

Home Horticulture Training 2021

Syllabus

Introduction

Welcome to **Home Horticulture Training 2021**. This course is provided to you by WSU Extension through the Master Gardener Program. The attached Syllabus is your guide to our 15 weeks of Saturday morning online workshops.

The **Syllabus** contains information and assignments about each week's lessons including:

- Date
- Topic
- Instructor name and biography
- Guiding Question
 - Use this question to help guide you through the lesson material
 - Come to class with your answer
- Assignments Before Class
 - Blackboard Online Modules
 - Other readings
 - Presentations and Videos to view
 - Exercises to complete
 - Additional Online Resources
- At home skills practice
- Quizzes to complete
- Optional activities

Please use this Syllabus as your study guide. Depending on your time availability and personal interests, we encourage you to view optional videos suggested in the Blackboard Online modules. Our instructors may also recommend additional resources during their lectures.

In addition, Home Horticulture Students are encouraged to acquire **two useful tools** for observing specimens and diagnosing plant problems:

- Magnifying Glass or Loupe (5x or higher)
- Sharp Knife (such as a pocketknife)

You will need these tools to complete many of the assigned exercises. We recommend you have them handy during the Saturday morning online workshops.

If you have **questions** during the course, please contact the Master Gardener Program Coordinator in your county.

We look forward to making Home Horticulture Training 2021 a great learning experience for you.

January 9

Welcome to Home Horticulture Training

Instructor: Jennifer Marquis is Program Leader, WSU Extension Master Gardener Program, College of Agricultural, Human and Natural Resource Sciences. Jennifer has been a WSU Master Gardener program leader for 13 years. She accepted the statewide coordinator position in May of 2019 after serving in a county role for 12 years. She has 20 years of experience working with non-profit organizations and volunteers to deliver on organizational mission. Her experience coupled with a B.A.S. in Non-Profit Management and a M.S. in Management and Leadership, make her well skilled as the leader of the world's first Master Gardener Program. She is known for her strategic thinking and for her ability to engage with diverse teams to create trusting and durable community partnerships that lead to mission and vision success. She is a transformational leader who seeks to elevate the WSU Extension Master Gardener Program by engaging university-trained volunteers to empower and sustain diverse communities with relevant, unbiased, research-based horticulture and environmental stewardship education.

Basic Botany and Plant ID

Instructor: Paula Dinius, Urban Horticulturist, WSU Extension Chelan County, began her career with WSU in 2004 in urban horticulture. She is a botanist and plant pathologist who shares her urban horticulture expertise with the landscaping industry, local governments, and municipalities. Paula is also known for her work in educating the WSU Extension Master Gardener Program volunteers.

Guiding Question: What is the role of the plant's flower and why is it important to gardeners?

Assignments Before Class:

In Blackboard:

Under heading *Botany and Plant ID* read:

- Chapter 1 Basic Botany
- Chapter 2 Plant Nomenclature

In Presentations and Videos watch:

- Lily Parts, run time: 1:18
- Twig Growth, run time: 0:49
- Apple Parts, run time: 1:18

Complete the exercise:

- Leaf Characteristics (either interactive exercise or the WORD document.)

Using Additional Online Resources:

- Flower Reproduction and Function
<https://www.youtube.com/Recommended?v=7G9Jozhr7HO> (run time 12 minutes)

At home practice observational skills:

- Using pages 8 & 9 in Chapter 2, look at a plant and verbally describe:
 - Stems and structure
 - Leaf shape, arrangement, and edges (*hint*: you can look for leaf nodes on deciduous plants to determine leaf placement or check out house plants)

Optional Activity:

- Dissect a flower to see the different reproductive parts (best - daffodils/jonquils).

Complete Quizzes for Chapters 1 & 2

January 16

Understanding Pesticides

Instructor: Dale Whaley, Assistant Professor for Integrated Weed Management/Agriculture, has been working for Washington State University Extension for 16 years. He is currently assisting Douglas, Chelan, Kittitas, and Okanogan County residents with their agriculture and integrated weed management needs. He has expertise in entomology (M.S., WSU), integrated pest management (IPM) (B.S., WSU), noxious weed control, invasive species, alternative cropping systems, and continues to work as a regional coordinator for the Washington State Integrated Weed Control Project.

Guiding Question: What are the six steps you must follow in order to use any pesticide?

Assignments Before Class:

In Blackboard:

Under heading *IPM and Pesticides* read:

- Chapter 20 Understanding Pesticides

In Presentations and Videos watch:

- Understanding Pesticides, run time: 40:38
- Pesticide Safety, run time: 18:53

Complete the exercises:

- Pesticide Label Terminology - *check your answers*
- Pesticides in Your Community

Using Additional Online Resources:

WSU Extension Hortsense <http://hortsense.cahnrs.wsu.edu/>

- Select **Hortsense Factsheets**, select **Common Insects and Mites**, and read how to manage slugs.

National Pesticide Information Center <http://www.npic.orst.edu/> Follow the directions to familiarize yourself with this valuable resource.

- Check out all the tabs for information, especially **Emergency** tab to read about what to do with accidental poisonings.
- On the Home Page find the **Interactive Map** for contacts in your area.
- Familiarize yourself with **Hazardous Waste** drop off sites in your area.

Complete Quiz for Chapter 20

January 23

Soil Nutrition and Soil Fertility

Instructors:

Deirdre Griffin LaHue is an Assistant Professor of Soil Quality and Sustainable Soil Management at the WSU Northwest Washington Research and Extension Center (WSU NWREC) in Mount Vernon, WA. Her research interests focus on the impacts of agricultural practices on soil microbial communities and the functions they provide. She takes a systems approach to understanding dynamics of soil organic matter, microbes, and nutrients in agriculture to help improve the resilience of cropping systems. Deirdre received her M.S. and Ph.D. in Soils and Biogeochemistry from University of California, Davis, where she studied the effects of soil amendments (e.g. compost and biochar) and irrigation management on soil carbon and nitrogen dynamics, soil health, and system productivity and profitability. Originally from Maryland, Deirdre enjoyed a previous career in ballet before earning her B.S. at the University of Maryland, College Park in Environmental Science and Policy.

Gabriel (Gabe) LaHue is an Assistant Professor of Soil Science with the Department of Crop and Soil Sciences at Washington State University and based at Northwest Washington Research and Extension Center (WSU NWREC) in Mount Vernon, WA. His research focuses on soil moisture management and irrigation scheduling, managing soils to improve soil-water relationships, soil fertility, and water-nutrient interactions in diverse cropping systems, including blueberries, cider apples, forage crops, onions, and spinach seed.

Guiding Question: Why is it important to get a soil test and analyze your soil makeup before adding fertilizers and soil amendments?

Assignments Before Class:

In Blackboard:

Under heading *Soils and Plant Nutrition* read:

- Chapter 3 Soil Science
- Chapter 5 Plant Mineral Nutrition and Fertilizers

In Presentations and Videos watch:

- Soil Texture by Feel Demonstration, run time: 6:03
- Soil Sampling, run time: 5:27
- Sponge Analogy, run time: 3:10
- Soil Structure, run time: 1:55

Open the Map of Washington State:

- Note the number of different soil regions.
- Find your region to see how it compares to the other regions of Washington.

Complete the Soil Evaluation Activity

Complete Quizzes for Chapters 3 & 5

January 30

Plant Health Care and IPM

Instructor: Gwen Hoheisel is Regional Extension Specialist with Washington State University focusing on perennial fruit crops and more specifically sustainable pest management, blueberry horticulture, and application technologies. She has degrees in zoology from the University of Maryland and entomology from Pennsylvania State University focusing on IPM and insect diversity.

Guiding Question: You notice that one of your woody landscape plants has some damaged leaves. What do you consider before taking action?

Assignments Before Class:

In Blackboard:

Under heading *Soils and Plant Nutrition* read:

- Chapter 4 Urban Soil Management

Under heading *IPM and Pesticides* read:

- Chapter 19 Plant Health Care and IPM

In Presentations and Videos watch:

- Principles of Pest Management, run time: 41:13
- Intro to IPM, run time: 22:48

Using Additional Online Resources:

WSU Hortsense <http://hortsense.cahnr.wsu.edu/>

- In **Common Cultural Problems** look up the non-chemical management for:
 - Desiccating wind
 - Drought damage

Complete Quizzes for Chapters 4 & 19

February 6

Diagnosing Plant Problems

Instructor: Jenny Glass has managed the WSU Puyallup Plant and Insect Diagnostic Laboratory for the past 20 years where she has honed her diagnostics skills on a wide range of plant pathology and insect identification experiences. She spends hours under the microscope trying to find signs of fungal pathogens and scours the internet looking for plant and problem information. Her favorite part of the job is interacting with clients and helping them learn about the management solutions to their plant problems. She is known to quip “Take up another hobby other than your lawn – Western WA grows moss, moles, and annual bluegrass better than turf on many sites.” She loves vegetable gardening, reading books, and hiking. Some of her favorite plant diseases include the destructive power of late blight on potato and tomato, the sporulation of Entomophobia leaf spot on photinia, and the ring patterns that develop when snapdragons become infected with the fungal disease rust.

Guiding Question: In order to diagnose a plant problem and develop a plan of action, what do you need to know and consider?

Assignments Before Class:

In Blackboard:

Under heading *Plant Pathology and Plant Problem Diagnosis* read:

- Ch 16 Plant Problem Diagnosis
- Diagnosis Worksheet
- Systematic Diagnosis Plan

In Presentations and Videos watch:

- Planting Depth, run time: 1:44
- Leaf Scorch, run time: 1:14
- Heat Stress, run time: 1:45
- Drought Resistance, run time: 1:34
- Animal Damage, run time: 2:00 transcript
- Identify Conifer, run time: 1:05 transcript

Using Additional Online Resources:

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- In **Publications**, select **Gardening**, then select **Plant Pests and Diseases**, read:
 - Assessing Tree Health – FS055E

Optional Exercise:

- Download the Puyallup clinic intake form at <https://s3.wp.wsu.edu/uploads/sites/408/2015/02/c1006.pdf>
- Practice filling it out for a plant you find is having a problem. Even a partially filled out form will help your Master Gardener clinicians in helping you solve a problem.

Complete Quiz for Chapter 16

February 13

Lawns and Weed Management

Instructors:

Eastern Washington

Paula Dinius, Urban Horticulturist, WSU Extension Chelan County, began her career with WSU in 2004 in urban horticulture. She is a botanist and plant pathologist who shares her urban horticulture expertise with the landscaping industry, local governments, and municipalities. Paula is also known for her work in educating the WSU Extension Master Gardener Program volunteers.

Western Washington

Jim Kropf is currently the Natural Resources Program Director for WSU Extension. He is also the Director of County Administration for the 40 extension offices across the state and the interim county Director for WSU Extension Pierce County. He has been a faculty member for WSU Extension for 41 years. He was the Area Agronomist in Chelan and Douglas Counties for 14 years followed by four years as the Area Horticulturalist for Pierce and King Counties. In addition to providing technical production skills for farmers, he focused on direct marketing, training new farmers, and on-farm research related to horticultural crops. He continues to provide training for the Master Gardener Program. Jim was raised on a small diversified farm in western Washington with a focus on small fruits. He has a B.S. and M.S. in Agronomy from Washington State University.

Guiding Questions: **What are good lawn management practices?**
 What are the components of integrated weed management?

Assignments Before Class:

In Blackboard:

Under heading *Lawns* read:

- Chapter 9 Lawns

Under heading *Weed Management* read:

- Chapter 17 Weeds and Weed Management

In Presentations and Videos watch:

- Weed ID, run time: 26:43

Using Additional Online Resources:

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- Download and save for reference:
 - Home Lawns – EB0482
 - Drought Advisory Lawns and other Turf – EB0684E

WSU Hortsense <http://hortsense.cahnrs.wsu.edu/Home/HortsenseHome.aspx>

- Follow these steps to find out more on dandelions: menu “weed problems”, select dandelions, click on “dandelion” hyperlink.

Complete Quizzes for Chapters 9 & 17

February 20

Entomology

Instructor: Todd Murray, Entomologist and Extension Agriculture and Natural Resources Program Director, is Director of the Washington State University Puyallup Research and Extension Center. Earning his master's degree in Entomology at WSU in 1996, Murray made his career in Extension, serving as a coordinator and educator in King and Whatcom counties, then director of Skamania and Klickitat County Extension. Since 2015, he has directed WSU Extension's Agriculture and Natural Resource Program Unit, helping thousands of Washingtonians learn how to improve farm productivity, conserve natural resources, and protect crops, forests, and streams.

Guiding Question: What are the key features to understand about insects in order to properly identify problems in the landscape?

Assignments Before Class:

In Blackboard:

Under heading *Entomology* read:

- Chapter 14 Entomology

In Presentations and Videos watch:

- Leafhoppers, run time: 1:46
- Aphids, run time: 3:54
- Leafcutter Bees, run time: 1:26
- Leafhoppers, run time: 1:46

Download and save as a reference:

- *Insects in Your Community*

Using Additional Online Resources:

WSU Hortsense <http://hortsense.cahnrs.wsu.edu/Home/HortsenseHome.aspx>

- In menu on the left, under **Search Factsheets By** select **Natural Enemies and Pollinators**. In the sub-category list check out a few of our predatory insects that help us in our yards.

WSU Hortsense <http://hortsense.cahnrs.wsu.edu/Home/HortsenseHome.aspx>

- In menu on the left, under **Search Factsheets By**, select plant, pest, symptom. In the second box, type in "aphid" and see what comes up.

WSU Gardening in Washington State <http://gardening.wsu.edu/>

- Click on **Wildlife** and read the publication:
 - Pollination and Pollinator Protection – FS174E

Complete Quiz for Chapter 14

February 27 for Eastern Washington

Home Orchards and Small Fruit

Instructors:

Home Orchards: Tianna DuPont is Tree Fruit Extension Specialist at the WSU Tree Fruit Research and Extension Center (WSU TFREC) and supported by Douglas, Grant, and Chelan Counties. Her programs for tree fruit growers are an important tool that helps them continue to thrive in a constantly changing environment. Her current program areas include organic production; sustainable pest and disease management; soil and water management; next generation tree fruit network; and increase knowledge and application of tree fruit Best Management Practices (BMPs).

Bernardita Sallato is Tree Fruit Extension Specialist at the WSU Irrigated and Tree Fruit Extension Center (WSU-IAREC) in Prosser. Her program provides leadership in applied research, extension, and outreach for the PNW tree fruit industry. Her goal is improving orchard efficiency and fruit production through horticultural management practices and technology. Her main areas of interest are: 1) soils and plant nutrition; 2) tree fruit stress management; and 3) general horticultural practices for tree fruit production. Bernardita has a B.Sci. Agriculture Engineer, Horticulture and a M.Sci. Physiology and Fruit Production Area from PUC, Chile.

Small Fruits: Jim Kropf is currently the Natural Resources Program Director for WSU Extension. He is also the Director of County Administration for the 40 extension offices across the state and the interim county Director for WSU Extension Pierce County. He has been a faculty member for WSU Extension for 41 years. He was the Area Agronomist in Chelan and Douglas Counties for 14 years followed by four years as the Area Horticulturalist for Pierce and King Counties. In addition to providing technical production skills for farmers, he focused on direct marketing, training new farmers, and on-farm research related to horticultural crops. He continues to provide training for the Master Gardener Program. Jim was raised on a small diversified farm in western Washington with a focus on small fruits. He has a B.S. and M.S. in Agronomy from Washington State University.

Guiding Question: What must you consider when planning and maintaining good fruit production?

Assignments Before Class:

In Blackboard:

Under heading *Fruit Crops* read:

- Chapter 7 Home Orchards
- Chapter 8 Berries and Small Fruits

In Presentations and Videos watch:

- Tree Fruit Insect Pests and Their Management, run time: 51:47
- Increasing Light Exposure, run time: 1:10
- Harvesting Apples, run time: 1:27
- View any small fruit videos in which you have an interest.

Complete the exercise: Tree Fruit Problems

Using Additional Online Resources:

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- Under **Publications** in submenu **Gardening**, find:
 - Growing Small Fruits for the Home Garden (Home Garden Series) – EB1640 (download electronic version for free)

WSU Hortsense <http://hortsense.cahnrs.wsu.edu/>

- In left menu select **Hortsense Fact Sheets**, select **Tree Fruits** and read about the insects and diseases that might affect one of the fruits.
- In left menu select **Hortsense Fact Sheets**, select **Small Fruits** and read about the insects and diseases that might affect one of the fruits.

Complete Quizzes for Chapters 7 & 8

February 27 for Western Washington

Home Orchards and Small Fruits

Instructors:

Home Orchards: Travis Alexander is a Postdoctoral Researcher in WSU Cider Program at the Northwestern Washington Research and Extension Center (WSU NWREC) in Mount Vernon, Washington. Travis grew up in Southern California, earned a B.S. in Biochemistry at the University of California, San Diego and an M.S. in Horticulture and Agronomy at the University of California, Davis. His masters' research was focused on chilling injury in peaches for the fresh and canned fruit markets. His doctorate work focuses on the postharvest implications, if any, of introducing mechanization in the harvesting of cider apples. Travis is fluent in English and Spanish and currently working on speaking Russian.

Small Fruits: Lisa Wasko DeVetter is an Assistant Professor at WSU Northwestern Washington Research and Extension Center (WSU NWREC) in Mount Vernon, Washington where she leads the state-wide Small Fruit Horticulture program. Originally from Iowa, Lisa developed her agricultural interests while spending summers on her family's farm and helping her grandmother cultivate a diverse farmyard garden. Her horticultural interests grew as she engaged in international development projects at Iowa State University (ISU), which is where she also earned her B.S. in biology and horticulture. She received her M.S. in both horticulture and soil science at ISU before continuing on to the University of Wisconsin-Madison for her Ph.D. Lisa joined WSU in 2014 and has developed a diverse research and extension program with an emphasis on maximizing productivity, fruit quality, and on-farm efficiencies, while ensuring the health of adjacent natural resources critical for small fruit crop production in the Pacific Northwest.

Guiding Question: What must you consider when planning and maintaining good fruit production?

Assignments Before Class:

In Blackboard:

Under heading *Fruit Crops* read:

- Chapter 7 Home Orchards
- Chapter 8 Berries and Small Fruits

In Presentations and Videos watch:

- Tree Fruit Insect Pests and Their Management, run time: 51:47
- Increasing Light Exposure, run time: 1:10
- Harvesting Apples, run time: 1:27
- View any small fruit videos in which you have an interest.

Complete the exercise: Tree Fruit Problems

Using Additional Online Resources:

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- Under **Publications** in submenu **Gardening**, find:
 - Growing Small Fruits for the Home Garden (Home Garden Series) – EB1640 (download electronic version for free)

WSU Hortsense <http://hortsense.cahnrs.wsu.edu/>

- In left menu select **Hortsense Fact Sheets**, select **Tree Fruits** and read about the insects and diseases that might affect one of the fruits.
- In left menu select **Hortsense Fact Sheets**, select **Small Fruits** and read about the insects and diseases that might affect one of the fruits.

Complete Quizzes for Chapters 7 & 8

March 6 for Eastern Washington

Vegetable Gardening

Instructor: Connie Mehmel was a Forest Entomologist with the U.S. Forest Service Forest Health Protection Division from 2000 to 2019. With a small team of forest entomologists and pathologists, she provided training and technical assistance to federal land managers in most of the State of Washington, including three national forests, three national parks, and the Yakama, Colville, Spokane, and Kalispell Indian Reservations. She retired from the Forest Service in August 2019 after a 42-year career. She is a Chelan County Master Gardener, Chair of the Wenatchee Valley Chapter of the Washington Native Plant Society, and Superintendent of Floriculture for the Chelan County Fair. She is also an enthusiastic member of CrossFit 791 in Cashmere.

Guiding Question: What steps can you take to ensure sustainable vegetable production?

Assignments Before Class:

In Blackboard:

Under heading *Vegetables* read:

- Chapter 6 Vegetable Gardening

In Presentations and Videos watch:

- Seed Planting Depth, run time: 1:31
- Preparing Planting Pots, run time: 2:24
- Seed Planting, run time: 6:31

Complete the exercise:

- Planting the Vegetable Garden exercise (.docx); then check your answers at
- Planting the Vegetable Garden exercise answers (.docx)

Using Additional Online Resources:

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- Growing Food in Parking Strips and Front Yard Gardens (Home Garden Series) – FS115E
- Home Vegetable Gardening in Washington (Home Garden Series) – EM057E

Complete Quiz for Chapter 6

March 6 for Western Washington

Vegetable Gardening

Instructor: Diane Decker-Ihle, Master Gardener in Snohomish County since 1990, has been an avid gardener most of her life. She helped establish the WSU Extension Snohomish County Growing Groceries Program in 2009 and has been teaching Growing Groceries classes ever since. She has also been an advisor for several community gardens and managed her church's food bank garden for eight years. With B.S. degrees in Biology and Medical Technology, Diane enjoys learning the science behind the sustainable gardening techniques she teaches.

Guiding Question: **What steps can you take to ensure sustainable vegetable production?**

Assignments Before Class:

In Blackboard:

Under heading *Vegetables* read:

- Chapter 6 Vegetable Gardening

In Presentations and Videos watch:

- Seed Planting Depth, run time: 1:31
- Preparing Planting Pots, run time: 2:24
- Seed Planting, run time: 6:31

Complete the exercise:

- Planting the Vegetable Garden exercise (.docx); then check your answers at
- Planting the Vegetable Garden exercise answers (.docx)

Using Additional Online Resources:

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- Growing Food in Parking Strips and Front Yard Gardens (Home Garden Series) – FS115E
- Home Vegetable Gardening in Washington (Home Garden Series) – EM057E

Complete Quiz for Chapter 6

March 13 for Eastern Washington

Plant Pathology

Instructor: David Linnard Wheeler was born and raised in Lebanon, Pennsylvania. After being temporarily kicked out of secondary school for insubordination he graduated from Temple University with a B.S. in Horticulture and Fine Arts. Thereafter David received a M.S. and Ph.D. in Plant Pathology from Washington State University. To further quench his thirst for knowledge David obtained a minor in Statistics from WSU and a Master of Data Science from the University of California, Berkeley. For fun David enjoys walking his Newfoundland, Josh.

Guiding Question: What are the three critical factors necessary to cause plant disease and what methods of control are used to manage them?

Assignments Before Class:

In Blackboard:

Under heading *Plant Pathology and Plant Problem Diagnosis* read:

- Chapter 15 Plant Pathology

In Presentations and Videos watch:

- Columbine Virus, run time: 0:29 transcript
- Leaf Spot, run time: 2:13 transcript
- Scorch on Yellow Leaves, run time: 2:17 transcript
- Animal Damage, run time: 2:00 transcript
- Slug Damage, run time: 0:44

Using Additional Online Resources:

WSU Hortense Home <http://hortsense.cahnrs.wsu.edu/>

- Hortense Fact Sheets – Common Diseases – Powdery Mildew
 - Find out what non-chemical management can be done to eliminate powdery mildew.

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- Cold Temperature Injury of Landscape Woody Ornamentals (Home Garden Series) – FS196E
- Growing Roses in Washington State: Common Disease and Insect Problems (Home Garden Series) – FS246E

Complete Quiz for Chapter 15

March 13 for Western Washington

Plant Pathology

Instructor: Jenny Glass has managed the WSU Puyallup Plant and Insect Diagnostic Laboratory for the past 20 years where she has honed her diagnostics skills on a wide range of plant pathology and insect identification experiences. She spends hours under the microscope trying to find signs of fungal pathogens and scours the internet looking for plant and problem information. Her favorite part of the job is interacting with clients and helping them learn about the management solutions to their plant problems. She is known to quip “take up another hobby other than your lawn- Western WA grows moss, moles, and annual bluegrass better than turf on many sites.” She loves vegetable gardening, reading books, and hiking. Some of her favorite plant diseases include the destructive power of late blight on potato and tomato, the sporulation of *Entomosporium* leaf spot on photinia, and the ring patterns that develop when snapdragons become infected with the fungal disease rust.

Guiding Question: What are the three critical factors necessary to cause plant disease and what methods of control are used to manage them?

Assignments Before Class:

In Blackboard:

Under heading *Plant Pathology and Plant Problem Diagnosis* read:

- Chapter 15 Plant Pathology

In Presentations and Videos watch:

- Columbine Virus, run time: 0:29 transcript
- Leaf Spot, run time: 2:13 transcript
- Scorch on Yellow Leaves, run time: 2:17 transcript
- Animal Damage, run time: 2:00 transcript
- Slug Damage, run time: 0:44

Using Additional Online Resources:

WSU Hortense Home <http://hortsense.cahnrs.wsu.edu/>

- Hortense Fact Sheets – Common Diseases – Powdery Mildew
 - Find out what non-chemical management can be done to eliminate powdery mildew.

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- Cold Temperature Injury of Landscape Woody Ornamentals (Home Garden Series) – FS196E
- Growing Roses in Washington State: Common Disease and Insect Problems (Home Garden Series) – FS246E

Complete Quiz for Chapter 15

March 20

Fire Resistant Landscapes

Instructor: Al Murphy, Master Gardener in Chelan/Douglas County, has worked for the U.S. Bureau of Land Management (BLM) as Chief of Community Assistance and Protection. He has over 37 years of experience with the Forest Service and BLM. Al worked in most of the western states as well as the national office. He graduated from the University of Montana with a degree in Forest Science. Al has worked in many different disciplines and spent most of his summer “vacations” working on fire suppression teams.

Guiding Question: **Considering your home and property, what are five things you should do to create a defensible space?**

Assignments Before Class:

In Blackboard:

Under heading *Woody Landscape Plants* read:

- Chapter 12 Backyard Forest Stewardship
- Chapter 23 Fire-resistant Landscaping for the Home and Community

Using Additional Online Resources:

WSU Gardening in Washington State <http://gardening.wsu.edu/>

- In menu **Trees and Shrubs**, read the publications that apply to where you live.
 - Backyard Forest Stewardship in Eastern Washington – EM028E
 - Backyard Forest Stewardship in Western Washington – EM026E

Complete Quizzes for Chapters 12 & 23

March 27

Vertebrate Pest Management

Instructor: Dave Pehling is a retired WSU Extension Snohomish County Extension Assistant, Zoologist, and IT Technologist. He joined WSU Extension in Snohomish County for a six-month position in 1978, and remained until retirement 40+ years later in 2018. He has a B.Sc. in Zoology from the University of Washington and still occasionally teaches about entomology, plant diagnosis, and vertebrate pest management for the WSU Master Gardener and Livestock Advisor programs, as well as teaching the Washington State Beekeeper's "Beginner Master Beekeeper" course for WSU Extension Snohomish County. Special interests include mammalogy, insect pest management, parasitic arthropods, and pollinators.

Guiding Question: You have noticed tooth marks on plants. What are the possible causes and what are management and control techniques?

Assignments Before Class:

In Blackboard:

Under heading *Vertebrate Pests* read:

- Chapter 18 Vertebrate Pest Management

In Presentations and Videos watch:

- Moles - Order: Soricomorpha (formerly Insectivora), run time: 28:37
- Voles - Order: Rodentia, run time: 8:36
- Squirrels and Rabbits, run time: 10:49
- Rats and Mice, run time: 28:35
- Deer, run time: 6:52

Using Additional Online Resources:

WSU Gardening in Washington State <http://gardening.wsu.edu/>

- Hortsense Fact Sheets – Vertebrates – Sapsucker damage
 - What are key indicators of sapsucker damage?

Complete Quiz for Chapter 18

April 3: No Class Scheduled (Easter Weekend)

This is a great time to catch up on quizzes. The following quizzes should be completed:
1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 14, 15, 16, 17, 18, 19, 20, 23

April 10

Waterwise Landscaping

Instructor: David Jackson is Program Manager for the Snohomish Conservation District's Community Conservation Team. His background is in environmental science and green infrastructure, with degrees and certifications from the University of Washington and Oregon State University. He has worked in green stormwater infrastructure for several years and in community-led urban green spaces projects. He has worked as a project manager and administrator for the majority of his career.

Guiding Question: What are the benefits of using mulch in a landscape?

Assignments Before Class:

In Blackboard:

Under heading *Sustainable Gardening* read:

- Chapter 24 Waterwise Landscaping

Under heading *Herbaceous Landscape Plants* read:

- Chapter 10 Herbaceous Landscape Plants

In *Sustainable Gardening* Presentations and Videos watch:

- Sustainable Garden Design, run time: 33:13
- Using Water Wisely, run time: 14:38
- Drip Irrigation in Vegetable Gardens, run time: 14:21
- Drip Irrigation in Ornamental Gardens, run time: 9:25

Using Additional Online Resources:

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- Water Conservation in Gardens and Landscapes – EM4834
- Watering Home Gardens and Landscape Plants – EB1090

Washington State Noxious Weed Control Board at <https://www.nwcb.wa.gov/>

- Look through *Garden Wise* publication for Eastern or Western Washington (These can also be found in menu under *Herbaceous Landscape Plants*)
- In **Resources** submenu find **Your County Weed Board**

Complete Quizzes for Chapters 10 & 24

April 17

Pruning Trees and Woody Landscape Plants

Instructor: **Tim Kohlhauff** is Urban Horticulture Coordinator for Washington State University Extension's office in Spokane County, where he assists with plant problem diagnosis, and has lead the local master gardener volunteer program since 2012. He is an adjunct instructor at Spokane Community College where he has taught arboriculture, advanced arboriculture, and plant problem diagnosis classes. For 10 years, Tim was the arborist at the Spokane Country Club golf course. He has been an ISA-certified arborist since 2004.

Guiding Question: **What should you consider when pruning your flowering tree?**

Assignments Before Class:

In Blackboard:

Under heading *Woody Landscape Plants* read:

- Chapter 11 Trees and Woody Landscape Plants
- Chapter 21 Pruning Woody Landscape Plants

In Presentations and Videos watch:

- Planting Woody Plants, run time: 25:01
- Conifer ID, run time: 15:09
- Pruning Conifer Candles, run time: 1:23 transcript
- Height Reduction, run time: 2:43 transcript
- Pruning for Disease, run time: 2:17 transcript

Using Additional Online Resources:

WSU Gardening in Washington State <http://gardening.wsu.edu/>

- Select **Trees and Shrubs** and look up:
 - Pruning Equipment for Home Gardeners – FS131E

Complete Quizzes for Chapters 11 & 21

April 24 (1 of 2)

Invasive Species

Instructor: Justin Bush has been Executive Coordinator of the Washington Invasive Species Council since 2016. Justin has been working on invasive species issues since 2008 with federal, state, regional, and local organizations including King County, Skamania County, and the Lady Bird Johnson Wildflower Center at the University of Texas at Austin where he managed the Texasinvasives.org statewide partnership. During these years, he has been involved in various projects to prevent, detect, and control both aquatic and terrestrial invasive species and is passionate about reducing the threat they pose to the economy, native species, and ecosystems. Justin is past president of the Washington State Weed Coordinators' Association, former co-chair of the Columbia Gorge Cooperative Weed Management Area, founding member of the Texas Gulf Region Cooperative Weed Management Area, and past Secretary of the Texas Invasive Plant and Pest Council.

Composting

Instructor: Deborah Smeltzer, Skagit County Master Gardener since 2012, serves on the Training Team developing curriculum. She has been an instructor for soils, fertility, mosses, lichens, fungi, online tools, and presentation skills. Her work with the Master Gardener Program also includes supporting community outreach and education events and serving in leadership roles - four years as president of the SCMG Foundation Board and three years as chairperson of the annual SCMGF Plant Fair. Deborah has a B.S. in Biology and an M.S. in Medical Microbiology from the University of California, Irvine and an M.B.A. from Stanford University Graduate School of Business. She spent over 30 years in the biotechnology industry as a scientist, financier, corporate officer, business manager, and public spokesperson. She retired to the Skagit Valley where she enjoys gardening, wildlife viewing, and serving volunteer community organizations focused on education in sustainable environments and music.

WSU Extension Master Gardener Program

Instructor: Jennifer Marquis is Program Leader, WSU Extension Master Gardener Program, College of Agricultural, Human and Natural Resource Sciences. Jennifer has been a WSU Master Gardener program leader for 13 years. She accepted the statewide coordinator position in May of 2019 after serving in a county role for 12 years. She has 20 years of experience working with non-profit organizations and volunteers to deliver on organizational mission. Her experience coupled with a B.A.S. in Non-Profit Management and a M.S. in Management and Leadership, make her well skilled as the leader of the world's first Master Gardener Program. She is known for her strategic thinking and for her ability to engage with diverse teams to create trusting and durable community partnerships that lead to mission and vision success. She is a transformational leader who seeks to elevate the WSU Extension Master Gardener Program by engaging university-trained volunteers to empower and sustain diverse communities with relevant, unbiased, research-based horticulture and environmental stewardship education.

April 24 (2 of 2)

Invasive Species Composting

Guiding Questions: How would you define an invasive species in Washington state?
What are the benefits of incorporating compost into garden soil?

Assignments Before Class:

In Blackboard:

Under heading *Houseplants and Greenhouses* read:

- Chapter 13 Houseplants
- Chapter 25 Greenhouse Construction

Under heading *Soils and Plant Nutrition* read:

- Chapter 22 Composting

Using Additional Online Resources:

WSU Extension Publications <https://pubs.extension.wsu.edu/>

- Backyard Composting (Home Garden Series) – EB1784E

WSU Master Gardener Program <http://mastergardener.wsu.edu/>

- In left menu find your County MG Program and find out how to contact them for help with a home horticulture problem.

Noxious Weed Control Board <https://www.nwcb.wa.gov/>

- **Outreach** menu, select **Publications**, scroll down to the noxious weed publication that applies to you:
 - Noxious Weeds that Harm Washington State, Eastern WA Field Guide
 - Noxious Weeds that Harm Washington State, Western WA Field Guide

Washington Invasive Species Council <https://invasivespecies.wa.gov/>

- Click on **Report a Sighting** to see the different forms and read **How to Report a Sighting** (if you choose you can download the app on your phone).
- In the right menu for **Priority Invasive Species**, select on species to read about that you might encounter in your landscape.
 - *Optional:* Download the picture of this invader to your phone so you can watch for it.

Complete Quizzes for Chapters 13, 22 & 25

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Persons with disabilities who require alternative means for communication or program information or reasonable accommodation need to contact Jennifer Marquis at 400 Washington St., Wenatchee, WA or 509 667-6540 or jgmarquis@wsu.edu at least three weeks prior to the start of the event.