

Area of Interest: Environmental and Applied Sciences

## Urban Forestry - Arboriculture

Ontario College Certificate

Program Code: 1214X01FPM

1 Year

Pembroke Campus

### Our Program

**Provide environmental, social and economic benefits in today`s society with a career in urban forestry.**

In the one-year Urban Forestry - Arboriculture Ontario College Certificate program, you experience a hands-on education exploring arboriculture science with tree care skills.

You acquire the skills and knowledge related to a range of tree care services provided by professional arborists, including:

- tree climbing
- tree identification
- tree pruning
- tree removal
- tree care
- tree planting
- identification of common tree wildlife
- identification, diagnosis and management of tree diseases

Spend the majority of your time in the program outdoors, in a variety of weather conditions and heights. Working on real trees, practice climbing techniques and learn to become proficient in the use of arborist-related equipment including chainsaws, chippers and pruning essentials.

Develop foundational tree identification and safe tree-climbing skills through theoretical, laboratory and hands-on learning.

Participate in workplace scenarios that replicate actual challenges faced by arborists. In classroom and labs settings, examine tree science and arboriculture practises, such as planting, pruning and removal.

Graduates may find a career as a(n):

- certified arborist
- consulting arborist
- lead climber
- secondary climber
- manager
- crew lead
- groundsperson

There are employment opportunities in a wide variety of areas such as:

- commercial tree service companies
- public utility companies
- city, county, and other government agencies
- landscape maintenance firms
- nurseries
- garden centres
- industrial complexes
- private estates
- theme parks and resorts
- arboretums
- botanical gardens
- tree research centres
- golf courses

If you choose to pursue further education, you are ready to write the College of Trades (COT) exemption exams for some college courses.

### **SUCCESS FACTORS**

This program is well-suited for students who:

- Enjoy physical activity and working outdoors.
- Are willing to work in extreme weather conditions.
- Are comfortable working at heights exceeding 25M (80 feet).
- Are able to lift one's own weight.
- Have an affinity to working with trees and shrubs.
- Work well in a team environment.
- Enjoy problem solving.
- Possess good communication skills.

### **Employment**

Graduates of the program may find employment as Head Arborist, Crew Leader, Arborist, Ground Crew, Lead Climber, Climber, and Consulting Arborist.

### **Learning Outcomes**

The graduate has reliably demonstrated the ability to:

- Explain principles and procedures relating to urban forests and ecosystems to inform clients' decision-making when selecting tree sites, species and planting procedures.
- Treat trees by considering the relationship between tree anatomy, physiology and urban soil conditions to maintain tree health and management.
- Recommend and apply integrated treatments and preventative care to promote healthy trees.

- Use complex climbing systems with basic industry-recognized fall protection techniques to climb and prune trees safely while addressing tree wound reactions in juvenile and mature trees.
- Implement proper tree maintenance and safe removal procedures in accordance with industry standards, policies, and legislation.
- Employ safe operational and maintenance procedures for arborist-related hand tools and large equipment in accordance with recognized standards.
- Prepare reports and field records in compliance with industry regulation and established policies and procedures.
- Utilize industry related personal protective equipment and safe working practises to ensure optimum health and safety of self, team members and the environment.
- Apply the fundamentals of hazardous tree assessment, tree appraisal and tree risk management in order to implement safe and appropriate harm reduction actions and procedures.
- Identify and apply discipline-specific practices that contribute to the local and global community through social responsibility, economic commitment and environmental stewardship.

## Program of Study

Level: 01	Courses	Hours
ENL7777	Communications I	42.0
FOR7101	Basic Tree Climbing	84.0
FOR7102	Equipment Operations and Maintenance	42.0
FOR7106	Advanced Tree Climbing	84.0
FOR7109	Tree Entomology and Pathology	42.0
FOR7114	Dendrology	56.0
Level: 02	Courses	Hours
FOR7103	Tree Sciences and Practices	42.0
FOR7107	Arboriculture Practices	42.0
FOR7108	Tree Removal	84.0
FOR7110	Urban Soils	42.0
FOR7115	Tree Pruning Techniques	84.0
Choose one from equivalencies:	Courses	Hours
GED1214	General Education Elective	42.0

## Fees for the 2023/2024 Academic Year

Tuition and related ancillary fees for this program can be viewed by using the Tuition and Fees

Estimator tool at <https://www.algonquincollege.com/fee-estimator> .

Further information on fees can be found by visiting the Registrar's Office website at <https://www.algonquincollege.com/ro> .

Fees are subject to change.

Additional program related expenses include:

- Students should plan on spending approximately \$300 on books and approximately \$1,500 on personal protective equipment (PPE) for the program duration.
- Additionally, included in program ancillary fees, students receive a climbing package which includes a climbing harness and various other pieces of mandatory equipment.
- It is highly recommended that students contact their program coordinator prior to purchasing any equipment for this program.

## **Admission Requirements for the 2024/2025 Academic Year**

### **College Eligibility**

- Ontario Secondary School Diploma (OSSD) or equivalent. Applicants with an OSSD showing senior English and/or Mathematics courses at the Basic Level, or with Workplace or Open courses, will be tested to determine their eligibility for admission; OR
- Academic and Career Entrance (ACE) certificate; OR
- General Educational Development (GED) certificate; OR
- Mature Student status (19 years of age or older and without a high school diploma at the start of the program). Eligibility may be determined by academic achievement testing for which a fee of \$50 (subject to change) will be charged.

### **Program Eligibility**

- English, Grade 12 (ENG4C) or equivalent with a grade of 60% or higher.
- Applicants with international transcripts must provide proof of the subject specific requirements noted above and may be required to provide proof of language proficiency. Domestic applicants with international transcripts must be evaluated through the International Credential Assessment Service of Canada (ICAS) or World Education Services (WES).
- IELTS-International English Language Testing Service (Academic) Overall band of 6.5 with a minimum of 6.0 in each band; OR TOEFL-Internet-based (iBT)-overall 88, with a minimum of 22 in each component: Reading: 22; Listening: 22; Speaking: 22; Writing: 22; OR Duolingo English Test (DET) Overall 120, minimum of 120 in Literacy and no score below 105.

Should the number of qualified applicants exceed the number of available places, applicants will be selected on the basis of their proficiency in English.

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## **Application Information**

### **URBAN FORESTRY - ARBORICULTURE** **Program Code 1214X01FPM**

Applications to full-time day programs must be submitted with official transcripts showing completion of the academic admission requirements through:

ontariocolleges.ca  
60 Corporate Court  
Guelph, Ontario N1G 5J3  
1-888-892-2228

Students currently enrolled in an Ontario secondary school should notify their Guidance Office prior to their online application at <http://www.ontariocolleges.ca/>.

Applications for Fall Term and Winter Term received by February 1 will be given equal consideration. Applications received after February 1 will be processed on a first-come, first-served basis as long as places are available.

International applicants please visit this link for application process information:  
<https://algonquincollege.force.com/myACint/>.

For further information on the admissions process, contact:

Registrar's Office  
Algonquin College in the Ottawa Valley  
1 College Way  
Pembroke, ON K8A0C8  
Local: 613-735-4700  
Toll-free 1-800-565-4723  
TTY: 1-866-620-3845  
Fax: 613-735-4739  
<https://algonquincollege.com/pembroke>

## **Additional Information**

### **First Aid and CPR:**

A current Standard First Aid and CPR certificate is preferred prior to registration. Otherwise, the student must obtain the certificate within the first two months of the first semester.

### **Advanced Standing:**

Algonquin College graduates of the Ontario College Certificate `Urban Forestry - Arboriculture` program may be eligible for admission with Advanced Standing for a maximum of 8 courses in the Forestry Technician Diploma program. On the basis of the review/evaluation, a program of study will be prescribed, identifying the entry point within the program and the courses that must be successfully achieved to attain graduation status in the Forestry Technician Diploma.

### **Transportation:**

Transportation to and from off-campus work sites, within the vicinity of the city of Pembroke, is not included in the programs costs and is the responsibility of the student. Most city training sites are within walking distance of the campus. Transportation to remote locations will be provided and when provided, college transportation must be used by students.

## Contact Information

### Program Coordinator(s)

- Nadja Morin, <mailto:morinn@algonquincollege.com> , 613-735-4700, ext. 2723

## Course Descriptions

### ENL7777 Communications I

Communication remains an essential skill sought by employers, regardless of discipline or field of study. Using a practical, vocation-oriented approach, students focus on meeting the requirements of effective communication. Through a combination of lectures, exercises, and independent learning, students practise writing, speaking, reading, listening, locating and documenting information and using technology to communicate professionally. Students develop and strengthen communication skills that contribute to success in both educational and workplace environments.

Prerequisite(s): none

Corerequisite(s):none

### FOR7101 Basic Tree Climbing

The ability to climb trees is one of the most important skills an arborist can possess. Students learn the skills to safely use specialized arborist equipment, such as climbing harnesses and ropes. Training includes pre-climb inspection of trees and equipment, techniques for ascending, descending, maneuvering within a tree's canopy and aerial rescue procedures. Students become proficient climbers through climbing demonstrations and applied practice.

Prerequisite(s): none

Corerequisite(s):none

### FOR7102 Equipment Operations and Maintenance

The proper use and maintenance of specialized equipment increases productivity and significantly reduces the risks to Arborists in the workplace. In this course, you will learn tree felling techniques as well as chainsaw maintenance and safe methods to service brush chippers and chainsaws. You will work hands-on in the field, felling trees and operating a wood chipper, as well as practicing machinery maintenance in the lab. This course also exposes you to additional machinery and equipment that Arborists operate in the workplace such as stump grinders, winches, brush saws and cranes.

Prerequisite(s): none

Corerequisite(s):none

### FOR7103 Tree Sciences and Practices

Applying the concepts and principles of the science behind trees is important when managing the health of trees. Students gain an overview of tree sciences such as anatomy and physiology. Focus is on urban soil conditions, tree installation and the impact nearby construction can have on trees. Students are exposed to the practices by which arborists select, plant and prune trees, as well as how to assess hazards posed by trees.

Prerequisite(s): none

Corerequisite(s):none

### FOR7106 Advanced Tree Climbing

Students further hone their tree climbing abilities, while acquiring more advanced climbing systems and techniques. Always focusing on safety, students use equipment such as split tails, friction savers and re-directs. Students also gain experience pruning trees aloft using specialty hand tools. Demonstrations by instructors and rigorous continued practice further develop these skills.

Prerequisite(s): FOR7101

Corerequisite(s):none

**FOR7107 Arboriculture Practices**

In an urban setting, Arborists are required to perform inspections and produce reports for a variety of client needs. As a well rounded arborist, common knowledge of tree wildlife is key when performing tree assessments. Arborists have the authority to diagnose and advise on tree issues and problems. Arborists are furthermore qualified to assess trees and apply for tree removal permits. Many different scenarios exist where an Arborist is required to perform a consulting role. As experts in this field, we may be required to defend our diagnosis in a court of law and are considered "expert witnesses" in these cases. This course will allow you to perform some of these specialized assessments, and to make use of the data you collect.

Prerequisite(s): none

Corerequisite(s):none

**FOR7108 Tree Removal**

In an urban setting with overhead wires, proximity to buildings and tight spaces, tree removal is a complicated matter. Students develop action plans to perform these operations safely and without damage to property by applying the latest tree removal techniques. Through case studies, demonstrations and continuous practice, students build confidence and proficiency in this complicated task.

Prerequisite(s): FOR7102 and FOR7106

Corerequisite(s):none

**FOR7109 Tree Entomology and Pathology**

Now more than ever our urban trees are at risk from a multitude of insects and diseases. As tree care specialists, it is important to be aware of today's main forest threats, and to be able to manage them wherever possible. Students identify and discuss current insect and pathogen threats to our urban forests. Through classroom study and sample collections, students begin to develop an encyclopedic knowledge of these threats.

Prerequisite(s): none

Corerequisite(s):none

**FOR7110 Urban Soils**

The root system is undeniably the most important part of plants, yet rarely is any thought given to the conditions it endures. Students examine the differences between urban and natural soil types and methods of enriching urban soils to promote healthy root systems. The selection of appropriate tree species for specific sites is also discussed. Proper species selection is discussed as well. Through case studies and examples, students develop their knowledge of soil types and their root environment.

Prerequisite(s): none

Corerequisite(s):none

**FOR7114 Dendrology**

Recognizing tree species and their attributes are an essential skill for diagnosing and planning care. Classrooms and study labs develop strong identification skills, while field trips re-enforce the skill set in an authentic context. Students learn to identify approximately 150 tree and shrub specimens that are commonly found in Ontario's urban settings.

Prerequisite(s): none

Corerequisite(s):none

**FOR7115 Tree Pruning Techniques**



As with many art forms, pruning is founded in strong, science-based technique. It is often left up to the individual to make critical decisions, which could enhance or decrease the likelihood of a tree living a full lifespan. In this course, you will learn about how a tree reacts to pruning. Emphasis is placed on strategic planning, proper pruning cuts and techniques. Most time is spent in the field practicing result-specific pruning techniques such as structural pruning, aesthetic pruning, crown thinning, clearance pruning, pruning for fruit production, etc. This course will equip you with the knowledge and expertise to make those critical decisions with confidence.

Prerequisite(s): FOR7102 and FOR7106

Corerequisite(s):none

**GED1214 General Education Elective**

Students choose one course, from a group of general education electives, which meets one of the following five theme requirements: Arts in Society, Civic Life, Social and Cultural Understanding, Personal Understanding, and Science and Technology.

Prerequisite(s): none

Corerequisite(s):none