The Morris Arboretum of the University of Pennsylvania

The Morris Arboretum of the University of Pennsylvania is an educational institution that promotes an understanding of the important relationships between people and plants. Founded in 1887 as the private estate of John and Lydia Morris, brother and sister, the Arboretum today is an interdisciplinary center that integrates art, science, and the humanities. It is the official arboretum of the Commonwealth of Pennsylvania. It is listed in the National Register of Historic Places and is accredited by the American Alliance of Museums.

The 92-acre public garden, located in the Chestnut Hill section of Philadelphia, provides an idyllic setting for historical architectural features as well as provides a fine collection of contemporary sculpture. Specialty garden areas include the Rose Garden, Swan Pond, English Park, Asian gardens, meadows, and woodlands.

More than 12,000 labeled woody plants from around the world grow here along with superior plants for urban and community landscapes. The Arboretum provides internships, school tours, adult and professional education, lectures, and other special events.

The School of Arboriculture at Morris Arboretum

offers high-quality courses designed for arborists, landscape architects and designers, urban foresters, land managers, and other tree care professionals. Classes cover a wide range of topics including climbing techniques and safety, tree identification, pest and disease problems, tree health, and land management practices. The School of Arboriculture is committed to providing first-rate educational and professional development opportunities led by world-renowned instructors and experts in the field.

International Society of Arboriculture and Pennsylvania Landscape Architects Continuing Education Units (CEUs)

The Arboretum’s professional training courses carry International Society of Arboriculture Continuing Education Units. If you are an ISA certified arborist and need to maintain certification by taking 30 credits over a three-year period, you will want to sign up for classes at the Morris Arboretum. Some courses also carry CEUs for landscape architects. If you have questions about this, please contact Jan McFarlan, (215) 247-5777, ext. 156 or jlm@upenn.edu. The ISA category codes for CEUs are as follows: Science=S, Practice=P, Management=M. Sign up sheets will be available at the end of the course and it is each participant’s responsibility to sign the appropriate forms.
Municipal Arboriculture: The Role of Urban Forestry
Robert Wells
Associate Director of Arboriculture Outreach, Morris Arboretum

Urban forestry is the careful management of tree populations in urban settings for the purpose of improving the urban environment. This course is designed to provide a comprehensive survey of the role of an urban forester in the management of publicly owned trees in city parks and rights-of-way. The focus will be on the management of tree populations rather than individual trees. We will discuss quantifying and assessing the urban forest, as well as planning and budgeting for planting, pruning, and all of the arboricultural tasks needed to maintain a healthy municipal treescape. This course will help to prepare individuals for the ISA Municipal Specialist Exam. You must apply to take the ISA Municipal Specialists or other Certification Exams separately from this class registration. Applications can be obtained at www.isa-arbor.com/certification/becomeCertified. For further questions about the exam, please contact the ISA office at (888) 472-8733 or cert@isa-arbor.com. This course carries 5 CEUs for ISA certified arborists (S=2, P=1, M=2).

Friday, February 23
9:00a.m. – 3:30p.m.

Fee: $140 (includes lunch)

Landscape Design for Professionals
Paul D. Orpello
Horticulturist, Morris Arboretum

The world of landscape design is continually evolving. Hitting the design target for critical customers has become increasingly difficult as well. In this ever-changing world of landscape design integrated with customer satisfaction, it helps to have an experienced guide. Award-winning landscape designer and ASHS certified professional horticulturist, Paul D. Orpello will demonstrate how to successfully navigate these complex waters. Paul will cover all phases of the design process from client meetings to project completion. There will be an informative lecture discussing the essential components of the design process and client interaction. The lecture will be followed by a studio session where we will work on meeting specific client needs in a designed environment. Come and learn how to increase your effectiveness as a designer while increasing your profitability as a professional! This course carries 5.5 CEUs for ISA certified arborists (S=0, P=2.75, M=2.75). LA-CES credits for landscape architects have been applied for.

Tuesday, February 27
9:00a.m. – 4:00p.m.

Fee: $140 (includes lunch)
Protecting and Preserving Trees during Construction

Jason Lubar
Associate Director of Urban Forestry, Morris Arboretum

Trees are valuable assets to commercial and residential property, contributing up to 25% of the property’s assessed value. Successful tree preservation during construction assures the project’s goals are achieved without jeopardizing the health and lifespan of protected trees. Since there must be a collaborative process by decision makers for this to occur, people from all disciplines involved with the construction process, such as landscape architects, builders, developers, architects, and arborists, will benefit from this presentation. Information covered includes how to designate adequate tree protection zones based on the tree’s structural and biological needs, specifying and installing protective fencing, and how construction processes such as cut/fill, trenching, and soil compaction effect both existing and proposed trees. Valuable lessons learned from working on a variety of construction jobs will be presented, tree protection specifications will be discussed, and tree protection myths will be presented and dispelled. This course carries 5.5 CEUs for ISA certified arborists. (S=0, P=2.75, M=2.75). LA-CEP credits for landscape architects have been applied for.

Friday, March 2
9:00a.m. – 4:00p.m.  Fee: $140 (includes lunch)
Managing Invasive Plants Strategically: Objectives and Methods

Daniel Barringer
Preserve Manager/Invasives Management Coordinator, Natural Lands

Amy L. Jewitt
Invasive Species Information Assistant, Pennsylvania Natural Heritage Program

Jess Slade
Natural Areas Horticulturist, Morris Arboretum

After habitat loss, invasive plants and animals represent the greatest threat to endangered species. Invasive species can change plant community structure, composition, and ecosystem processes on preserved lands in ways that may not be anticipated or desirable. This intermediate course will cover goals, objectives, and strategies for managing invasive species and help prioritize sites, species, and populations. We will cover examples of invasive species and use case studies to talk about Early Detection-Rapid Response, noxious weed law, and different forms of management: mechanical, chemical, biological, and cultural. The class will cover electronic tools for collecting data on invasives management projects, specifically the iMapInvasives website and mobile app. An afternoon field session will look at some of the invasive plants and management challenges in the Natural Areas Section of Morris Arboretum. We will wrap up with a discussion of invasive species that are not yet widespread in our region but are ones to look out for. This course carries 5.5 CEUs for ISA certified arborists (S=2, P=1.5, M=2).

Friday, March 16
Fee: $140 (includes lunch)
9:00a.m. – 4:00p.m.

Pruning Shrubs for Maximum Health and Beauty: A Hands-on Class

Vince Marrocco
Chief Horticulturist, Morris Arboretum

Pruning shrubs is an essential practice for a well-maintained landscape. While proper pruning is important, it is not difficult if you understand the basics. This class teaches the principles of why, when, and how to prune a variety of shrubs and hedges. A morning lecture and demonstration will be followed by an afternoon session of supervised, hands-on pruning. Please bring your pruning tools and dress appropriately for the weather. This course carries 4.5 CEUs for ISA certified arborists (S=1.5, P=2, M=1).

Tuesday, March 20
Fee: $120 (includes lunch)
10:00a.m. – 3:00p.m.
Raindate: Thursday, March 22
The TRAQ training course was created by the International Society of Arboriculture (ISA). This training opportunity is sponsored by the New Jersey Chapter of the ISA. It is hosted by the Morris Arboretum at the New Jersey Forest Service’s, Forest Resource Education Center, 495 Don Conner Blvd. in Jackson, New Jersey. The course will provide a high level of training for arborists, landscape architects, and landscape management professionals in the fundamentals of tree risk assessment. This qualification promotes the safety of people and property by providing a standardized and systematic process for assessing tree risk. TRAQ is a two-day course followed by a half-day examination that includes both a written and a field component. The course prepares the participant to take the TRAQ exam to become ISA Tree Risk Assessment Qualified. It is required that you attend the course and successfully complete the assessment examination in order to receive the ISA Tree Risk Assessment Qualification. The content of this course will focus on the following areas: tree biology and mechanics, tree inspection and assessment, data analysis and risk categorization, and risk reporting. The Tree Risk Assessment Qualification is valid for five years from the date the exam is passed. The qualification holder is required to retake the course and pass the exam every five years in order to maintain the qualification. To be able to register for the course and take the exam, you must have earned one of the following credentials:

- ISA Certified Arborist or BCMA
- A national certification or certificate in arboriculture
- Licensing or certification from an approved state program
- SAF Certified Forester
- ASCA Registered Consulting Arborist
- A degree in arboriculture, urban forestry, traditional forestry, or horticulture from an accredited college or university.

Participants will receive course materials two weeks prior to the start of class. Bring these materials with you to the class. The class takes place at the New Jersey Forest Service Forest Resource Education Center, 495 Don Conner Blvd, Jackson, NJ 08527. This course carries 15 CEUs for ISA certified arborists (S=7, P=3, M=5).

Registration deadline is: February 21, 2018.

Thursday and Friday, March 22, 23
8:00 a.m.–5:00p.m.
Saturday, March 24
8:00a.m.–12 noon

Fees: ISA Members: $650 (includes lunches)
Non ISA Members: $750 (includes lunches)
Exam retake only $150
Diagnosis and Identification of Plant Diseases
Richard Buckley
Manager, Plant Diagnostics Laboratory, Rutgers University

This session will present an overview of the major causes of abiotic and biotic plant disorders in North American woody stemmed plants. Biotic plant problems are caused by living organisms, such as fungi, bacteria, viruses, nematodes, and animals. Abiotic disorders are caused by nonliving factors, such as drought stress, sunscald, freeze injury, wind injury, chemical drift, nutrient deficiency, or improper cultural practices, such as overwatering or planting too deeply. Unfortunately, the damage caused by these various living and non-living agents can appear very similar. A systematic approach to the identification of environmental, fungal, and bacterial causes of plant disorders and diseases will be considered along with common sense approaches to their control.

This course carries 5.5 CEUs for ISA certified arborists (S=3, P=1, M=1.5).

Friday, March 23
9:00a.m. – 4:00p.m.
Fee: $140 (includes lunch)

It’s Alive! A Study of the Living Soil Beneath our Feet
Eric Moore
The Martha S. Miller Endowed Urban Forestry Intern, Morris Arboretum.

Mark Highland
President, The Organic Mechanic Soil Company, LLC

Soils provide essential ecological functions and services that promote human well-being. From agriculture and groundwater purification, to climate regulation and erosion control, soil health plays a monumental role in shaping society. However, invasive species, shifting land use, climate change, and other anthropogenic stressors, threaten soil health globally. In order to better manage the soils of our gardens, parks, forests, and even urban centers, we need to better understand soil biology and the complexities associated with soil systems. This one-day course serves as an introduction to the history of soil science from its early beginnings through to the modern era with an emphasis on insights gleaned from case studies. Eric holds a master’s degree in soil ecology and has extensive experience working in the fields of forest and agricultural soil science. Mark received his degree from the Longwood Graduate Program focusing on compost and potting soil, and started The Organic Mechanic Soil Company, LLC in 2006. This course carries 5.5 CEUs for ISA certified arborists (S=4.5, P=1, M=0). LA-CES credits for landscape architects have been applied for.

Thursday, March 29
9:00a.m. – 4:00p.m.
Fee: $140 (includes lunch)
Emerald Ash Borer Workshop

Joel Spies  
*President, Rainbow Treecare Scientific Advancements*

Shannon Herbst  
*Mid-Atlantic Territory Manager, Rainbow Treecare Scientific Advancements*

The spread of emerald ash borer (EAB) into eastern Pennsylvania and New Jersey is a major challenge and opportunity for Philadelphia area arborists to preserve worthwhile ash trees in the landscapes we manage. One of the most efficient and environmentally safe methods of pesticide application is microinjection technology that allows you to apply systemic products to targeted trees in a responsible manner. Microinjection is also an effective way to deliver a host of other fungicides and plant health care products. A key factor in achieving safe and effective applications is a thorough understanding of the injection techniques and products that are available. This one-day workshop will provide you with a background in microinjection and an overview of all of the available products and equipment on the market. You will have a hands-on opportunity to practice an application on an ash tree. *This course carries 5.5 CEUs for ISA certified arborists (S=2, P=1.5, M=2).*

**Wednesday, April 4**  
*Fee: $140 (includes lunch)*  
9:00a.m. – 4:00p.m.

Tree Health Assessment

Jerry Bond  
*Principal Consultant, Urban Forest Analytics LLC, and Author, Urban Tree Health*

If you have ever struggled with trying to understand and describe the condition of a tree in a report or a proposal, this course will be of assistance. Dr. Jerry Bond is a principal in the firm Urban Forest Analytics and the author of *Urban Tree Health*. He will explain his new field methods for obtaining quick and reliable estimates of tree condition and tree load potential. This involves the use of six specific parameters to help quantify the health of a specific tree. This methodology helps provide a more robust evaluation when doing level 3 tree inspections. Participants will learn an easy-to-use technique to determine the load potential for trees and their parts. An outdoor exercise will put this knowledge into practice, and will be followed by a discussion of actual case studies. *This course carries 5.5 CEUs for ISA certified arborists (S=2, P=1.5, M=2).*

**Thursday, April 5**  
*Fee: $140 (includes lunch)*  
9:00a.m. – 4:00p.m.
Managing Forest Fragments

Ken LeRoy
Arborist, John B. Ward & Co Tree Experts

Fragmentation of natural areas due to urbanization results in isolated forest fragments. Cut off by highways, rail lines, and commercial and residential developments, these patches of green infrastructure surrounded by the built environment are often neglected. These disturbed landscapes can be managed to develop a healthier, safer, functioning forest. The potential for the earth to support optimum tree growth and carbon sequestration can be realized by following basic forestry practices including vine control, preferred species selection, thinning for fewer more efficient trees, considering soil health, wildlife enhancement, and carving out access for people. All the earth is a garden and requires tending. Come and learn how to manage woods in our community forests.

This course carries 5.5 CEUs for ISA certified arborists (S=2, P=1.5, M=2).

Tuesday, April 10
9:00a.m. – 4:00p.m.  
Fee: $140 (includes lunch)
Introductory Tree Climbing

Zach Shechtman
Owner, Shechtman Tree Care

Brian Hutchinson
Arborist, Shechtman Tree Care

This class provides an introduction to tree climbing and features the opportunity to have supervised climbing instruction in trees. It is ideal for tree companies looking to advance promising grounds staff, or for gardeners and landscapers who want to add new skills. Effective methods for climbing trees will be demonstrated by instructors and practiced by students. Safety rules will be reviewed and stressed. Students will learn how to tie critical knots regularly used by arborists. Included in the fee, each student will receive a copy of *The Tree Climbers Companion* by Jeff Jepson, a great resource for climbers. **If you have them, bring an arborist’s rope and saddle, a hard hat, gloves, safety glasses to the class. If not, there is equipment you may use. Wear boots, long pants, and dress for the weather.** We will meet at Bloomfield Farm. Look for the paved road across Northwestern Avenue from the public garden entrance. Park in the lot and follow the signs to the Horticulture Center. This course carries 16.5 CEUs for ISA certified arborists (S=0, P=16.5, M=0).

**Wednesday, Thursday, and Friday**
April 11, 12, 13
9:00a.m. – 4:00p.m.

Fee: $525 (includes lunch)
Fundamentals of Garden Mapping and Surveying

Wayne Cahilly
Manager, Institutional Mapping Department, New York Botanical Garden

This class will introduce the garden manager, facilities manager, or gardener to the tasks required to precisely map plants and infrastructure within a garden. Techniques will range from proper use of tapes, to the benefits and pitfalls of mapping-grade GPS devices. Terrestrial surveying equipment and techniques will be introduced and demonstrated. Students will leave with a better understanding of the techniques, equipment, costs of various mapping methods, and the level of staff commitment necessary to achieve their required level of precision. With nearly 30 years of experience, Wayne brings a wide range of skills, techniques and experience to the subject of garden mapping. This course carries 5.5 CEUs for ISA certified arborists (S=2, P=2, M=1.5).

Friday, April 13
9:00a.m. – 4:00p.m.

Fee: $140 (includes lunch)
Tree Appraisal Workshop

James Koman
Consulting Arborist

Assigning a fair monetary value to individual trees is an important skill for municipal and consulting arborists, as well as anyone who is responsible for managing a property, park, or arboretum. This workshop focuses on the theory and practice of the appraisal of woody plants. James will review the various approaches to valuation that are currently available and how to determine which is the most suitable choice. The primary focus will be on the Cost Approach and the Trunk Formula Method for determining monetary value. The outdoor component of the workshop involves simulated appraisals on several trees in the Arboretum with hands-on instruction. An analysis of each problem will follow. The instructional material follows the 9th edition of the Guide for Plant Appraisal (International Society of Arboriculture) as prepared by the Council of Tree and Landscape Appraisers (CTLA) and reflects current understanding and practice in arboriculture. Come prepared to be outside. This course carries 6.5 CEUs for ISA certified arborists (S=2, P=2.25, M=2.25).

Thursday, April 19
8:30a.m. – 4:30p.m.

Fee: $140 (includes lunch)

Build a Stool from a Tree!
An Introduction to Green Woodworking Tools and Techniques

Karl F. Newman
Master Cabinetmaker and Green Woodworker

Using traditional tools and safe, modern practices, we will explore the craft of green woodworking by making a simple stool. Each student will split out legs and a seat, and will have an opportunity to hew, shave, bore, and plane the parts, and assemble a three-legged stool. These methods are the same as the processes that are used to make many other (and finer) types of furniture such as Windsor or Welsh stick chairs and joint stools. In addition to the class fee, each student needs to bring the following tools: a froe, hatchet, drawknife, spokeshove, 1-inch auger and brace or 1-inch drill bit, and a cordless drill. The instructor has a limited number of loaner tools. We will meet in the barn at Bloomfield Farm. Looked for the paved road across Northwestern Avenue from the public garden entrance. Park in the lot and look for the red barn on your left.

Three Wednesdays, May 16, 23, 30
4:30 – 7:00p.m.

Members: $165
Non-members: $180
woody plant conference

Mark your calendars for the 21st annual Woody Plant Conference at Swarthmore College. This popular day-long conference focuses on great woody plants for the Mid-Atlantic states and how to use them in the landscape. The conference is co-sponsored by Morris Arboretum, Chanticleer, Longwood Gardens, the Pennsylvania Horticultural Society, the Scott Arboretum of Swarthmore College, and Tyler Arboretum. The conference is geared to landscape professionals and avid amateur gardeners.

Featured speakers include:

- Ed Ikin – is Head of Landscape and Horticulture at Royal Botanic Garden Kew’s Wakehurst. Located in West Sussex, Wakehurst boasts formal gardens, woodlands, and a nature reserve. Wakehurst is also home to the Millennium Seed Bank, the largest wild plant seed bank in the world.
- Thomas Molnar – Associate Professor, Plant Biology, Rutgers University will focus on woody plant breeding and insect and disease resistance.
- Jane Kilpatrick – author of *Fathers of Botany: The Discovery of Chinese Plants by European Missionaries* highlights European missionaries that were the first explorers in China to send home evidence of one of the richest and most varied floras ever seen.
- Gerald Donnelly – President and CEO of The Morton Arboretum in Lisle, Illinois, will talk about the role of arboreta in society and in the conservation of globally threatened trees.

Continuing education units (CEUs) for landscape architects and International Society of Arboriculture certified arborists will be available. Brochures will be available in April from Longwood Gardens at 610-388-5238.

Friday, July 20
8:30 a.m. – 4:30 p.m.
The Morris Arboretum is located in the Chestnut Hill section of Philadelphia. For further information or directions, call (215) 247-5777 or check the Arboretum website at: www.morrisarboretum.org.

**Morris Arboretum – Proud to be a Smoke-free Environment**

In keeping with our commitment to maintaining a healthy and safe environment, the use of all tobacco products (including smokeless tobacco) is prohibited anywhere on the property. This covers all smoking methods, including but not limited to the use of electronic smoking devices (e-cigarettes, e-cigars, and e-pipes) and hookah smoked products.

**The Green Choice**

We need your input. In the interest of sustainability, if you would like to opt out of receiving our course brochure, please e-mail us at education@morrisarboretum.org with the subject line, “Opt out.” We always offer the course brochure on our website under the Education tab.

**Location of Classes**

All classes will be held at the George D. Widener Visitor Center unless otherwise noted.

Parking areas may be reached by entering the Arboretum off of Northwestern Avenue. Students should arrive at least ten minutes before the start of the class to allow time to check in.

If you are a person with a disability and require an accommodation to participate in classes, please contact Jan McFarlan at (215) 247-5777, ext. 156 Monday through Friday, to discuss the accommodation. For people who use TTY, please call PA Relay at 1-800-654-5984.

**Refund and Cancellation Policy**

In order to receive a refund for a class or trip you must call (215) 247-5777, ext. 125 at least five business days before the class start date. There will be a $5 processing fee for each class withdrawal. The Arboretum reserves the right to cancel any program if necessary. Refunds take approximately three to four weeks to process. There will be no refunds after a class begins.

**Weather Information**

In case of inclement weather conditions on the day of your class, please call the Education Department, (215) 247-5777, ext. 156, for information on possible cancellation or rescheduling of the class.

**CEUs**

Sign up sheets will be available at the end of the course and it is each participant’s responsibility to sign the appropriate forms.
To register online, visit https://online.morrisarboretum.org/arboriculture.

To register by mail, send this form along with check payable to the “Morris Arboretum” to:

Education Department
Morris Arboretum
100 East Northwestern Avenue
Philadelphia, PA 19118-2697

To register by phone, have your credit card ready.
Call the Education Dept. (215) 247-5777, ext. 125.

Payment Information

Name ________________________________________________________________
Address ____________________________________________________________
_________________________________________________________________
_________________________________________________________________
Phone home __________________________________ work ____________________ cell ____________________
Email Address ________________________________________________________

☐ My check or money order payable to the Morris Arboretum is enclosed.
The School of Arboriculture at Morris Arboretum offers high-quality courses taught by world-renowned instructors and experts in the field.

See inside for descriptions. Topics include:

- Landscape Design for Professionals
- Managing Forest Fragments
- Protecting and Preserving Trees During Construction
- Diagnosis and Identification of Plant Diseases

The Morris Arboretum is proud to print on FSC® (Forest Stewardship Council™) certified paper, which supports the growth of responsible forest management worldwide through its international standards.