Lassen Community College Course Outline

FS 75 Intermediate Wildland Fire Behavior (S-290) 2.0 Units

I. Catalog Description

This course provides instruction in the identification and prediction of wildland fire behavior problems in various fuel types and under varying weather conditions.

Prerequisite:
FS 61 – Basic Firefighter Training (Basic 32) or FS 60 - Wildland Firefighter (CalFIRE Basic Training); or S-190 Certification
Before entering this course the student should be able to:

1. Identify and discuss the three sides of a fire triangle.
2. Identify the environmental factors of fuels, weather and topography that affect the spread of wildland fire.
3. Describe the contribution factors that indicate the potential for increased fire behavior that may compromise safety.

37 Hours of Lecture, 74 Hours Outside Class Work: 111 Total Student Learning Hours
Scheduled: Spring even, by
agency request

II. Coding Information

Repeatability: Not repeatable
Open Entry/Open Exit: NA
Grading Option: Graded
TOP Code: 2133.10

III. Course Content

A. Course Student Learning Outcomes

Upon completion of this course the student will be able to:

1. Identify and describe the characteristics of fuels, weather, and topography that influence wildland fire behavior.
2. Describe the interaction of fuels, weather, and topography on wildland fire behavior, fireline tactics, and safety. Predict wildland fire behavior, given specific fuel, terrain and weather conditions.
3. Describe the causes of extreme fire behavior (long range spotting, crowning and firewhirls) developing due to weather, fuels, and/or topography.
4. Interpret, apply, and document wildland fire behavior and weather information.

B. Course Objectives

Upon completion of this course the student will be able to:

1. Identify and describe the characteristics of fuels, weather, and topography that influence wildland fire behavior.
2. Describe the interaction of fuels, weather, and topography on wildland fire behavior, fireline tactics, and safety.
3. Describe the causes of extreme widland fire behavior (long-range spotting, crowning, and fire-whirls developing due to fuels, weather, and /or topography.
4. Interpret, apply, and document wildland fire behavior and weather information.

IV. Outline of Topics

5. The Fire Environment
6. Topographic Influences
7. Fuels
8. Weather Processes
9. Temperature & Humidity
10. Atmospheric Stability
11. Wind Systems
12. Keeping Current with Weather
13. Observing Weather
14. Fuel Moisture
15. Extreme Fire Behavior
16. Fire Behavior Fireline Decisions

V. Assignments

A. Appropriate Readings
Assigned handout material

B. Writing Assignments
Incident action plans (IAP) dealing with fire behavior

C. Expected Outside Assignments
Utilizing the FLAME Field Guide for expected fire behavior spread.

D. Specific Assignments that Demonstrate Critical Thinking
Utilizing the FLAME, along with the Appendix B for fire calculations.

VI. Methods of Evaluation

Traditional Evaluation
Written exams and written assignments

VII. Methods of Delivery

Check those delivery methods for which, this course has been separately approved by the Curriculum/Academic Standards Committee.

☒ **Traditional Classroom Delivery** ☐ Correspondence Delivery

☐ Hybrid Delivery ☐ Online Delivery

Traditional Classroom Delivery
Lecture, discussion, audio/visual aids, demonstration, group exercises, guest speakers, lab, individualized programs and other as needed.

VIII. Representative Texts and Supplies

Materials provided by Instructor:
NFES 2377 - Intermediate Wildland Fire Behavior (S-290) Pre-Course Packet (1994)
NFES 2891 S-290 Student Workbook (2007)
NFES 2893 S-290 Student CD-ROM
NFES 2894 S-290 FLAME Field Guide
NFES 2165 Fireline Hanbook Appendix B: Fire Behavior – PMS 410-2
NFES 1574 Aids for Determining Fuel Models
NFES 1077 Incident Response Pocket Guide (PMS 461)

IX. Discipline/s Assignment

Fire Technology

X. Course Status

Course Status: Active
Original Approval Date: May 14, 1992
Revised by: Dan Weaver
Curriculum/Academic Standards Committee Revision Date: 10/04/2022