

# Course Syllabus

## HT247 - Arboriculture Principles & Practices – Spring 2019

Instructor: Jennifer Killian  
Meets: Thursdays, 8am – 9:50m; 11 am – 12:50 pm WOH 217  
Office Hours: Thursdays, 1pm, and/or by appointment  
CRN: 42032  
Email: killiaj@linnbenton.edu

### Description

Introduces fundamentals of Arboriculture. Emphasis on understanding trees as autotrophic and dynamic systems. Concepts include tree morphology and function, reaction to injury, tree and soil relationships, tree selection and planting, pruning, aftercare, and problem diagnosis and remediation as well as urban forestry principals.

### Goals

1. Teach foundational understanding of trees and their care and maintenance.
2. Preparation for International Society of Arboriculture certification.
3. Instill and nurture a lifelong appreciation and wonderment of trees.

### Learning Objectives

At the conclusion of this course, students should be able to

1. Identify primary tree structures and their function relating to the tree as an autotrophic, dynamic member of an ecosystem.
2. Assess and manage critical soil relationships.
3. Identify tree specimens appropriate to the climate, site, and environment.
4. Successfully establish and maintain landscape trees.
5. Understand basic pruning principles, techniques, and their applications to gardens, landscapes, orchards, and parks.
6. Successfully maintain landscape trees including irrigation, fertilization, and common tree diseases.
7. Understand the importance of urban forestry and street tree management

### Methods to Achieve Objectives

The course balances scientific and academic understanding with the practical application. The course is very hands on with more than half of meeting time practicing and applying techniques learned through interactive lectures and discussion.

Field trips may be scheduled to experience concepts in actual application.

Optional texts are:

- *Arborists' Certification Study Guide*, International Society of Arboriculture, 2010, available at: <http://www.isa-arbor.com/store/product.aspx?ProductID=7>;
- *Tree Basics*, Dr. Alex Shigo, Shigo and Trees, Associates, available at Amazon.com;
- *Silvics of North America*, United States Department of Agriculture, 1990, available by download at: [https://www.na.fs.fed.us/spfo/pubs/silvics\\_manual/table\\_of\\_contents.htm](https://www.na.fs.fed.us/spfo/pubs/silvics_manual/table_of_contents.htm).
- Supplementary readings will be posted to the eLearning site.

**Students are also strongly encouraged to have hook and blade hand pruners.**

## Moodle

Course lectures, announcements, and schedules will be posted on the Moodle site. Each student should self-enroll in the course if not automatically enrolled.

## Grading

The following is an approximation of points for each respective category, and is *subject to change*, as deemed appropriate by the instructor.

Attendance & Participation: 10 %

Your attendance and participation in class is essential. Arboriculture is a very broad and diverse field. Your discussion contributions will assist in customizing the lecture materials to unique situations and your own field work.

Unit Quizzes: 20 %

Five quizzes will be conducted. Material on the quiz will have largely been covered in lecture, but not exclusively. Some of the questions will cover material in the supplemental readings and may not have been highlighted during the lectures. Quiz questions can be comprehensive from the beginning of the term.

Mid Term Exam: 20 %

The Mid Term will be take home. It can be completed individually or with a group. The exam can be submitted as a group or individually. If submitted as a group, all members of the group will receive the same score.

Comprehensive Final Exam: 30 %

The final exam will draw heavily upon the International Society of Arboriculture certification exam. Many of the questions will be taken directly from the certification exam. Your performance on the exam will be a good indicator of your preparedness for the ISA exam.

Projects: 20 %

Grading will be half on content (information discovered) and half on presentation (how that information is conveyed).

Ordinary A-F Grading Scale (also available as Pass/No Pass)

90-100%	A
80-89%	B
70-79%	C
60-69%	D
<60%	F

**Extra Credit:** On a few occasions, such as on the exams, there may be extra credit, which will be in the form of high-challenge questions that can aid your score. Even if you do not know the answer you are encouraged to try. This credit will generally not influence a grade more than 2-4% for the overall grade, but it could make a difference in borderline grade situations.

**Make up Tests:** There will be **NO** make-up exams.

**Special Accommodations:** If you have a documented disability that will impact you at college and you have yet to seek accommodation, contact the Office of Disability Services for intake and to document your disability with LBCC. Only students who document a disability and present an accommodation letter to an instructor are entitled to academic accommodation. Each term, when you register for classes and at least two to three weeks prior to the start of the term, submit your “Request for Accommodation” form to the Office of Disability Services. Week one, pick up letters for your instructors and deliver in person to each instructor during office hours or by appointment. The Office of Disability Services may be reached by email at [ODS@linnbenton.edu](mailto:ODS@linnbenton.edu) or by phoning 917-4789. As required by federal and state laws, I will be happy to make accommodations for students with disabilities or those with special needs. It is the student’s responsibility to make any needs known to me within the first week of the semester, *in writing*, so that I can give appropriate accommodation. This includes but is not limited to disabilities of visual, hearing, learning, dates needed for religious holidays, court dates etc.

**Learning Center:** LBCC has many free programs to help you be successful. The Learning Center is the campus place for academic support and tutoring. The Learning Center will help with issues that get in the way of your success.

**Incomplete Policy:** An incomplete (IN) will only be issued when a student is unable to complete the last exam by the end of the term, but has otherwise completed 75% of the work in class prior to the final exam. Each incomplete grade will be accompanied by a signed contract specifying the conditions necessary to complete the course. This contract will be signed by the student and the instructor and placed on file in the Division office. The grade can only be issued if the student has attended no more than 25% of class time and less than 25% of the course work was submitted.

**Cell Phones:** As a courtesy to your fellow students and instructor, please turn off all cell phones and pagers during the instructional period. Please do not talk or text-message on your cell phone during a class session. Anyone who answers a phone in class is creating a disturbance. Anyone who needs to have a phone connected (e.g., spouse close to labor, a child sick at home) must clear it with the instructor at the beginning of the class period.

**Computers (Notebook/Laptop/PDA):** Please do not use a computer such as a notebook or laptop or a PDA during class other than for class work. On a wireless campus it is distracting to other students when a peer is not fully participating in the class.

**Schedule (Subject to Change)**

<b>Class Meeting</b>	<b>Class Date Thursdays</b>	<b>8:00am-9:50am &amp; 11 am- 12:50pm WOH 217</b>	<b>Lab/ Activity</b>	<b>Suggested Readings</b>
<b>1</b>	<b>4/4/2019</b>	Course and student introductions  Introduction to Arboriculture	Tree Characteristics Seminar introduction	ISA Chapter 1
<b>2</b>	<b>4/11/2019</b>	Tree Structure & Function	Quiz 1: Introduction to Arboriculture Knots	<i>A Tree Hurts, too</i> (.pdf)
<b>3</b>	<b>4/18/2019</b>	Site Considerations, Tree Selection, and Planting	Quiz 2: Tree Structure & Function	ISA Chapter 3, 6, 11  <i>Benton OR Soil Survey</i> (.pdf)
<b>4</b>	<b>4/25/2019</b>	Introduction to Urban Forestry Tree Inventory	Class Project Introduction	
<b>5</b>	<b>5/2/2019</b>	Selection and planting	Tree Planting Mid Term Exam	<i>Pruning Guide</i> (.pdf)  ISA Chapter 7
<b>6</b>	<b>5/9/2019</b>	Pruning	Quiz 3: Site and Planting  Pruning lab	
<b>7</b>	<b>5/16/2019</b>	Pruning summary  Maintenance, Care, and Hazard Identification	Quiz 4: Planting and Pruning  Identification of Hazards/TRAQ practice	<i>Tree Hazard Form</i> (.pdf)  ISA Chapter 4, 5, 10
<b>8</b>	<b>5/23/2019</b>	Introduction to Climbing	Quiz 5: Planting and Establishment  Climbing practicum	ISA Chapter 12, 16
<b>9</b>	<b>5/30/2019</b>	Seminar Presentations	TBD	
<b>10</b>	<b>6/6/2019</b>	No class :: work on tree report ::		
	<b>Week of June 10</b>	Final Exam Tree report due		

## Project:

### Common Name

*Latin Name*

Alternate Common Names

<p>Summary description of your tree of choice. Personal notes can be included such as why this species is important to you or your connection to this particular specimen.</p>	<p>Insert Specimen Photograph</p>
<b>Identification</b>	
<p><b>Leaves</b> Deciduous v. evergreen; leaf arrangement; simple or compound; description.</p>	<p><b>Flower/Fruit</b> Monoecious v. dioecious; flower description; timing; fruit description.</p>
<p><b>Bark/Wood</b> General description as aid in tree identification.</p>	<p><b>Form</b> General form description including excurrent v. decurrent, shape (columnar, vase, etc.).</p>
<p><b>Uses</b> Discuss primary and other uses of this tree species. Cover commercial and industrial aspects and/or its role in the landscape, street, park, or forest environment.</p>	<p><b>Ethnobotany</b> Present First People's or historical uses of the tree. May include spiritual, medicinal, cultural, commercial, etc. uses.</p>
<p><b>Native Distribution</b> From where does this species originate? What is its native range?</p>	<p><b>Establishment</b> Identify unusual or particular establishment issues: pruning requirements or competition, etc.</p>
<b>Growing Conditions and Culture</b>	
<p>Mature Size USDA Zone Light Requirements</p>	<p>Height x Width x dbh Growing Range Shade to Sun</p>
<p><b>Pests/Damaging Agents</b> Discuss primary pests to this species. Identify any unusual susceptibility to mechanical, chemical, or other impacts.</p>	<p><b>Similar Species</b> With what other species might this be confused and how would you differentiate?</p>
<p><b>Propagation</b> Seed (stratification and/or scarification requirements) and/or cutting technique.</p>	<p><b>Source(s)</b> Where could you find a source tree to collect seed or take a cutting?</p>