

Forest Management ~ Managing Forests for a Sustainable Future ~

FORS 4100/5100 with Dr. Michael Remke

Fall 2024



Image: Ponderosa pine forests in the Pecos, one of the first Forest Reserves in the United States.

Welcome to FORS 4100 – Forest Management. Forest Management will connect elements of social, ecological, and economic values of forests, including silviculture, to guide us to consider how to best manage forests.

Managing Forests for a Sustainable Future

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Figure 1: A dense understory of wildflowers proliferates following the Hermit Peak Calf Canyon fire in the Spruce-Fir.

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Course Information:



Course Number:		Instructor:
FORS 4100/5100		Dr. Michael Remke
Term:	Credits:	Office:
Fall 2024	3	Ivan Hilton Science Building (HSCI) 135
Lecture Meeting Time:	Lecture Meeting Place:	Email:
		mremke@nmhu.edu
Monday, Wednesday 11:00am-12:15pm	HSCI 321 Zoom Room	Phone:
		(505)454-3320
Zoom information:		
Zoom Room ; Password: Forests		
Website: https://www.mycoremke.com/teaching/fors4100forestmanagement		

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Student Hours:

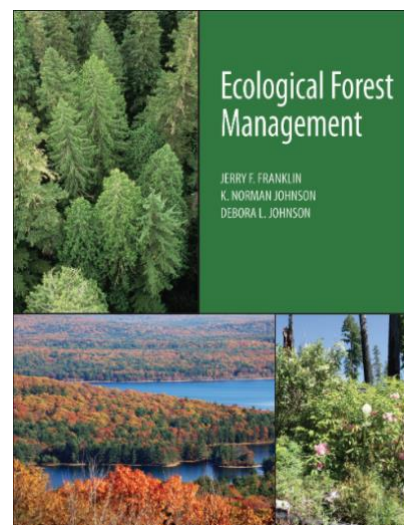
~ Student hours are when my office door is open for any drop-in conversation.

Please use this time to discuss course material, career ideas, or anything else you really want to nerd out on.

Student Hours: Spring 2024		None of these times work?	
Day	Time		
Monday	12:00pm-2:00pm lunch hour	 <p>If none of these times work scan this QR Code to schedule an alternative time to meet</p>	<p>Have a question or comment regarding class? Scan this QR Code to submit an anonymous question or comment. This can be academic related or otherwise.</p> 
Tuesday	2:00pm-4:00pm seltzer hour		
Thursday	9:00am-11:00am coffee hour		
*Please bring your own beverage to enjoy with our conversation, if you want			

Textbook and readings: **Readings for this class will be uploaded to BrightSpace and no text book is required.**

The books to the right are what many lecture materials and lab materials will be based on and are highly recommended for your personal forestry library for supplemental readings and future reference, but I will not require readings from these books.



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Learning Goals:

NMHU Learning Goals:

1. Mastery of content knowledge.
2. Critical and reflective thinking skills.
3. Ability to communicate effectively.
4. Ability to use technology.

Society of American Foresters Learning Goals:

1. Understand the interdisciplinarity of forestry.
2. Critically think about how to sustain ecosystems for multiple objectives.
3. Students will understand the values offered by participants, landowners, communities, society, and the ecosphere.
4. Students will demonstrate an understanding of both scientific and traditional ecological knowledge systems.
5. Students will demonstrate professional and ethical behaviors and be able to critically think regarding ethics from diverse viewpoints.
6. Students will understand the value of diverse people, perspectives, and practices.

Course Learning Objectives (CLOs):

This course is focused on understanding common forest pathogens and insects and how to consider them in an integrated forest health lens.

Knowledge	Skills
1. Understand ecological dimensions of forest management	5. Translate quantitative data into forest management decisions
2. Understand human dimensions (social-economic) of forest management	6. Find forest planning resources and write forest management plans
3. Apply critical thought to complex and nuanced management scenarios	7. Writing and communication skills
4. Be familiar with the principals of forest management	8. Independent research and critical thinking

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Course Structure:

Classroom Format: This course will be a mix of lectures, interactive activities, and hands-on learning in the laboratory format.

Course Attribute	Description
Lecture	<p>The lecture will emphasize material content from readings and focus on concepts, theories, and principles of soil science. The lecture will be in-person, interactive, and participation is mandatory (see grades).</p> <p>There will be a daily quiz that will cover material from the previous lecture. This quiz will also reflect any assigned readings for the day.</p>

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Assessments and Grading:

This class will be graded based on the following categories: **participation, examination, lab, and final project**. These categories are outlined in terms of their total points towards your final grade below.

Category	Points	Percent of total	Description
Participation	200	21%	5 points / lecture = 160 points + 40 points overall grade and professionalism
Quizzes	250	26%	25 x quizzes @ 6 points each
Lab Project	200	21%	Final paper and self-assessment from lab reports
Total:	950	100%	

Grades are reported to the university using the standard grading scale outlined below based on the percentage of your total grade. Please consider the rubric categories as opportunities for growth rather than focusing on your grade alone. Since your participation grade is a daily grade, you always have opportunity to improve in the next class.

Grade	Percent Range	Rubric Category
A	>90%	Excelling (4)
B	80-89.0%	Sufficient (3)
C	70-79.9%	Developing (2)
D	60-69.9%	Needs Improvement (1)
F	<60%	Absent

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<u>Policy</u>	<u>Description</u>	<u>Resources</u>
<p>Late assignments</p>	<p>Assignments will be posted to BrightSpace and will always be due at the beginning of the class period for which their due date is listed.</p> <p>Late assignments will result in a 10% grade deduction for every day they are late. Professional settings mandate proactive communication for missing deadlines, so this late assignment penalty can be waived with reasonable proactive communication.</p>	<p>How to communicate with your professor</p> <p>How to email your professor</p>
<p>Attendance</p>	<p>Attendance is mandatory. We will be meeting as a class in person. Should you not be able to attend class in person for any reason (illness, extraneous circumstance etc), a Zoom link is available. Please communicate with Dr. Remke in advance to ensure the Zoom room is activated.</p> <p>Should you miss class – Well shoot. Every day is special. The biggest consequence in my opinion is FOMO (Fear of Missing Out). In professional settings, missing an obligation is acceptable with proactive communication and a dedication to making up missed material independently. Interpret this for how you wish in your self-assessment.</p>	<p>How to catch up</p> <p>What to do when you miss class</p>

In addition to the above policies, we will collaboratively develop the [Rules Of Engagement](#) as a class. This space is our community, so let us prioritize making our community a place that is inclusive and enjoyable for everyone.

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Rules of Engagement:

We develop these rules as a group on the first day of class. The point is to ensure we have a respectful classroom setting everyone can agree with and feel comfortable with. If someone is violating these rules, we can politely point out the situation and remedy the problem as a group or as individuals within the group. The point is to ensure we are all empowered and supported rather than me, the professor, holding disproportionate rule-making and enforcing authority.

Example Rules:

1. Be present
2. Assume positive intent
3. Critique ideas, not people
4. If you identify a problem, present a solution as well
5. Make mistakes
6. If you take space, make space

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Tentative Schedule:

Page 1/4	<u>Day</u>	<u>Date</u>	<u>Class Type</u>	<u>Topic</u>	<u>Readings and Assignments Due</u>
Week 1	Monday	8/12	Lecture	Introductions and syllabus	
	Wednesday	8/14	Lecture	Production Forestry	
Week 2	Monday	8/19	Lecture	Production Forestry: Logistics and Considerations	
	Wednesday	8/21	Lecture	Ecological Forestry: Themes and Approach	
Week 3	Monday	8/26	Lecture	Policy, Negotiation, and Change	
	Wednesday	8/28	Lecture	Mysteries, Wickedness and Tenets	
Week 4	Monday	9/2	Lecture	Forests as Ecosystems	
	Wednesday	9/4	Lecture	Disturbance and Forest Development	

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Page 2/4	<u>Day</u>	<u>Date</u>	<u>Class Type</u>	<u>Topic</u>	<u>Readings and Assignments Due</u>
Week 5	Monday	9/9	Lecture	Disturbance and Forest Development	
	Wednesday	9/11	Lecture	Silviculture: A review	
Week 6	Monday	9/16	Lecture	Silviculture and Forest Management Case Study	
	Wednesday	9/18	Lecture	Landscape Ecology	
Week 7	Monday	9/23	Lecture	Planning and Managing Landscapes	
	Wednesday	9/25	Lecture	Ownership, Markets, Investment and License	
Week 8	Monday	9/30	Lecture	Don't break the Law	
	Wednesday	10/2	Lecture	Conflicts and Collaboration	

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Page 3/4	<u>Day</u>	<u>Date</u>	<u>Class Type</u>	<u>Topic</u>	<u>Readings and Assignments Due</u>
Week 9	Monday	10/7	Lecture	Conflicts and Collaboration	
	Wednesday	10/9	Lecture	Collaboration Examples	
Week 10	Monday	10/14	Lecture	Resilience and uncertainty: Adaptive Management	
	Wednesday	10/16	Lecture	Monitoring and Collaborative Learning	
Week 11	Monday	10/21	Lecture	Current Issues: Our Forests are Burning	
	Wednesday	10/23	Lecture	Current Issues: Sink or Source: Forest Carbon	
Week 12	Monday	10/28	Lecture	Certifications etc	
	Wednesday	10/30	Lecture	Forest Management Plans	

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Page 4/4	<u>Day</u>	<u>Date</u>	<u>Class Type</u>	<u>Topic</u>	<u>Readings and Assignments Due</u>
Week 13	Monday	11/4	Lecture	Naturalistic Decision-Making	
	Wednesday	11/6	Lecture	Systematic Decision Making	
Week 14	Monday	11/11	Lecture	A framework for Ecological Forest Management	
	Wednesday	11/13	Lecture	Course wrap-up	
Week 15	Monday	11/18	Lecture	Forest Plan Writing	
	Wednesday	11/20	Lecture	Forest Plan Writing	Submit draft forest plans
Week 16	Monday	11/25	Lecture	Forest Plan Writing	
	Wednesday	11/27	Lecture	No Class: Fall Recess	

FINALS

No in person final; Happy Holidays! – Forest Plans due no later than 12/1

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Course Policies:

<u>Policy</u>	<u>Description</u>	<u>Resources</u>
Academic Integrity Policy:	<p>New Mexico Highlands University students and faculty are expected to maintain integrity through honesty and responsibility in all their academic work.</p> <p>Academic dishonesty includes plagiarism, Cheating, Collusion, Facilitation, Fabrication, Multiple Submissions, and Falsification of Records.</p> <p>ChatGPT and other Artificial Intelligence (AI) tools help look up questions or ideas; however, copying and pasting AI-generated answers is still academically dishonest.</p>	<p>This course follows the Highlands Academic Integrity Policy as described in the catalog: Academic Integrity Policy</p>
Cell Phone and Electronics Policy	<p>Cell phones can both distract and enhance the learning environment.</p> <p>We will develop rules regarding cell phone use together as a class, please reference the Rules of Engagement for more details.</p>	<p>Smart Phones in Classrooms</p> <p>10 Ways A Smartphone can help you Learn</p>
Preparedness and Etiquette Policy	<p>Having the proper etiquette for the day means having a good attitude and being part of the team that is our class.</p> <p>Specific Rules of Engagement will be made on the first day of class and added to this syllabus.</p>	<p>Packing checklist</p> <p>Field Biology Checklist</p>

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Rubrics:

Participation Assessment Rubric		Needs Improvement (1)	Developing (2)	Sufficient (3)	Excelling (4)
Behavioral Trait	Engagement	Student does not participate and lacks interest or curiosity in material covered	Student sometimes participates and seems curious for only some material covered	Student participates most days and is interested in some, but not all of the material covered	Student participates daily and encourages participation of peers. Student is curious in material covered
	Focus	Student is distracted and often dedicating energy to items besides the tasks on hand	Student is often distracted with other items during activities, presentations, and instructions	Student is sometimes distracted with other items during activities, presentations and instructions	Student works on task and is attentive during presentations, instructions, and activities
	Attitude	Student is negative and complains about circumstances without being proactive in resolving circumstances	Student is seldom positive and if negative about circumstances at least attempts to resolve the issue	Student is mostly positive but is mostly focused on self and not others	Student is positive daily regardless of circumstances and helps classmates
	Preparedness	Student came dressed inappropriately for weather or activity	Student forgot something at home but had the foresight of preparedness	The student had most needed items but would benefit from more organization	Student had all needed items and was well organized.
	After Action Review	Student is constantly distracted during class	Student is sometimes distracted.	Student often participates during after action reviews	Student is attentive and engaged during

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Written Assessment Rubric		Needs Improvement (1)	Developing (2)	Sufficient (3)	Excelling (4)
Writing Component	Clarity	The purpose of the student work is not well-defined. Central ideas are not focused to support the thesis. Thoughts appear disconnected.	The central purpose of the student work is identified. Ideas are generally focused in a way that supports the thesis.	The central purpose of is clear and ideas are almost always focused in a way that supports the thesis. Relevant details illustrate the author's ideas.	The central idea is clear and well supported, supporting ideas are focused and details are relevant.
	Organization	Information and ideas are poorly sequenced (the author jumps around). The audience has difficulty following the thread of thought.	Information and ideas are presented in an order that the audience can follow with minimum difficulty.	Information and ideas are presented in a logical sequence which is followed by the reader with little or no difficulty.	Information and ideas are presented in a logical sequence which flows naturally and is engaging to the audience.
	Mechanics	There are five or more misspellings and/or systematic grammatical errors per page or eight or more in the entire document. The readability of the work is seriously hampered by errors.	There are no more than four misspellings and/or systematic grammatical errors per page or six or more in the entire document. Errors distract from the work.	There are no more than three misspellings and/or grammatical errors per page and no more than five in the entire document. The readability of the work is minimally interrupted by errors.	There are no more than two misspelled words or grammatical errors in the document.
	Creativity	The student work is difficult to distinguish as its own.	Some elements of the work are unique	Most of the work is unique	The student work is unique and stands out as a novel perspective or writing

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Self-Assessment Rubric		Needs Improvement (1)	Developing (2)	Sufficient (3)	Excelling (4)
Self-assessment Component	Knowledge	I feel I did not learn new knowledge	I learned little new knowledge in this class.	I learned many new knowledge, but some knowledge was not new.	I feel like I learned lots of new knowledge.
	Skills	I feel like I did not gain new skills	I learned few new skills in this class.	I learned many new skills, but some skills were not	I feel like I learned lots of new skills
	Comfort	I feel like I am uncomfortable in topics discussed in class	I did not increase my comfort much from the beginning of class	I am generally more comfortable, but some things still challenge me	I feel my comfort with material in course has increased.
	Confidence	I feel like I am not confident in class	I did not increase in confidence in forestry in this class at all.	I feel fairly confident but still find material I am not so confident in	I feel more confident as a forester than I did at the beginning of class
	Participation	I feel like I rarely participate throughout this class in the class	I only sometimes participated throughout the class	I find myself participating most of the time.	I feel like by the end of the class I was participating more.
	Excitement	I feel unexcited about the topics in the class.	I feel only sometimes excited about things in this class.	I am generally excited about material, but some topics still are not interesting to me.	I feel very excited about learning more about forestry.