



**Australian Government**

**Assessment Requirements for ICTBWN305  
Use optical and radio frequency measuring  
instruments**

**Release: 1**

# Assessment Requirements for ICTBWN305 Use optical and radio frequency measuring instruments

## Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

## Performance Evidence

Evidence of the ability to:

- comply with all job requirements and work health and safety (WHS) regulations, standards and work practices
- check and calibrate tools and instruments
- perform optical measurements using hand-held instrument
- perform radio frequency (RF) measurements using hand-held instrument
- operate the following equipment:
  - hand-held optical power meter
  - hand-held optical source
  - passive optical network (PON) meter
  - radio frequency (RF) signal level meter (SLM)
- perform the following optical measurements:
  - detect the presence of an active optical network terminal (ONT)
  - determine absolute optical power (in dBm)
  - determine insertion loss (in dB)
  - determine relative optical power level (in dB)
- perform the following RF measurements:
  - determine absolute RF power (in dBm)
  - determine relative RF power level (in dB)
  - determine relative RF voltage (in dBmV).

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

## Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify and describe the various instruments used in measuring RF and optical frequencies
- list the types of measurements and their respective interpretation for optical and RF frequencies
- explain the consequences of mating contaminated optical connectors
- correctly record and discuss data using the units decibels, dBm and dBmV
- discuss the variations between optical and RF connector types
- identify and describe the WHS hazards and risks, and describe controls when working with RF frequency measuring equipment
- outline RF spectrum and optical spectrum limits and allocations
- discuss safe handling procedures with optical fibres.

## Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the telecommunications – broadband and wireless networks field of work and include access to:

- a site where measuring instruments can be used
- plant, tools and equipment currently used in industry
- relevant regulatory and equipment documentation that impacts on work activities.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

## Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>