTAL-10

**Office Hours: CANVAS, EMAIL or ZOOM:** TUESDAY- 15:00-16:00,THURSDAY- 8:00-10:00, FRIDAY 8:00-10:00.

**Drop Deadline: August 12th, 2022** – Last day to drop for full refund

**Final Exam:** TBD

# Laboratory Handbooks (Provided)

#1 - Incident Response Pocket Guide (IRPG)

#2 – Leading in the Wildland Fire Service

**Laboratory Guidebooks on the Internet (Download Required)**

1. **“**Wildland Fire Incident Management Field Operations Guide” (PMS 210) January 2014.
2. “National Incident Management System Emergency Responder Field Operations Guide” (October 2010)

\*\* Documents available on the Internet (google them) and will be useful for homework assignments. Other online guidebooks may be announced in class.

# FALL 2022

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| Important Dates for Summer and Fall 2022 |
| **DATE** | **DAY** | **EVENT / DEADLINE** |
| July 29 | (F) | End of 6, 8, and 10-week Summer Sessions |
| August 8 | (M) | Start of Fall 2022 semester |
| August 8 - October 7 | (M-F) | Short-term classes, first nine weeks |
| August 19 | (F) | Last day to drop a Fall 2022 full-term class for full refund |
| August 26 | (F) | Last day to register for a Fall 2022 full-term class in person |
| August 26 | (F) | Last day to drop a Fall 2022 full-term class in person to avoid a “W” |
| September 5 | (M) | Labor Day Holiday (no classes held, campus closed) |
| October 7 | (F) | Last Day to drop a full-term class (letter grades assigned after this date) |
| October 10 - December 9 | (M-F) | Short-Term classes, second nine weeks |
| November 11 | (F) | Veterans Day (no classes held, campus open) |
| November 24-25 | (Th-F) | Thanksgiving holiday (no classes held, campus closed) |
| December 5-9 | (M-F) | Fall 2022 final exams week |
| December 9 | (F) | End of Fall 2022 semester |
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**NR-98 Wildland Fire Basics-Academy**

**Course Description:**

This course will prepare students for basic employment as a wildland fire fighter with State and Federal agencies. Successful completers may earn basic National Wildfire Coordinating Group course certificates for ICS I-100, S-130, S-190, L-180 and IS-700. Students will have the opportunity to experience the physical training standards as well as the physical demands of the job in a field-work setting. This class also strives to develop physical skills that are necessary for arduous wildland firefighting work. Fire line construction, hand tool maintenance, fire shelter deployment, fire hose drills, fire engine operations, and foot travel in complex terrain are components of our lab exercises.

Additionally, this course provides introductory level training for the use of chainsaws in the forestry and natural resources field. Emphasis is placed on defining and applying chainsaw safety standards, maintenance and function of personal protective equipment (PPE), identification of chainsaw parts, maintenance, tuning, and tactical application of techniques required for brushing, limbing, bucking, and falling trees.

This course will also cover the development of goals and skills required to secure a job in the natural resources field including job search, resume/cover letter development, interviewing and motivation. This course is also a seminar on workplace issues within natural resources addressing elements of leadership, communication skills, work ethic, human behavior of individuals and groups, team building and dynamics, decision-making along with rating and evaluation, supervision skills of controlling work force and conflict resolution. ADVISORIES: English 1A or 1AH. (A, CSU) **Course Objectives:**

**Learning Outcomes:**

In the process of completing this course students should acquire the following Learning Outcomes and Objectives

**Course Objectives**

1. Analyze how environmental factors influence fire behavior and a know how to respond appropriately.

 2. Compare effects of changing the three components of a fire triangle.

 3. Analyze the factors contributing to wildland fire technician deaths.

 4. Recognize topographic conditions that typically increase fire activity.

 5. Demonstrate field maintenance tasks required for chainsaw operation.

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

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

 8. Create a resume/cover letter that is specifically appropriate for their career path in natural resources field.

 9. Develop accurately completed job applications for natural resource agencies whether public or private (e.g. USAJobs).

**CSLOs**

**NR-98 SLO1: Analyze how environmental factors influence fire behavior and know how to respond appropriately.**

**NR-98 SLO2: Perform fire line construction using hand tools in a crew formation safely.**

**NR-98 SLO3: Recite and be able to apply the NWCG (National Wildfire Coordinating Group) “10 Standard Fire Orders” and correctly evaluate possible consequences of the violation of these in the context of fire behavior principles.**

**NR-98 SLO4: Differentiate among basic chainsaw parts nomenclature, maintenance, tuning, troubleshooting, and safety feature**

**NR-98 SLO5: Demonstrate tactical chainsaw skills related to brushing, limbing, bucking, and felling operations**

**NR-98 SLO6: Apply for a job opportunity by completing required documents (e.g. resume/cover letter) accurately and following procedure so as to comply with specific natural resource employers’ requirements**

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**Online:**

Portions of this class may be conducted 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 hike continuously for 3 miles over rough terrain at a moderate pace under the weather conditions of the day. Students will learn and demonstrate how to use hand-tools (shovels, Pulaskis, and Mcleods) to construct fire control line and use fire hose and appliances to construct hose lays. It is strongly recommended that students be in 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 wildland firefighter both technically and physically.

Firefighting is a particularly labor-intensive task. Safety and success depend on every person’s full participation. In this class you will be practicing actual fire-line work. For the safety of others, and yourself, you must perform in a responsible manner. You must have your own 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 as a part of your participation grade. If you cannot safely carry out the tasks for any reason, including a health condition, you should notify the instructor. 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. When a message is disseminated you are required to respond that you have received the message.

**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**: Weather and various conditions play a role in the fieldtrip learning. For this reason, field trips dates will be announced throughout the semester. ***For your planning purposes, once a week field trips to various locations will be the standard, plan for this***. Due to COVID protocols for SPRING 2022, personal transportation will be required for all field trips. Be prepared to drive, carpool or get a ride to the field trip location. School transportation may not be provided.

There will be a scheduled trip to Glenwood Springs, Colorado to learn from the South Canyon Fire. Fundraising efforts will need to take place to support the costs associated with the trip. This trip will be further discussed during the semester.

**Grading Policy and Certificates**:

To receive a certificate of successful completion for NWCG Course work a student must pass all unit exams with a satisfactory score (specified for each unit). Final exam passing grade for NWCG & FEMA courses is 70% (NWCG and FEMA requirement).

# Course Unit Points Available Certificate Acquired

# IS-800 30 Points FEMA, IS-800

# S-131 30 Points NWCG, S-131

# S-290 30 Points NWCG, S-290

# S-219 30 Points NWCG, S-219

# L-280 30 Points NWCG, L-280

Performance Evaluation/Participation 30 Points

Assigned work/quizzes 30 Points

Resume 30 Points

Cover Letter 20 Points

USA Jobs Application 20 Points

Cal Careers Application 20 Points

Fresno OC Crew Application 20 Points

Chainsaw Assessment #1 20 Points

Chainsaw Assessment #2 20 Points

Chainsaw Assessment #3 20 Points

# Mid Term 30 Points

# Final 30 Points

Grading will be based on the results of above-mentioned assessments and Performance evaluation/participation. Assignments must be submitted on the due date or earlier. **Assignments and exam content will be based on lectures, in-class labs, and reading assignments. Your success will be centered around your notetaking from in class lectures, labs and readings. Always have something to write with and always take notes!!!!**

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

**Student Required PPE for Field Activities and general course activities:**

**NR-98-Wildand Fire Basics**

*Each student must have the following items during each class. Some items may be provided by the RC-WLF Program.*

- Hardhat

- Crew Shirt, Sweatshirt and Hat (minimum of 1 each)

- Leather Gloves

- Water container (6-1-quart canteens or water bottles)

- Leather Boots (minimum 8” high uppers, nonskid soles preferably Vibram, no steel) (estimate $200)

- Nomex Fire Pants

- Nomex Fire Shirt

- Leather Belt

- Watch

- Notepad-small (Must fit into cargo pocket)

- Always have a Something to write with (2 regular pens and 1 sharpie)

- Notebook for organizing your class materials.

- Lighter

- Backpack sufficient to carry hardhat, gloves, safety glasses, water, and food (needs to be in addition to your regular school backpack). Chest and waist straps are advisable.

\*\*\* Details will be given during the first-class meeting\*\*\*

**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 campus area.

***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 and participation 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. Take care of yourself, ***treat this class like it is your job and your instructor is your employer.***

***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: Unless directed otherwise, 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 can expect to 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. Be responsible for your own learning. Once you have a grip on the concepts help other gain proficiency as well.

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 performance and 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.

Course Learning Concepts (Schedules and outlines must remain flexible):

NR-5 Course Schedule

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| --- | --- | --- |
| **7** | **Fire Weather and Weather Observations** | * Review-belt weather kit
* Predictive Services
* Effects on fire behavior
* Extreme Fire Behavior
 |
| **8** | **Wildfire Suppression Tactics** | * Review Fire behavior descriptions and potential.
* Common suppression difficulties.
	+ Mid Slope lines
	+ Downhill line construction
* Hot Spotting
* Flair up potential
* Bolstering the hand line
* Ridges as advantageous engagement locations
 |
| **9** | **Emergency Medical Planning** | * Planning for bad outcomes
* Preparedness and rehearsed
* Effective treatment
* Effective extraction
* The golden hour
* Concise communications
 |
| **10** | **Burn Operations** |  |
| **11** | **Helicopter Transportation** |  |
| **12** | **Case Studies** | * South Canyon Fire-Case Study
* Yarnell Hill Fire-Case Study
* Mann Gulch-Case Study
* Loop Fire-Case Study
* Cramer Fire-Case Study
 |
| **14** | **Incident Action Plan** | * Content and how to use it
 |
| **15** | **Tool Maintenance**  | * Master the fundamentals
 |
| **16** | **Chainsaw Proficiency**  | * Fundamental saw maintenance and trouble shooting.
	+ Basic system operating principals
* Size up procedures
	+ Objective, Hazards, Lean, Escape Route, Cut Plan
* Bucking Skills
* Brushing Skills
* Felling Skills
	+ Undercut proficiency
 |
| **17** | **HAZMAT - TBD** | * HAZMAT First Responder Operations
 |
| **18** | **FIRST AID/CPR – FEB-8th & 9th**  | * Basic First Aid Treatment
 |
| **19** | **A Day in the Life** | * Hotshot Crew
* Engine Crew
 |
| **20** | **THICK SKIN** | * Work culture preparedness
 |
| **21** | **NWCG** | * Organizational guidance, consistency, qualifications
 |
|  | **MASTERY SKILLS*** Radio operations and use
* Belt Weather Kits
* Probability of Ignition
* Map and Compass
* Tool Maintenance
* Chainsaw operations
* Chainsaw Maintenance
* After Action Reviews
 | **MASTERY SKILLS*** Progressive hose lays
* Portable pump set ups
* Briefings
* Helicopter Loading
* Line Construction and Trenching
* Medical Scenario planning
* Downhill Line Construction
* 6 minutes for safety
* Hanford Weather
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