

COURSE SYLLABUS - FORESTRY 450

FIRE POLICY, SUPPRESSION, and USE

Spring 2021

Meeting Time and Location:

Online Synchronous Tuesday's 6:30PM - 9:00PM Jan 25, 2021-May 14, 2021

Final Exam Group: Tuesday 5/18/2021 7:15PM - 9:15PM

Instructor:

Steven R. Miller Office hours: By appointment Office location: Online or by phone

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Course Purpose & Description: Course Purpose & Description: The purpose of this course is to provide you with a deeper understanding and appreciation of the development of wildland fire policy and how that influences agency and organization approaches to wildland fire suppression and use. The course is divided into 3 discrete units; policy, suppression and use. The unit on policy will explore the history of wildland fire policy development and the events that have precipitated current federal policy and fire law. The unit on suppression will cover basic strategy, tactics, organization and resources. Additionally this unit will explore fire education, media relations, and wildland urban interface issues. The unit on fire use will cover categories of wildland fire use, fire weather, smoke management, prescribed fire objectives and practice, and fire surrogates. We will use the concept of a virtual "Staff Ride" to better understand contextual decision making. A Staff Ride is a study of infamous fires conducted in an effort to provide valuable learning opportunities from actions taken by wildland firefighters/manager. On a Staff Ride, finding out about leadership factors that affected the outcome can help participants benefit from the good decisions, and reduce the chances of making similar mistakes. You will conduct library and internet research and make a presentation about one significant wildfire fire event that affected fire policy. You will also explore WUI issues and develop a Fire Wise plan for a neighborhood.

Enduring Understandings, Essential Questions, Key Learning Outcomes:

Enduring Understandings:

Students will understand that current wildland fire policy has developed as a result of regional cultural perspectives and historical educational perspectives of the forestry profession. Cultural perspectives and professional bias influence how fire policy is implemented regionally. Students will also understand that the need for wildland fire suppression is subject to much philosophical public debate about causes of wildfires, the militaristic approach used, and the damage that often results to ecosystems from suppression efforts. That public debate has precipitated policy that has been unsound at times from a scientific or management standpoint. Students will understand that wildland fire suppression strategy and tactical skills provide only a framework for dealing with large-scale incidents. The context of every fire is different. Students will understand that prescribed fire is a safe way to apply a natural process, ensure ecosystem health, and reduce wildfire risk.

Essential Questions:

Why has science often taken a back seat in policy development? How has culture over-ridden science in policy development? Can suppression activities cause as much if not more damage to ecosystems than the wildfire itself? Is the military model the best one for organization of suppression efforts? Can we find a better balance in wildland fire management that poses less risk to fire personnel and the public, is more economically sustainable, protects valuable infrastructure and provides for ecological integrity? If fire is indeed an ecological process why do land managers hesitate to use it? What does it mean to manage renewable natural resources for the public good?

Learning Outcomes:

Knowledge (Know):

Students will learn that policy provides a guideline for field operations (i.e., how to do business) and has often developed in reaction to a problem situation. Students will learn that wildland fire policy is not always science based or proactive. Students will learn that policy determines how wildland fire suppression efforts and wildland fire use is implemented. Students will know the basic strategies and tactics employed in wildland fire operations. Students will know the mitigating measures to apply in wildland urban interface situations. They will know the basic objectives for prescribed burning and the parameters used to develop safe burn prescriptions to meet various objectives.

Skills:

Students will be able to describe policy development and implementation, and how these influence wildland fire strategy, tactical decisions, and wildland fire use. Students will become familiar with the basic strategic and tactical skills used to approach small and large fire containment. Students will gain decision making skills through practical exercises (virtual Staff Ride) that put them in the contextual position and circumstance of decisions made by others. Students will develop skill in dealing with wildland urban interface issues through appraisal of hazard situations and formulation of methods to create defensible space. Students will develop skill in understanding fire weather and the connection to smoke management. They will develop skills to project or model smoke trajectories and identify potential hazard areas. Students will develop skills in determining burn parameters for specific objectives and situations and appropriate goals and objectives for application of prescribed fire

Dispositions:

Students will appreciate the difficulty in developing sustainable policy that balances science, management needs, and public input. Students will value the rich history of the early conservation movement and how it intertwines with formulation of early public fire policy. Students will respect the lessons learned from wildland fire tragedies about suppression organization, strategies, and techniques used in modern day suppression efforts. Students will commend the appropriate use of prescribed fire as a way to re-introduce fire into ecosystems as an essential part of wise natural resource management.

Required Textbook(s):

Egan, Timothy. 2009. *The Big Burn: Teddy Roosevelt and the Fire that saved America*. Houghton Mifflin Harcourt, Boston, Massachusetts. 324p.

Additional readings will be assigned to supplement the textbook reading assignments.

Canvas will be used to; provide some of your assigned readings, provide access to your grade, rubrics, and other as appropriate. *Note that Canvas is linked to **turnitin.com** which checks for originality.*

Assignments and Class Activities:

Weekly reading assignments are generally on the course schedule. You are expected to read assignments before class and come prepared to discuss the material or complete the lab assignment. There will be three semester projects. One will be to review a significant fire event and report out the lessons you learned. The second is to develop and present a wildland urban interface fire plan for a neighborhood selected from a list provided. The final project will be to develop a burn prescription and a Go-No go guide in Excel.

Attendance: Your participation in class is a significant part of your grade. Classes will be recorded so they can be viewed if you miss the scheduled session, but that should be the exception and not the rule, since it will provide little opportunity for discussion. If you are not unable to attend the live version, please notify me via email in advance.

Grading Policies / Procedures / Scale:

Three exams will be given, one over each of the major units. Exams are not cumulative. The last exam will be given during finals week. The exams over each of the units will compose 60% of the final grade. Exams will be a combination of multiple-choice, short answer and matching. Quizzes constitute 10% of the grade. Up to

four short quizzes will be given during the course. Homework assignments will be 5%; The projects will be 15% of the total grade with 5% for each one (significant fire review, WUI plan, prescribed fire plan and go no go). The remaining 5% will be from discussion participation.

<u>GRADING</u>	<u>WEIGHT</u>	<u>Grade Scale</u>			
		Mean	Letter	Mean	Letter
Exam 1 - Policy	20%	<u>Score</u>	<u>Grade</u>	<u>Score</u>	<u>Grade</u>
Exam 2 - Suppression	20%	100-93	A	77-73	C
Final exam – Use	20%	92-90	A-	72-70	C-
Quizzes	10%	89-88	B+	69-68	D+
Homework	10%	87-83	B	67-60	D
Projects and plans	15%	82-80	B-	<60	F
<u>Participation</u>	<u>5%</u>	79-78	C+		
	100%				

Student Responsibilities:

UWSP values a safe, honest, respectful, and inviting learning environment. In order to ensure that each student has the opportunity to succeed, we have developed a set of expectations for all students and instructors. This set of expectations is known as the *Rights and Responsibilities* document, and it is intended to help establish a positive living and learning environment at UWSP. Click here for more information:

<http://www.uwsp.edu/stuaffairs/Pages/rightsandresponsibilities.aspx>

Academic integrity is central to the mission of higher education in general and UWSP in particular. Academic dishonesty (cheating, plagiarism, etc.) is taken very seriously. **Don't do it!** The minimum penalty for a violation of academic integrity is a failure (zero) for the assignment. For more information, see the UWSP "Student Academic Standards and Disciplinary Procedures" section of the *Rights and Responsibilities* document, Chapter 14, which can be accessed here:

<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>

Materials that you use in your report that are not your own must be credited with a source. This includes photo credit for photographs that are not your own.

Students With Disabilities:

The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations for students with disabilities. For more information about UWSP's policies, check here: <http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyInfo.pdf>

If you have a disability and require classroom and/or exam accommodations, please register with the Disability and Assistive Technology Center and then contact me at the beginning of the course. I am happy to help in any way that I can. For more information, please visit the Disability and Assistive Technology Center, located on the 6th floor of the Learning Resource Center (the Library). You can also find more information here: <http://www4.uwsp.edu/special/disability/>

EMERGENCY SITUATIONS:

The following guidance for appropriate response in *Emergency Situations* is excerpted from the Risk Management Preparedness web page:

“In the event of a **medical emergency**, call 911 or use red emergency phone located (list location). Offer assistance if trained and willing to do so. Guide emergency responders to victim.

In the event of a **tornado warning**, proceed to the lowest level interior room without window exposure at (list primary location for shelter closest to classroom). See www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans for floor plans showing severe weather shelters on campus. Avoid wide-span rooms and buildings.

In the event of a **fire alarm**, evacuate the building in a calm manner. Meet at (state logical location to meet 200 yards away from building). Notify instructor or emergency command personnel of any missing individuals.

Active Shooter – Run/Escape, Hide, Fight. If trapped hide, lock doors, turn off lights, spread out and remain quiet. Follow instructions of emergency responders.

See UW-Stevens Point Emergency Management Plan at www.uwsp.edu/rmgt for details on all emergency response at UW-Stevens Point.”