

1. Module details**Module name****Safe Tree Climbing Procedures****Module duration**

It is expected that students with the appropriate entry knowledge and skills will successfully complete this module in 18 - 20 hours.

Module code

NUE270

Discipline code

1101310

2. Module purpose

The purpose of this module is to provide participants with knowledge and skills of tree climbing principles, techniques and their application and to provide skills for ground support and tree climbers during arboricultural operations.

By completing this module participants will be able to demonstrate basic skills and techniques in ground support and in climbing trees, demonstrating the necessary safety precautions and requirements, associated with these operations

3. Prerequisites

Introduction to the Powerline clearance industry
OH & S
First aid
Traffic Controller
Identifying Site Conditions
Introduction to Tree Climbing
Introduction to EWPs
Electrical Systems Identification and Powerline Clearances Requirements

4. Relationship to competency standards

NES101, NES450, RUH HRT223

5. Content**Rope and knot selection****Climbing principles****Climbing techniques****Ground support for tree climbers****Emergency rescue for climbing situations**

6. Assessment strategy

Assessment methods

More than one learning outcome may be assessed at once.
If appropriate, learning outcomes in this module may be assessed in conjunction with learning outcomes in other modules.

Skills based learning outcomes should be assessed by practical demonstration with oral or written evidence where underpinning knowledge is required.

Learning outcomes which do not require practical demonstration should be assessed using oral and/or written evidence such as assignments, reports, exercises, projects or presentations

Conditions of assessment

Access to appropriate site, resources materials and equipment.
Learning outcomes may be assessed either on or off the job.
Skills based learning outcomes may be assessed on the job or in a simulated work environment

7. Learning outcome details

Learning outcome 1

Identify risks and hazards associated with climbing and describe the procedures to be followed to ensure safe climbing practices.

Assessment criteria

- 1.1 Identify the hazards associated with climbing on a range of work sites in proximity to power lines.
- 1.2 Recognise and select arboricultural equipment explaining the purpose for which each item is used.
- 1.3 Detail faults associated with tools and climbing equipment, carrying out tests to check serviceability.
- 1.4 Select and demonstrate the ability to don and adjust Arboricultural equipment used in tree climbing.

Learning outcome 2

Assess trees for defects and hazards prior to climbing.

Assessment criteria

- 2.1 Recognise and describe common tree defects and hazards associated with climbing.
- 2.2 Explain methods of ascent and descent which could be used to overcome or minimise hazards.

Learning outcome 3

Develop and demonstrate standard tree climbing techniques.

Assessment criteria

- 3.1 Develop and use check lists inspect the tree for defects and surrounding environment for hazards.
- 3.2 Establish communication commands with ground support crew member prior to ascent.
- 3.3 Inspect and select ropes and correctly tie climbing knots.
- 3.4 Select tie off points and install climbing lines using ladder, weighted throwing line, casting life line or EWP.
- 3.5 Select, don and adjust climbing gear.
- 3.6 Explain terms associated with climbing and demonstrate safe ascent and descent climbing procedures, remaining attached at all times and demonstrating fluent climbing movements.
- 3.7 Demonstrate lateral movement in the tree, including branch walking operations.

Learning outcome 4

Demonstrate simulated aerial emergency rescue procedures for tree climbers.

Assessment criteria

- 4.1 Detail a range of emergency situations that may arise during climbing operations.
- 4.2 Check climber position with respect to live power lines in an emergency.
- 4.3 Assess response requirements and commence emergency response procedures including breaking contact of energised climber.
- 4.4 Contact emergency services including power supply company.
- 4.5 Climb tree and commence first aid procedure to victim if safe to proceed climber to ground.
- 4.6 Demonstrate retrieval procedures by lowering.
- 4.7 Recommence first aid (CPR Procedures).
- 4.8 Communicate with emergency service workers.

4.9 Report and record incident for employer and relevant OH&S authority according to enterprise and state legislative requirements.

4.10 Evaluate rescue operation for future emergency rescue situations.

Note All simulated rescue procedures must be carried out using a dummy or similar

8. Delivery of the module

All or part of this module may be delivered through full or part time, on and off the job and/or distance education modes.

Practical components should be delivered in a way that ensures participant safety.

Delivery methods must provide for the demonstration of skills and associated knowledge specified in all learning outcomes, either in work place or simulated work place conditions.

Delivery should take into account current legislation, regulations and by-laws and be consistent with existing industry standards including Australian and International Standards.

Delivery should take into account the environmental impact of arboricultural practices

Resource requirements

Access to appropriate materials, tools and equipment including personal protective clothing.

Site appropriate for the type of arboriculture activities to be undertaken

References

Lawrence, T. et al. Practical Tree Management: An Arborist's Handbook. Inkata Press, Melbourne, 1993.

Lilly, S. The Tree Climber's Guide. International Society of Arboriculture.

Standards Australia Australian Standard: Pruning of Amenity Trees AS 4373 - 1996.

Line clearance tree trimmer certification manual: ACRT, inc. Commercial press inc 1996.

American National Standards Institute Tree Care Operations - Safety Requirements: ANSI - 2133.1 - 1994.

Current relevant federal and state legislation/references covering Acts, Regulations, By-laws, Codes of Practice.

Current information brochures published by federal and state OH&S agencies.

Relevant manufacturers operation and basic maintenance manuals.

Enterprise policy and procedures manuals.

Current, relevant video material

Occupational health and safety requirements

All work practices must comply with current state and federal Safety Requirements and OH&S requirements