

## Level 3 Award in Additive Manufacturing (3D Printing)

[General guidance for interpreting OCF qualification levels](#) [1]

Click on the links in the table below for specific guidance on the assessment criteria.

### Unit 1, Additive Manufacture (6 credits)

#### 1. use a brief to design 3D objects.

[1.1 establish the need for a specified design through research.](#) [2]

[1.2 explain design constraints in projects.](#) [4]

[1.3 compare different perspectives or attitudes to a design and the impact of additive manufacturing on the design process.](#) [6]

[1.4 explain the basis for selection of appropriate software to develop the design.](#) [8]

[1.5 create a complex 3D model using appropriate software.](#) [10]

[1.6 make checks to ensure the model will print.](#) [12]

[1.7 amend errors and ensure design and manufacture quality.](#) [14]

#### 2. enable 3D manufacture from a 3D design.

[2.1 identify different export file types for additive manufacturing.](#) [3]

[2.2 explain characteristics of the file format for additive manufacturing.](#) [5]

[2.3 import files into additive manufacturing software.](#) [7]

[2.4 use the appropriate settings to create a build file.](#) [9]

[2.5 explain possible issues related to print speed, quality, size and overall outcome.](#) [11]

[2.6 explain changes to machine settings to improve build quality.](#) [13]

[2.7 use the final product to identify possible improvements.](#) [15]

[2.8 identify and explain the role of additive manufacturing systems within other design and manufacturing processes or systems.](#) [16]

[2.9 document the production of a design and present it to a knowledgeable audience.](#) [17]

**Source URL:** <https://theingots.org/community/l3aman>

### Links

- [1] [https://theingots.org/community/QCF\\_levels](https://theingots.org/community/QCF_levels)
- [2] <https://theingots.org/community/sml3u1x#1.1>
- [3] <https://theingots.org/community/sml3u1x#2.1>
- [4] <https://theingots.org/community/sml3u1x#1.2>
- [5] <https://theingots.org/community/sml3u1x#2.2>
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- [17] <https://theingots.org/community/sml3u1x#2.9>
- [18] <https://theingots.org/community/sml3u1i>