

**PLUMBING AND SERVICES
TRAINING PACKAGE**

BCP03

VERSION 3

PURCHASING GUIDE

Western Australian Department of Education and Training

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Version modification history

The version details of this endorsed Training Package are in the table below. The latest information is at the top of the table.

Version	Release Date	Modification History
3	24/8/06	<p>Addition of new units of competency and qualifications at Certificate IV and Diploma levels.</p> <p>Packaging into qualifications of previously endorsed units (Version 2) used for licensing purposes.</p>
2	22/10/04	<p>Addition of Licensing Units and replacement mains piping unit BCPDR3004A</p> <p>Addition of nineteen competency standards for licensing purposes:</p> <ul style="list-style-type: none"> • BCPCM4001A Carry out work based risk control processes • BCPCM4002A Estimate and cost work • BCPDR4001A Plan, size and layout sanitary drainage systems • BCPDR4002A Plan, size and layout stormwater drainage systems • BSPDR4003A Plan, size and layout domestic treatment plant disposal systems • BCPFS4001A Commission domestic and residential fire suppression sprinkler systems • BCPFS4002A Commission and maintain special hazards fire suppression systems • BCPFS4003A Commission fire system pump sets • BCPFS4004A Design residential and domestic fire sprinkler systems • BCPGS4001A Plan, size and layout consumer gas installations • BCPGS4002A Service Type A gas appliances • BCPMS4001A Plan, size and layout heating and cooling systems • BCPMS4002A Commission air and water systems • BCPRF4001A Plan, size and layout roof drainage systems • BCPSN4001A plan, size and layout sanitary pipework and fixtures • BCPWT4001A Plan, size and layout hot and cold water services/systems • BCPWT4002A Commission and maintain backflow prevention devices • BCPWT4003A Commission and maintain hot water temperature control devices • BSBSBM401A Establish business and legal requirements <p>Note: There are no qualifications attached to these standards</p>
1	20/11/03	Initial release of the package

Qualifications and Nominal Hours

The following table provides a summary of the qualifications and nominal hours in the Plumbing and Services Training Package BCP03.

National ID	Training Package Qualification Title	Maximum Nominal Hours
BCP40106	Certificate IV in Plumbing and Services	575
BCP50106	Diploma of Plumbing and Services	530

Units of Competency and Nominal Hours

The following table provides a summary of the units of competency and nominal hours in the Plumbing and Services Training Package BCP03.

National ID	Training Package Unit Title	Max Nominal Hours
BCPCM4001A	Carry out work based risk control processes	40
BCPCM4002A	Estimate and cost work	36
BCPCM4003A	Produce 2-D architectural drawings using CAD software	40
BCPCM5000A	Design complex sanitary plumbing and drainage systems	60
BCPCM5001A	Design complex cold water systems	60
BCPCM5002A	Design complex stormwater and roof drainage systems	40
BCPCM5003A	Design complex (non-solar) hot water systems	60
BCPCM5004A	Design sewer systems	60
BCPDR4001A	Plan, size and layout sanitary drainage systems	100
BCPDR4002A	Plan, size and layout stormwater drainage systems	32
BCPDR4003A	Plan, size and layout domestic treatment plant disposal systems	20
BCPFS2001A	Connect static storage tanks	52
BCPFS2002A	Install portable fire equipment	12
BCPFS3001A	Fabricate and install fire hydrant and hose reel systems	16
BCPFS4001A	Commission domestic and residential fire suppression sprinkler systems	52
BCPFS4002A	Commission and maintain special hazards fire suppression systems	72
BCPFS4003A	Commission fire system pump sets	90
BCPFS4004A	Design residential and domestic fire sprinkler systems	96
BCPFS4005A	Commission fire alarm and detection systems	60
BCPFS4006A	Commission firefighting appliances	64
BCPFS5000A	Design fire-compliant hydraulic services	280
BCPFS5001A	Design fire sprinkler systems	370
BCPFS5002A	Design fire hydrant and hose reel systems	325
BCPGS4001A	Plan, size and layout consumer gas installations	24
BCPGS4002A	Service Type A gas appliances	150
BCPGS4003A	Install, commission and service Type B gas appliances	95
BCPMS4001A	Plan, size and layout heating and cooling systems	96
BCPMS4002A	Commission air and water systems	96
BCPMS5000A	Design steam distribution systems	40
BCPMS5001A	Design air conditioning and ventilation systems	40
BCPMS5002A	Design sound attenuated hydraulic services	40
BCPMS5003A	Design hydronic heating and cooling systems	80
BCPPS5000A	Design gas bulk storage systems	80
BCPPS5001A	Design industrial gas systems	255
BCPPS5002A	Design gas reticulation systems	160
BCPPS5003A	Design solar water heating systems	40
BCPPS5004A	Conduct a water audit and identify water-saving initiatives	30
BCPPS5005A	Design grey water re-use systems in sewered areas	30
BCPPS5006A	Design rainwater collection, storage, distribution and	30
BCPPS5007A	Design irrigation systems	30
BCPPS5008A	Design trade waste pre-treatment systems	30
BCPPS5009A	Analyse and report on technical plumbing systems	20
BCPPS5010A	Design pump systems	30
BCPPS5011A	Coordinate services and penetrations	40
BCPPS5012A	Design siphonic stormwater drainage systems	10
BCPPS5013A	Design vacuum sewerage systems	10
BCPPS5014A	Locate and maintain piping systems	8
BCPPS5015A	Inspect plumbing and drainage systems	32
BCPRF4001A	Plan, size and layout roof drainage systems	36
BCPSN4001A	Plan, size and layout sanitary pipework and fixtures	60
BCPWT4001A	Plan, size and layout hot and cold water services/systems	50
BCPWT4002A	Commission and maintain backflow prevention devices	30
BCPWT4003A	Commission and maintain hot water temperature control devices	24

Examples of Training Package Programs

Units of competency may be customised so that the tasks involved in demonstrating competence are designed to meet the requirements of an individual enterprise or to satisfy regulations in a particular state or territory.

Each qualification in the Plumbing and Services Training Package BCP03 may be customised to meet the context in which the training is taking place. A qualification can also be customised to accommodate a learner's chosen career pathway.

The following are examples of suitable training programs for the Plumbing and Services Training Package BCP03. The models are not intended to be prescriptive but illustrate ways that qualifications can be achieved.

BCP40106 – Certificate IV in Plumbing and Services Specialising in Plumbing Operations

Qualification Title	Certificate IV in Plumbing and Services
Qualification Code	BCP40106
Qualification Packaging Rules	<p>To achieve a Certificate IV in Plumbing and Services, specialising in Plumbing Operations:</p> <p>15 units consisting of:</p> <p>4 common core units</p> <p>8 Plumbing Services – Operations Stream Core units and</p> <p>3 Elective units must be completed, ensuring that any licensing requirements are addressed. Of these three electives:</p> <ul style="list-style-type: none"> - Maximum of 3 units may be selected from the pool of electives units in the plumbing services – operations stream and - Maximum of 1 unit may be drawn from Certificate III or Diploma levels in BCP03 and - Maximum of 2 units may be selected from another relevant endorsed Training Package or from the core or elective units of another stream with the Certificate IV in Plumbing and Services, with the units selected maintaining both integrity of the AQF level and the industry context of the qualification and - Maximum of 3 units may be selected from the pool of electives units common to all streams.

Unit Code	Unit Title	Nominal Hours
Core Units		
BCPCM4001A	Carry out work based risk control processes	40
BCPCM4002A	Estimate and cost work	36
BSBOHS403A	Identify hazards and assess OHS risks	40
BCGBC4012A	Read and interpret plans and specifications	40
Plumbing Services - Operations Stream Core		
BCPFS4001A	Commission domestic and residential fire suppression sprinkler systems	52
BSBSBM401A	Establish business and legal requirements	40
BCPDR4003A	Plan, size and layout domestic treatment plant disposal systems	20
BCPWT4001A	Plan, size and layout hot and cold water services/systems	50
BCPRF4001A	Plan, size and layout roof drainage systems	36
BCPDR4001A	Plan, size and layout sanitary drainage systems	55
BCPSN4001A	Plan, size and layout sanitary pipework and fixtures	60
BCPDR4002A	Plan, size and layout stormwater drainage systems	32
Plumbing Operations Specialisation Electives		
BCPWT4002A	Commission and maintain backflow prevention devices	30
BCPWT4003A	Commission and maintain hot water temperature control devices	24
BSBCMN310A	Deliver and monitor a service to customers	20
TOTAL		575

BCP50106 – Diploma of Plumbing and Services Specialising in Plumbing Services

Qualification Title	Diploma of Plumbing and Services
Qualification Code	BCP50106
Qualification Packaging Rules	<p>To achieve a Diploma of Plumbing and Services specialising in Plumbing Services:</p> <p>12 Units consisting of:</p> <p>2 common core units</p> <p>5 Plumbing Services Stream core units and</p> <p>5 elective units</p> <p>Elective units may be drawn from the pool of electives from the plumbing and services – management stream, or other plumbing services industry electives or from the core units of any other stream and</p> <ul style="list-style-type: none"> - Maximum of 2 units may be selected from the pool of elective units in the plumbing and services – management stream and - 1 unit of the elective units may be selected from another relevant endorsed Training Package with the units selected maintaining both the integrity of the AQF level and the industry context of the qualification and 1 unit of the elective units may be selected from Certificate IV in Plumbing and Services.

Unit Code	Unit Title	Nominal Hours
Core Units		
BSBOHS504A	Apply principles of OHS risk management	50
BSBPM504A	Manage project costs	40
Plumbing Services Stream Core		
BCPCM5003A	Design complex (non-solar) hot water systems	60
BCPCM5001A	Design complex cold water systems	60
BCPCM5000A	Design complex sanitary plumbing and drainage systems	60
BCPCM5002A	Design complex stormwater and roof drainage systems	40
BCPCM5004A	Design sewer systems	60
Plumbing Services Specialisation Electives		
BCPPS5004A	Conduct a water audit and identify water-saving initiatives	30
BCPPS5005A	Design grey water re-use systems in sewered areas	30
BCPPS5007A	Design irrigation systems	30
BCPPS5006A	Design rainwater collection, storage, distribution and	30
BCPPS5003A	Design solar water heating systems	40
TOTAL		530