

FOR 424/624 FOREST PATHOLOGY

Instructor: Dr. Holly A. Petrillo

Lecture: M&W 11-11:50; TNR 120

Email: hpetrill@uwsp.edu

Lab: T 11-12:50 (section 1) OR 1-2:50 (section 2), TNR 360

Office: TNR 363

Office Hours: Tuesdays 10-11am, Wednesdays 12-1pm, by appointment, or just stop in! Zoom office hours also available.

LEARNING OUTCOMES: This course is intended to provide students with the principles of forest pathology. After successful completion of this course, students will be able to:

1. Explain the basic biology, ecology, and significance of disease- and decay-causing agents in a variety of settings, including natural forests, managed plantations, urban areas, nurseries and wood storage facilities.
2. Diagnose common pathogen damage with examples in the lab and in the field.
3. Describe management techniques available for common forest pathogens of the Great Lakes region.

The content and learned outcomes associated with FOR 424/624 are aligned with the following SAF accreditation competencies:

Ecology and Biology

- an ability to make ecosystem, forest and stand assessments;
- knowledge of tree physiology and the effects of climate, pollutants, moisture, nutrients, genetics, insects and diseases on tree and forest health and productivity

RESOURCES FOR THIS CLASS:

We will not be using a textbook for our course. I will assign readings to accompany lecture topics; readings will be posted in Canvas. Readings will be taken from scientific literature, newsletters, and other relevant material. You will be expected to do the assigned readings, and material from readings will be incorporated into lecture exams.

These links will be useful in supplementing lecture and lab material:

Christmas Tree Pest Manual: <https://www.fs.usda.gov/naspf/publications/christmas-tree-pest-manual-third-edition>

Field Guide to Tree Diseases of Ontario:

http://www.natureindeed.com/PDFs/field_guide_to_tree_diseases_in_ontario.pdf

What's wrong with my plant? (MN): <http://www.extension.umn.edu/garden/diagnose/>

Wisconsin Plant Disease Clinic, including a monthly pathogen-related newsletter:

<https://pddc.wisc.edu/?q=pddc%2Fpddcgraphics%2Findex.htm>

Professor Blanchette's lab at the University of MN: <http://forestpathology.cfans.umn.edu/default.htm>

Michigan State University's Forest Pathology page: <https://forestpathology.msu.edu/>

Forest & Shade Tree Pathology: <http://www.forestpathology.org>

INSTRUCTOR EXPECTATIONS:

I will provide you with the most up-to-date information and resources on forest health, forest pathology, and related issues that I can. I will be available in and outside of class to answer questions and help you learn. I want you all to succeed and feel confident in applying the material we cover during class.

My expectations of you include professionalism, respect for your instructor and classmates, willingness (and even excitement!) to learn new material, inquiry, open-mindedness and academic integrity. Although I understand that all of you may not want to be professional pathologists, I will present the material relevant for professional foresters and appreciate your willingness to understand the importance of forest pathogens and related disturbances in forest management and ecology.

ATTENDANCE AND PARTICIPATION:

Both lectures and labs are in-person and your attendance in class is expected and essential for success in this course. Absence during an exam or quiz will result in a zero unless you have contacted me beforehand, or have an unexpected situation such as an emergency or illness. Please contact me as soon as possible if such

a situation occurs. Most importantly, a positive attitude and hard work will facilitate you achieving the grade you want.

*****Make-up exams will only be given when a valid excuse is presented to the instructor (or by prior arrangement). Arrangements for a make-up exam must be made prior to the exam period or no later than 24 hours after the missed exam.**

GRADING:

Grades* for this class will be based on exams (midterm and final), lab quizzes, and your pathogen management plans. Grades will be calculated by the following breakdown:

<u>Evaluation type</u>	<u>% of grade</u>	<u>Mean Score</u>	<u>Letter Grade</u>	<u>Mean Score</u>	<u>Letter Grade</u>
Lecture exams (2)	35%	>/=92.5	A	79.4-77.5	C+
Lab quizzes (3)	35%	92.4-89.5	A-	77.4-72.5	C
Pathogen Management Plans (2)	30%	89.4-87.5	B+	72.4-69.5	C-
		87.4-82.5	B	69.4-67.5	D+
		82.4-79.5	B-	67.4-59.5	D
				<59.5	F

*graduate students will have additional responsibilities in class that will contribute to the final grade; graduate students should attend the instructor's office hours within the first 2 weeks of class to discuss responsibilities

CANVAS:

We will be using the Course Management System, Canvas. Canvas login, support information, and training opportunities are available at www.uwsp.edu/canvas. Lecture powerpoints, readings, grades, announcements, and all other course information will be posted on our course Canvas page.

*All material posted in Canvas is the intellectual property of Dr. Holly Petrillo and may not be distributed without consent.

FOR 424/624 SPRING 2022 (TENTATIVE) LECTURE & LAB SCHEDULE Mondays & Wednesdays 11-11:50am, TNR 120

Week	Lecture Topics	Readings*
Week 1	Lecture: Introduction to forest pathology NO LAB 1ST WEEK OF CLASS	
Week 2	Lecture: Rust diseases (M); Fungi (W) <i>Lab: Rust diseases</i>	
Week 3	Lecture: Vascular wilt diseases (M); Fungi contd.(W) <i>Lab: Vascular wilt diseases</i>	Mycorrhizae readings
Week 4	Lecture: Fungal mutualists <i>Lab: Lab quiz 1</i>	
Week 5	Lecture: Canker diseases (M); Viruses and phytoplasma diseases (W) <i>Lab: Canker diseases</i>	Virus reading
Week 6	Lecture: Bacteria <i>Lab (March 1): NO LAB WI Plant Pest Summit; Pathogen management plan draft #1 due</i>	
Week 7	Lecture: Root & Lower Stem Diseases (M); Parasitic plants <i>Lab: Root & lower stem diseases</i>	Mistletoe & fire reading
Week 8	Lecture: March 14 (M): EXAM 1 DURING LECTURE March 16 (W): Nematodes <i>Lab: Wood decay organisms</i>	
	March 21-23: SPRING BREAK NO CLASSES	

Week 9	Lecture: Abiotic disorders <i>Lab: Lab quiz 2</i>	
Week 10	Lecture: Foliar disorders of gymnosperms (M); Pathogens & forest health (W) <i>Lab: Foliar diseases of gymnosperms</i>	
Week 11	Lecture: Foliar diseases of angiosperms (M); Damage & disease diagnosis (W) <i>Lab: Foliar disorders of angiosperms; Pathogen Management Plan draft #2 due</i>	
Week 12	Lecture: Exotic pathogens <i>Lab: Lab quiz 3</i>	Exotic pathogens reading
Week 13	Lecture: Declines <i>Lab: Outdoor field lab (weather permitting)</i>	
Week 14	Lecture: Fruit tree diseases <i>Lab: Outdoor field lab (weather permitting)</i>	
Week 15	Lecture: Forest pathogens and climate change <i>Lab: Outdoor field lab (weather permitting); Final pathogen management plans due May 10 by 11:59pm</i>	Climate change readings
May 16	Final Exam due by 10am, uploaded to Canvas	

Lecture powerpoints and other announced material can be found on the CANVAS site for FOR 424/624

*Readings are posted in CANVAS, and hyperlinked in PowerPoints when possible

**Outdoor field labs are required, see Canvas for updated instructions

UWSP COMMUNITY RIGHTS AND RESPONSIBILITIES

UWSP values a safe, honest, and respectful learning environment. To ensure that each student has the opportunity to succeed, the University has developed a set of expectations for all students and instructors called the *Rights and Responsibilities* document, which can be found at

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

Academic integrity is essential to the University mission and success in life. Academic dishonesty (cheating, plagiarism, etc.) will not be tolerated. Do not do it! The minimum penalty for a violation of academic integrity is a failure (zero) for the assignment. See "Student Academic Standards and Disciplinary Procedures" section of the *Rights and Responsibilities* document (<http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>). Trust between students and instructors is of paramount importance in academic settings. Academic dishonesty will not be tolerated in the classroom (e.g., cheating on exams) or in research efforts (e.g., any lab or other assignments). Students found cheating will be punished to the fullest extent that University policy permits.

AMERICANS WITH DISABILITIES ACT

The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations to students with disabilities. More information about UWSP's policies can be found at <http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyInfo.pdf>

Students with disabilities requiring accommodations should contact the Disability and Assistive Technology Center (Rm. 609, Learning Resource Center; (715)346-3365 during the first three weeks of the semester. If an accommodation is granted by the Disability and Assistive Technology Center, an accommodations request form should be provided to and discussed with the instructor. I ask that any accommodations request be brought to my attention at least one week prior to the need for accommodation, or as soon as it is practical to do so. I will be happy to assist in any way that I can.

CELL PHONE AND OTHER ELECTRONICS POLICY: While you may use your cell phone to take pictures of pathogen specimens in lab, you may not use your cell phone to talk or text during class. It is disruptive to students and instructors to have students using phones or to hear phones ringing (including ringers on vibrate mode). Students found using such devices will be asked to turn off their devices, or leave class. If you are expecting a call that cannot wait until after class, please make sure to sit close to the door and let the instructor know before class that you may have to leave during class time.

EMERGENCY PROCEDURES

-In the event of a medical emergency call 911 or use a Red Emergency Phone outside of TNR 151 (go out to the room and turn right). If during lab, there is an emergency phone outside of the lab (TNR 360) and outside of TNR 120. Offer assistance if trained and willing to do so. Guide Emergency Responders to victim.

-In the event of a tornado warning, the TNR 110 serves as a tornado shelter.

-In the event of a fire alarm, evacuate the building in a calm manner. Meet on the West side of the TNR 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.