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

**Course:** NR 5 – Section 57730

**Title:** Wildland Fire Technology

Friday – 8:00 to 12:50 p.m.

**Dates:** August 16, 2019 to December 13, 2019

**Room:** FEM 8

**Syllabus**

**Instructor:** Adam Hernandez

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

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

**Office Location:** FEM-10

**Office Hours:** Monday, 11:00-1:00pm & 5:00-6:00pm/Tuesday, 8:00-10:00

**Drop Deadline: September 9, 2019 -** (to avoid a “W” on transcript)

**October 4, 2019 –** Final Drop Date

**Final Exam:** December 15, 2019

# Laboratory Handbooks (Required)

National Wildfire Coordinating Group, Student Manuals for:

1. S-130
2. S-190
3. L-180
4. Incident Response Pocket Guide (IRPG)
5. Ten Standard Fire Orders and Watch Out Situations.

\*\*Packet available at TK College Textbooks, 797 Reed Ave, Reedley, CA. Phone 638-1800

**Laboratory Guidebooks on the Internet (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 used for homework assignments. Other online guidebooks will be announced in class.

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

**Holiday/No Class:** September 2, 2019 – Labor Day

 October 14, Columbus Day – Indigenous People’s Day

 November 28, Thanksgiving

**Course Description:**

Preparation for employment and advancement within a State or Federal wildland fire agency. This course will convey the most current information and training available for entry level wildland firefighters. Students will gain an understanding of the day to day operations and fundamental tactical expectations of “rookie” firefighters in order to better prepare them for employment in the wildland fire service. Students can expect to be structured in a disciplined fashion where success of the team and teamwork comes before the individual. This course will prepare students with the fundamental concepts of fire behavior, command and organization structure, tools and equipment, physical training, lessons learned and leadership.

**Course Objectives:**

This course is comprised of four National Wildland Fire Coordinating Group (NWCG) and one Federal Emergency Management (FEMA) courses. It will prepare students for entry-level wildland fire suppression employment with State and Federal wildland fire agencies. NWCG and FEMA Certifications for S-130 Basic Firefighter, S-190 Introduction to Fire Behavior, L-180 Human Factors in Wildland Fire Service, IS-700 Introduction to the National Incident Management System, and I-100 Introduction to the Incident Command System will be offered.

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.

**Learning Outcomes:**

In the process of completing this course students will:

1. Students will understand the organization system used to manage wildfires and other emergency incidents, and how the Incident Command System fits into the Nation-Wide emergency management structure.

2. Students will be able to recite the factors which influence wildland fire behavior. They will comprehend basic wildland fire suppression tactics and strategy concepts and how the “Watch Out Situations” and “Standard Firefighting Orders” and “LCES” (Lookouts, Communications, Escape Routes, and Safety Zones) apply to these concepts.

3. Students will be able to identify factors that affect working relationships with co-employees during long stressful fire seasons and how these factors may lead to safety issues.

4. Students will satisfactorily perform line construction techniques in the field in accordance with fire physics and fire behavior elements.

5. Field performance will include an understanding of the safe use and maintenance of various tools and equipment for fire suppression.

**Online:**

 Portions of this class will be online and will be announced by the instructor. Blackboard will be used for disseminating 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 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.

**Cancelled Class Notification:** Communications for class cancellations will be made by your instructorthrough your preferred email account which will be collected the first day of class.

**Behavioral Standards:**

* ***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 four absences are accrued unless specific arrangements are made.*** Field trips/exercises missed cannot be made up.
* ***Technological Gadgets:*** Please turn off or silence cell phones when entering the class. Students may not use cell phones during class. For any cell phone use, including texting, you will be asked to leave class.
* ***Preparedness:*** 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.

**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.**

Course Outline:

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| Session Date | Chapter/Resource | Topic/Discussion Emphasis |
| 8/16 | S-130 | Introduction: NWCG Certificates. How it fits into Wildland Fire |
| 8/23 | S-130S-100 | Resource Types, Basic Terminology, Preparedness, ICS overview |
| 8/30 | S-130 | Watch-out Situations and Firefighting Orders, LCES, Fire Shelters |
| 9/06 | L-180 | Human Factors on the Fire Line, Introduce *IS-700-online* |
| 9/13 | L-180 | Human Factors on the Fire Line |
| 9/20 | S-130 | Transportation safety, Hand Tools |
| 9/27 | S-130S-100 | Suppression & Chain of Command Incident Command SystemDUE: *IS-700 Certificate Completed* |
| 10/04 | S-130 | Firing Devices and Firing operations.  |
| 10/11 | S-130 | Patrolling, securing and mop up on the fire-line |
| 10/18 | S-190 | Basic concepts of Wildland Fire, Topography, Fuels |
| 10/25 | S-190 | Fuels & Weather |
| 11/01 | S-190 | Wildland Fire Behavior and Safety – S-190 Review & Exam |
| 11/08 | S-130 | Basics of Hose lays and water-handling equipment |
| 11/15 | S-130 | Use of water, Engines & Portable Pumps - Live |
| 11/22 | S-130 | Wildland Urban Interface Safety & Hazardous Materials |
| 11/29 |  | Maps/Compass, Radio communications |
| 12/06 |  | Maps/Compass, Radio communications, Final Review |
| 12/13 |  | Final Exam for S-130 & L-180 |
| Notes: |

**Field Trip**: To Be Determined

**Grading Policy and Certificates**:

To receive a certificate of successful completion a student must pass all S-190, L-180, S-130 and I-100 unit exams with a satisfactory score (specified for each unit) and pass the final exam for each course. Final exam passing grade for NWCG & FEMA courses is 70% (NWCG and FEMA requirement).

Students who pass the S-190 **mid-term**, S-130, and L-180 unit **final exams** but fail the overall class (end of semester grade of “F”) will not be given the certificates. In-other-words students must pass the class with a grade of “D” or better in order to receive the certificates.

# Course Unit Points Available Certificate Acquired

# ICS-100 40 Points NWCG, ICS-100

# IS-700 40 Points FEMA, IS-700

# S-190 Mid-term 80 Points NWCG, S-190

# S-130/L-180 Final 80 Points total NWCG, S-130, S-133, L-180

Field Participation 30 Points

Assigned work/quizzes N/A

Grading will be based on the results of 5 Unit Tests /quizzes and Field participation. 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!**

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| **Grade Distribution** |
| A = 243-270 Pts. | 90-100% |
| B = 216-242 Pts. | 80-89% |
| C = 189-215 Pts. | 70-79% |
| D = 162-188 Pts. | 60-69% |
| F = Below 162 Pts | Below 60% |

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| **Assignment Type** | **Possible Points** |
| Course units ICS-100, IS-700 | 2 @ 40 Pts ea. = 80 |
| Mid-Term Exam S-190 | 80 |
| Final Exam S-130, L-180 | 80 |
| Field Participation and or other Assignments | 30 |
| **TOTAL Points Possible** | **270** |

**Student Required PPE for Field Trips:**

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

- Hardhat

- Leather Gloves

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

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

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

- Long Sleeve Cotton Work Shirt (NO HOLES)

- 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\*\*\*