



Australian Government

UEEEEC0013 Design electronic printed circuit boards

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

Application

This unit involves the skills and knowledge required to design electronic printed circuit boards.

It includes designing electronic printed circuit boards. It also includes developing alternative printed circuit board design schemes based on design brief and customer relations, and documenting designs.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

UEECD0007 Apply work health and safety regulations, codes and practices in the workplace

Competency Field

Electronics and Communications

Unit Sector

Electrotechnology

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

1 Prepare to design printed circuit board assembly

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|------------|---|
| 1.1 | Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are identified and be applied |
| 1.2 | Extent of the proposed circuit board and sub-assemblies design is determined from the design brief or in consultation with appropriate person/s |

	1.3	Design development work is planned to meet scheduled timelines in consultation with relevant person/s involved
2 Develop printed circuit board assembly design	2.1	Electronic components, sub-assemblies and industry standards are applied to the design
	2.2	Alternative arrangements for the printed circuit board design are considered based on the requirements outlined in the design brief
	2.3	Safety and functional considerations are incorporated in the printed circuit board design
	2.4	Printed circuit board design draft is checked for compliance with the design brief and design rules
	2.5	Printed circuit board design is documented for submission to appropriate person/s for approval
	2.6	Unplanned situations are responded to in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
3 Provide assembly drawings and artwork files ready for production	3.1	Printed circuit board design is presented and explained to client representative and/or relevant person/s
	3.2	Requests for alterations to the printed circuit board design are negotiated with relevant person/s within the constraints of workplace policy
	3.3	Final printed circuit board design is documented and approval obtained from appropriate person/s
	3.4	Quality of work is monitored against performance agreement and/or workplace procedures or industry standards

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Designing electronic printed circuit boards must include at least the following:

- two printed boards for different component population densities and related sub-assemblies, including:
 - single-sided printed circuit board
 - doubled-sided printed circuit board

Unit Mapping Information

This unit replaces and is equivalent to UEENEEH181A Design electronic printed circuit boards.

Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>