



Australian Government

Assessment Requirements for ICPPRP495 Manipulate 3D graphics files in preparation for 3D printing

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 2.0.

Performance Evidence

Evidence of the ability to:

- communicate with client to ascertain needs
- confirm client requirements for three-dimensional (3D) print output
- determine work requirements and obtain client approvals
- recognise faults, imperfections and manifold errors in 3D printer files
- use software to rectify errors in 3D printer files
- save files in required format.

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:

- describe the common manifold errors in 3D printer graphics, including the effect on:
 - proposed printed material
 - printing technology
 - wall thickness
 - file resolution limits
 - conversion between software
 - support structure
- explain the relationship between 3D graphics modelling software and 3D graphics image software, including:
 - file types
 - function of the software
 - main image editing tools
 - scale and units
- describe "Cartesian coordinate system" and how it relates to 3D graphics file manipulation
- describe the purpose of "slicing" in the preparation of G-Code for 3D object build
- describe the effect of setting resolution and deposition thickness in 3D graphics on 3D print output quality.

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 **pre-media** field of work and include access to:

- a range of graphics model files and graphics image files with errors
- a computer with industry-standard 3D graphics software packages
- a 3D printer or 3D printer specifications.

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

Links

Companion volumes are available from the IBSA website -

http://companion_volumes.vetnet.education.gov.au/Pages/TrainingPackage.aspx?pid=17