COURSE OUTLINE: ARB601 - ARBORIST THEORY I

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Course Code: Title	ARB601: UTILITY ARBORIST THEORY I
Program Number: Name	6560: UTILITY ARBORIST I
Department:	UTILITY ARBORIST - APPR.
Semesters/Terms:	20W
Course Description:	This course will provide the student with the skills, tools and knowledge necessary to describe how to plan and work safely, identify electrical hazards, identify other hazards outside of the electrical environment, removing of trees, rigging principles, and how to manage fire and dangerous goods.
Total Credits:	5
Hours/Week:	42
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Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
Essential Employability Skills (EES) addressed in this course:	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form that fulfills the purpose and meets the needs of the audience. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. EES 3 Execute mathematical operations accurately. EES 4 Apply a systematic approach to solve problems. EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 6 Locate, select, organize, and document information using appropriate technology and information systems. EES 7 Analyze, evaluate, and apply relevant information from a variety of sources. EES 9 Interact with others in groups or teams that contribute to effective working relationships and the achievement of goals. EES 10 Manage the use of time and other resources to complete projects. EES 11 Take responsibility for ones own actions, decisions, and consequences.
Course Evaluation:	Passing Grade: 50%,
Course Outcomes and Learning Objectives:	

Course Outcome 1	**Learning Objectives for Course Outcome 1**
Plan all work operations safely, in compliance with provincial and municipal legislation and regulations.	Interpreting job documents, determining required personal protective equipment, determining job site limits, identifying job sequences, hazards and required barriers to hazards.
Course Outcome 2	**Learning Objectives for Course Outcome 2**
Describe how to manage all	

other potential hazards on the work site, including hazards in trees, overhead, on or underground, and hazards to the public.	Environmental hazards, tree hazards, ground hazards, underground hardware, and poison plants.
Course Outcome 3	**Learning Objectives for Course Outcome 3**
Describe typical tree removal processes using directional felling techniques without rigging equipment.	Identifying the tree to be removed, determining removal methods, establish communication within work groups, factors affecting removal methods, felling zone preparation, danger zone preparation, tree felling, gas powered tools and inspecting worksite.
Course Outcome 4	**Learning Objectives for Course Outcome 4**
Describe methods of handling/disposing of debris generated on the job site.	Equipment required, bucking and limbing, sweep technique, handle/dispose of debris, site clean-up, use of chainsaws on the work site.
Course Outcome 5	**Learning Objectives for Course Outcome 5**
Identify appropriate communication skills to deal effectively with customers and in the workplace.	Tailboard talk, writing effectively, reading effectively, and listening effectively.
Course Outcome 6	**Learning Objectives for Course Outcome 6**
Describe inspecting, adjusting, maintaining and wearing required personal protective equipment.	Eye protection, head protection, face protection, hearing protection, hand protection, foot protection, leg protection.
Course Outcome 7	**Learning Objectives for Course Outcome 7**
Describe the selection, use of, and inspection of hand tools and tree maintenance equipment.	Hand tools, pruners, slings, ropes, saws, and rigging equipment.
Course Outcome 8	**Learning Objectives for Course Outcome 8**
Identify subject wood plant(s) on site.	Features, written description, marking trees, names, and growth characteristics.
Course Outcome 9	**Learning Objectives for Course Outcome 9**
Describe proper use of knots and hitches.	Rope terminology, rigging knots, fall protection knots and splices.
Course Outcome 10	**Learning Objectives for Course Outcome 10**
Describe the types and purposes of typical pruning processes, and the tools and equipment required.	Considerations include identifying cut locations, pruning cuts, pruning methods, and mechanical and equipment, hand tools, gas powered tools, disinfection, and raising/lowering limbs using ropes.
Course Outcome 11	**Learning Objectives for Course Outcome 11**
Describe typical tree	Method and tools/equipment selection, factors affecting

removal processes using rigging equipment.	removal method, identifying tree to be removed, tree condition, fall zone, danger zone, learning trees, splits or cavities, `... hung up`` trees and felling cuts.
Course Outcome 12	**Learning Objectives for Course Outcome 12**
Describe selecting, inspecting and maintenance procedures for fall protection system components.	Climbing rope, climbing harness, position lanyard, slings, pulleys, friction savers and split tails.
Course Outcome 13	**Learning Objectives for Course Outcome 13**
Describe various methods for ascending and descending trees to access required work position.	Techniques used to ascend/descend, secured body thrust, belay, tree inspection, crown hazards, stem hazards, defects, anchor points (interim and final), open and closed system, reposition and limb walking.
Course Outcome 14	**Learning Objectives for Course Outcome 14**
Describe aerial tree rescue.	Assessing the emergency, observing the scene, communicating with the victim, EMS and rescue.
Course Outcome 15	**Learning Objectives for Course Outcome 15**
Describe rigging principles and equipment.	Determine shock-loading, mechanical advantage, rigging equipment materials, tensile strength and safe working load limits.
Course Outcome 16	**Learning Objectives for Course Outcome 16**
Describe methods of eliminating or controlling electrical hazards.	Electrical Theory, Ohm` s Law, utility hazards, barriers to electrical energy.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Attendance	25%
Quizzes / Assignments	50%
Scenario Based Test	25%

Date: June 19, 2019

Addendum: Please refer to the course outline addendum on the Learning Management System for further information.