



Australian Government

Assessment Requirements for AHCARB703 Research urban forest performance

Release: 1

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Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- researching and define elemental components of urban forests
- researching role of urban forests as a primary component of urban ecosystems
- researching threats to and resilience of urban forests in cities
- researching regulation of hydrological processes, retention of precipitation, mitigation of salinity, and effects of trees on water quality
- researching relationship of soil biological network, soil chemistry, soil structure and trees to soil structure stabilisation and erosion potential
- determining contribution of trees towards rhizosphere biodiversity, bioremediation and soil health
- researching energy conservation and micro-climate modification systems of trees and urban forests
- researching heat island analyses of an urban area
- evaluating health, social and psychological benefits of urban forests
- documenting evidence-based research into a preliminary report on benefits of urban forests
- researching current methods and technologies for spatial mapping of urban forests
- analysing process of carbon sequestration in urban forests
- analysing methods for sampling urban forests
- evaluating urban forest valuation methodologies
- documenting a preliminary report on valuation of an urban forest
- researching contribution of urban forest to carbon cycles
- determining local climate, soil factors and management factors affecting forest growth and sequestration
- researching contribution of forest carbon sequestration to mitigation of climate change
- documenting an evaluation of forest mitigation on climate change

- documenting a report on the social, environmental, economic and climatic values of urban forests
- determining challenges of increased urbanisation and urban densification on urban forests
- determining potential benefit of urban forest to mitigate climate change
- compiling preliminary reports and documenting a report describing multi-disciplinary solutions to challenges of urbanisation on urban forests.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- elemental components of urban forests
- role of urban forests as a primary component of urban ecosystems
- threats to and resilience of urban forests in cities
- regulation of hydrological processes, retention of precipitation, mitigation of salinity, and effects of trees on water quality
- relationship of soil biological network, soil chemistry, soil structure and trees to soil structure stabilisation and erosion potential
- contribution of trees towards rhizosphere biodiversity, bioremediation and soil health
- energy conservation and micro-climate modification systems of trees and urban forests
- heat island analyses of an urban area
- health, social and psychological benefits of urban forests
- current methods and technologies for spatial mapping of urban forests
- process of carbon sequestration in urban forests
- methods for sampling urban forests
- urban forest valuation methodologies
- contribution of urban forest to carbon cycles
- local climate, soil factors and management factors affecting forest growth and sequestration
- contribution of forest carbon sequestration to mitigation of climate change
- evaluation of forest mitigation on climate change
- social, environmental, economic and climatic values of urban forests
- challenges of increased urbanisation and urban densification on urban forests
- potential benefit of urban forest to mitigate climate change
- multi-disciplinary solutions to challenges of urbanisation on urban forests.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
 - computer
 - word processing software
 - statistical software
 - internet connection
 - measurement and data collection tools
- materials:
 - urban forest report

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- urban forestry vocational competencies at least to the level being assessed
- current urban forestry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>