

Course Syllabus
Fall Semester 2023

ENR 3335.01— INTRODUCTION TO WILDLAND FIRE MANAGEMENT

Kottman Hall 333
Monday, 6:30pm—8:20pm



COURSE DESCRIPTION: The student will gain an understanding of fire behavior, the factors affecting this behavior, fire safety, effective control of wildland fires, and how to use prescribed fire in wildfire management and other ecosystem objectives. This course will meet the requirements and standards prescribed for courses developed under the interagency curriculum established and coordinated by the National Wildfire Coordinating Group, specifically the course designated as S-190 (Wildland Fire Behavior).

Credit Hours: 2 U

Pre-Requisites: None

INSTRUCTORS:

Dr. Roger A. Williams

Associate Professor

Forest Management and Fire Science

367-C Kottman Hall

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Mr. Mike Bowden

Lecturer

Ohio Dept. of Natural Resources

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TEACHING ASSISTANT

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TEXTBOOKS

Course materials required for this course will be provided by instructors on the Carmen webpage. Reading assignments may be given during the course.

COURSE GRADING AND EVALUATION

GRADED ITEM	% of TOTAL GRADE
Quizzes	30%
Midterm Examination #1	35%
Midterm Examination #2	35%
Total Percentage	100 %

Letter	Percent	Letter	Percent	Letter	Percent
A	93-100 %	B –	79-82 %	D +	66-68 %
A –	89-92 %	C +	76-78 %	D	60-65 %
B +	86-88 %	C	73-75 %	E	<60 %
B	83-85 %	C –	69-72 %		

Quizzes:

Quizzes will be administered in person at the beginning of each class. The quiz will cover material from the previous week's class only. Please review the assignment schedule for more information.

Exams:

Two exams will be given in this course, and both exams will be administered in-person on the assigned dates. The first exam will contain a clearly identified section as “S-190 Exam”. Students must receive a score of 70% or higher on this part of the exam to receive the S-190 certificate of completion, a requirement for red card certification. The S-190 section is only part of the first exam, and the entire exam score will serve as the recorded score for the ENR 3335.01 course. Please review the assignment schedule for more information.

Final Course Evaluation

The Carmen website will not be used to determine the final course grade. The Carmen website will be used to post the recorded grades so that you can see what grades have been recorded on your behalf, and can detect if any errors have been made. The final course grade will be determined with the following formula:

$$\text{Final Grade} = (\text{Quiz grade} \times 0.30) + (\text{Exam \#1 grade} \times 0.35) + (\text{Exam \#2 grade} \times 0.35)$$

$$\text{Where the Quiz grade} = (\text{total quiz points}/100 \text{ points}) \times 100$$

ASSIGNMENT SCHEDULE:

DATE	ASSIGNMENT	DETAILS
September 11	Quiz #1	Covers material in Lecture #1; administered in-person
September 18	Quiz #2	Covers material in Lecture #2; administered in-person
September 25	Quiz #3	Covers material in Lecture #3; administered in-person
October 4	Quiz #4	Covers material in Lecture #4; administered in-person
October 9	Quiz #5	Covers material in Lecture #5; administered in-person
October 16	Exam #1	Covers material in Lectures 1 – 6; Includes the S-190 Exam (Lectures 3 – 5); administered in-person
October 30	Quiz #6	Covers material in Lecture #7; administered in-person
November 6	Quiz #7	Covers material in Lecture #8; administered in-person
November 13	Quiz #8	Covers material in Lecture #9; administered in-person
November 20	Quiz #9	Covers material in Lecture #10; administered in-person
November 27	Quiz #10	Covers material in Lecture #11; administered in-person
December 4	Exam #2	Covers material in Lectures 7 – 12; administered in-person

COURSE OUTLINE

NOTE: Because the instructor will be on a workshop panel at the Northeast-Midwest Regional Prescribed Fire Science and Management Workshop in Madison, WI, only the first lecture will be conducted via Zoom, and only the first lecture. The link is provided in the course outline.

DATE	LECTURE	TOPICS	INSTRUCTOR
Aug. 28	1	Introduction to the Course; The combustion process in wildland settings (On Zoom)** Zoom Meeting link: https://osu.zoom.us/j/91653174979?pwd=R1F6anlpelBEV1Jjc0h5RTdFNERJZz09	RW
Sept. 4	---	Labor Day - NO CLASS	---
Sept. 11	2	Intrinsic Fuel Properties; Heat and Heat Transfer; Fuel Consumption	RW

Sept. 18	3	<u>Fire Behavior</u> : The Fire Environment, Fire Growth, Fire Spread and Intensity, Extreme	MB
Sept. 25	4	<u>Fire Weather</u> : Basic Weather Concepts and Processes, Atmospheric Stability, Winds-General , Local, and Topographic Effects, Fire Climate and Fire Season	MB
Oct. 2	5	<u>Wildland Fuels</u> : Fuel Change over Time, Fuel Description and Properties, Fuel Classification, Fuel Moisture	MB
Oct. 9	6	Fire Ecology, Plant and Ecosystem Adaptations	RW
Oct. 16	---	EXAM 1 (includes the Federal S-190 exam; Covers Lectures 1 – 6)	---
Oct. 23	7	Fire History in the U.S.: Native American Use – Present Day	RW
Oct. 30	8	Fire Statistics, Effects of Climate Change	RW
Nov. 6	9	Fire Suppression Strategies and Methods	MB
Nov. 13	10	Fire Management Programs in the U.S.	RW
Nov. 20	11	Prescribed Fire- Purpose and Management Considerations	RW
Nov. 27	12	Prescribed Fire- Planning and Implementation	MB
Dec. 4	---	EXAM 2 (Covers Lectures 7 – 12)	---

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THE INCIDENT QUALIFICATION CARD (RED CARD) AND PACK TEST

The Incident Qualification Card, commonly called a Red Card, is an accepted interagency certification that a person is qualified to do the required job when arriving on an incident.

The National Wildfire Coordinating Group sets minimum training, experience, and physical fitness standards for wildland fire positions. Incident Qualification Cards are issued to individuals who successfully complete the required training, experience, and work capacity test (also known as the pack test) by the firefighting agencies that are members of the National Wildfire Coordinating Group. You will be certified as a Firefighter Type 2 (FFT2).

The S-190 certificate issued after successful completion of the S-190 education component in this course, ENR 3335.01, serves as proof of training, so students should keep the certificates in their personal files. This certificate, along with the S-130 certificate acquired in ENR 3335.02, can be presented at federal and state agencies across the country as proof of training. Certificates expire after 5 years of inactivity.

All agencies and organizations will give you a pack test upon hire if being red card certified is a job requirement. While S-130/190 certificates are good for 5 years, the pack test is issued annually and at the time of hire.

POLICIES AND RESOURCES

General Class Policies

This class is delivered in a face-to-face venue, and class attendance is required. All recorded lectures, PowerPoint slides and class materials will be available online through the Carmen website. Due to the

nature of the course delivery, there will be no opportunities for make-up assignments. The only exceptions will be in extreme cases, as determined by instructors, and the instructors must be contacted ahead of time regarding the nature of the problem if at all possible. All personal information/situations will be kept extremely confidential. If you experience any problems or have any questions you should contact either Dr. Williams or Mr. Bowden at the contact information listed on the first page of this syllabus.

Many studies have been conducted to demonstrate a direct correlation with classroom attendance and a student's performance in the course. While attendance will not be recorded every class meeting, random attendance checks will be conducted. Continued absence will be noted, and a student's absenteeism will call into question that student's interest in the course and subject.

Academic Misconduct

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). If any academic conduct is suspected, the student will be contacted initially in confidentiality and presented evidence of said misconduct. The student will have the opportunity to rebut any evidence brought forward. If the case cannot be resolved, the information and evidence will be brought forward to the Committee on Academic Misconduct for appropriate resolution. For additional information, see the Code of Student Conduct at <http://studentconduct.osu.edu>.

As it pertains to this particular course, if it is discovered that there is cheating taking place in regard to quizzes or exams, any remaining quizzes and exams will be conducted in class and proper disciplinary action will take place pertaining to the individual(s) in question.

Disabilities Statement

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Grievances

According to University Policies, if you have a problem with this class, you should seek to resolve the grievance concerning a grade or academic practice by speaking first with the instructor or professor. Then, if necessary, take your case to the department chairperson, college dean or associate dean, and to the provost, in that order. Specific procedures are outlined in Faculty Rule 3335-7-23. Grievances against graduate, research, and teaching assistants should be submitted first to the supervising instructor, then to the chairperson of the assistant's department.

Counseling Services/Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting ccs.osu.edu or calling (614) 292- 5766. CCS is located on the 4th Floor of the Younkun Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at (614) 292-5766 and 24 hour emergency help is also available through the 24/7 National Prevention Hotline at 1-(800)-273-TALK or at suicidepreventionlifeline.org.

David Wirt, wirt.9@osu.edu, is the CFAES embedded mental health counselor. He is available for new consultations and to establish routine care. To schedule with David, please call 614-292-5766. Students should mention their affiliation with CFAES when setting up a phone screening.

Creating an Environment Free From Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or Email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

This course adheres to The Principles of Community adopted by the College of Food, Agricultural, and Environmental Sciences. These principles are located on the Carmen site for this course; and can

also be found at <https://go.osu.edu/principlesofcommunity>. For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (<https://equityandinclusion.cfaes.ohio-state.edu/>). If you have been a victim of or a witness to a bias incident, you can report it online and anonymously (if you choose) at <https://studentlife.osu.edu/bias/report-a-bias-incident.aspx>.