# Level 1 - Unit 105 - Digital Design and Graphics (4 credits)

**Relevant LINKS**

BACK TO ITQ UNITS **[1]**

Handbook home page **[2]**

## Overview

**Digital Design and Graphics** at Silver Level requires the candidate to use design and graphical applications to create some work. This process will require candidates to identify the graphical designs and files required and to edit and format these to meet needs. They will need to use correct methods and procedures to get the right look and feel, such as colour and file sizes. They will then need to be able to export the designs for further use and manipulation.

**A work activity will typically be 'straightforward or routine' because:**

The task or context will be familiar and involve few variable aspects. The techniques used will be familiar or commonly undertaken.

**Example of context** – Creating a series of logos and graphical designs to be used for web sites and brochures for a small charity or local company.

## Assessor's guide to interpreting the criteria

***General Information***

**QCF general description for Level 1 qualifications**

- Achievement at QCF level 1 (EQF Level 2) reflects the ability to use relevant knowledge, skills and procedures to complete routine tasks. It includes responsibility for completing tasks and procedures subject to direction or guidance.
- Use knowledge of facts, procedures and ideas to complete well-defined, routine tasks. Be aware of information relevant to the area of study or work
- Complete well-defined routine tasks. Use relevant skills and procedures. Select and use relevant information. Identify whether actions have been effective.
- Take responsibility for completing tasks and procedures subject to direction or guidance as needed

***Requirements***

- Standards must be confirmed by a trained Silver Level Assessor or higher
- Assessors must at a minimum record assessment judgements as entries in the on-line mark

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book on the INGOTs.org certification site.

- Routine evidence of work used for judging assessment outcomes in the candidates' records of their day to day work will be available from their e-portfolios and on-line work. Assessors should ensure that relevant web pages are available to their account manager on request by supply of the URL.

- When the candidate provides evidence of matching all the criteria to the specification subject to the guidance below, the assessor can request the award using the link on the certification site. The Account Manager will request a random sample of evidence from candidates' work that verifies the assessor's judgement.

- When the Account Manager is satisfied that the evidence is sufficient to safely make an award, the candidate's success will be confirmed and the unit certificate will be printable from the web site.

- This unit should take an average level 1 learner 30 hours of work to complete.

***Assessment Method***

Assessors can score each of the criteria L, S, H. N indicates no evidence and is the default starting position. L indicates some capability but secure capability has not yet been achieved and some help is still required. S indicates that the candidate can match the criterion to its required specification. H indicates performance that goes beyond the expected in at least some aspects. Candidates are required to achieve at least S on all the criteria to achieve the unit. Candidates should be helped and encouraged to reference their work to the assessment criteria using assessment for learning process. e.g. IPU 1.1.2 for IPU Level 1 criterion 1.2. This will make it easier to provide the evidence required for the QA procedures when requested by the Account Manager. There is support for this from learner account profiles on the INGOT web site. PLTS is used to denote where there are opportunities to develop personal learning and thinking skills.

***Expansion of the assessment criteria***

## 1. The candidate will plan the use of appropriate IT systems and software to source content for designs

## 1.1 I can identify design needs

Candidates should be able to show a reasonable plan about how they intend to solve a particular problem and what IT systems they intend to us.

**Evidence:** will be provided directly from the presentation of work in web pages that has clear purpose and describes the purpose of the work.

#### Additional information and guidance

Candidates need to show a plan of their work and that they are aware of some of the design implications with different IT applications they are considering. They show also show some sense of the time constraints that may exist with the different options they are considering.

### 1.2 I can identify copyright license constraints on resources

Candidates should be able to show an awareness that some of the materials they will use in their

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design may be subject to license and copyright restrictions and some semblance of how they will deal with these constraints.

**Evidence:** Assessor feedback and reflective work on a portfolio or blog.

**Additional information and guidance**

Candidates should show some understanding of the ownership of other people's work that they may use and the value of using free resources where appropriate. Note that free means freely licensed, copyright is still maintained by the owner even if the terms of the license is to use the work freely. The exception to this is putting the work into the public domain. Some idea of plagiarism and legal issues, though not in great details, should be clear from their work and planning.

**1.3 I can find images suitable to support the design**

Candidates should have evidence that the images they find or create are suitable in terms of the quality and size of the images, or the meaning conveyed.

**Evidence:** Assessor feedback and candidate work.

**Additional information and guidance.**

Candidates working on something like web pages need to show that they clearly understand the implications of the graphics they choose or create. If they are embedding graphics and other media such as audio, they need to evidence that they know that particular formats may only be accessible by specific browsers or operating systems. Other aspects of suitability might be in relation to the image meaning, in order to avoid offending elements of the intended audience with insensitive image content.

**1.4 I can originate content in appropriate formats**

Candidates should have evidence that the images they find or create are suitable in terms of the format.

**Evidence:** Assessor feedback and candidate work.

**Additional information and guidance**

For example, candidates should have evidence that if the design is for a potential audience with a low bandwidth Internet access, large file size graphics would not be appropriate. Some reflective work by the candidates on aspects of file formats would be useful to underpin the material they are producing. As with other aspects of file creation, there should be some understanding from the candidates that open and accessible formats will be far more suitable for a wider and more varied audience, especially if they want to encourage re-use of their work.

**1.5 I can originate content that meets the design needs**

Candidates should have evidence that the images they find or create are suitable in terms of the specified needs of the project.

**Evidence:** Assessor feedback and candidate work.

**Additional information and guidance**

Candidates should show a good awareness that they should not just make graphics or audio files for the sake of it. They must make material or find material which meets the needs of the project as stated in their original plan. This will then show a clearly that they understand and appreciate the needs of their identified audience and that they are working closely to this end. At Level 1 structure

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and prompts will be needed to scaffold this process.

**2. The candidate will organise the content of the design**

**2.1 I can use a range of techniques to manipulate design components**

Candidates should have evidence that the materials they create show a suitable range of techniques which evidence a certain skill level with design systems.

**Evidence:** Assessor feedback and candidate work.

**Additional information and guidance**

Candidates should show a good level of skill in operating design systems to show that they can use a range of the built in tools. For example, they should be able to create images using elements such as changing the saturation levels or rotating aspects of the image by varying degrees, rather than just adding some shapes and colours.

**2.2 I can use space and colour effectively**

Candidates should have content that shows a good awareness of the use of space and colour.

**Evidence:** Assessor feedback and candidate work.

**Additional information and guidance**

Candidates should show that they have thought carefully about the required materials and have tried aspects of the design system to enhance the content to that end. For example, some images have more impact with large areas of empty or white space, while other images require a complex array of shapes and patterns. Some evidence of testing these elements would be useful to show they are working through this process by elimination of unsuitable content based on colour and space usage.

**2.3 I can use appropriate precision in designs**

Candidates should have content that shows a good amount of skill in aspects of precision.

**Evidence:** Assessor feedback and candidate work.

**Additional information and guidance**

Many design systems come with a variety of tools to allow great precision in the final outcome of the design. This could be in terms of the placement of elements in a design, such as shapes, down to the precise amount of colour gradient applied to objects. Candidates need to show how they have used some of these tools in order to complete their design to the required quality level.

**2.4 I can use appropriate scale in designs**

Candidates should be able to scale raster images and vector graphics.

**Evidence:** Candidates finished products and their documentation.

**Additional information and guidance**

Some design systems use file formats that do not allow a smooth scaling of images and candidates need to show that they understand this in principle and in practice. The use of scalable images would be a suitable choice. SVG - scalable vector graphics - should be used to design logos, diagrams and illustrations. Indeed just about anything that is not a photograph or scanned image. Any svg image is likely to be small in file size and can be scaled to any output device from high resolution images for

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paper to large screen TVs. The files stay the same size and the images will be as crisp as the display device is capable of producing. At Level 1 support will need to be provided in dealing with some effects of scaling e.g. pixelation in raster graphics.

**3. The candidate will be able to export to suitable finished states**

**3.1 I can export vector graphics to raster graphics**

Candidates should be able to work with a number of different image formats and be able to move their work between these systems as required.

**Evidence:** Candidates finished products and their documentation.

**Additional information and guidance**

Raster graphics are files also known as bitmap files. They are not good for scaling and if they are scaled, they will become blocky and unclear. The advantage is that they can be easily converted from one bitmap format to another and they are easily sourced from digital cameras eg in mobile phones. There are a large number of proprietary and incompatible vector graphic formats. For photographic images that are to be displayed in web pages .jpg should be used. Jpg (Jpeg) trades off quality against size of file. If a large high resolution image is required for professional photographic work on paper .jpg files will still be large and once reduced in file size can not be brought back to the original size and quality without the original file.

Another disadvantage of jpg is that it does not support image transparencies such that the background can show through. This means logos can be left with undesirable borders around them if they are on a background that is a different colour from the main display background. .png can be used to get around this problem because png does support transparency. Although .png files are compressed that always keep all the original data so that you can get back to the original but jpg files can be made smaller in size. This means in situations where it is critical to make the file size as small as possible e.g. when the image has to be transferred over a low bandwidth connection or storage space is at a premium, jpg will be better. GIMP [3] can edit and convert a very wide range of images between proprietary and open formats and it is free. On-line converters are also freely available. Vectors tend to be more difficult to convert between proprietary formats and it is difficult to convert a bitmap graphic such as a jpg into a vector. It is easy to convert a vector image to either a jpg or png at any chosen quality. For this reason it is best to originate designs in vectors and keep the images as vectors and only convert them to bitmaps when there is a specific need to do so. Increasingly web browsers will support vectors in the .svg format so it is good to give children and understanding of why there are important advantages in using them.

**3.2 I can follow instructions to scale images to set dimensions**

Candidates should be able to show that they can manipulate designs based on certain criteria set for them.

**Evidence:** Candidates finished products and their documentation.

**Additional information and guidance**

In many cases, designs will be presented to candidates from companies with vary particular needs. Most companies have very detailed branding requirements which have to be met on any public facing designs. This might be something like the range of colours to be used or the dimensions of any logos for different purposes. Candidates need to show that they can manipulate designs to these requirements when necessary. Level 1 candidates will need structured instructions and support to carry out these operations.

**3.3 I can follow instructions to trade off image quality for reduced file size**

Candidates should be able to show that they can work to a design's needs, even if this means

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sacrificing quality.

**Evidence:** Candidates finished products and their documentation.

**Additional information and guidance**

Candidates should be able to see that their designs sometimes are the result of a trade off. If a design is destined for the Internet, then issues relating to portability and transfer can become much more important than quality issues. The candidate may have produced a stunning image for the brief, but that image may be many MB in size and therefore unworkable on many Internet connections. Furthermore there might be no visible improvement in the image quality on particular displays. The file will need to be compressed, which may lead to a reduction in quality but that might not be noticeable in which case there is no disadvantage in doing it. Candidates should be able to reflect on this and understand that compromise is often important in design situations.

**3.4 I can evaluate the finished work in relation to intentions**

Candidates should be able to show clearly that they can see the strengths and weaknesses of their model and match these to some initial design intentions they set themselves.

**Evidence:** Assessor observation and from reflections on their portfolio or blog.

**Additional information and guidance**

Candidates should be able to offer some evaluation of their work, although they may need a framework to use as reference until the master this skill. The evaluation should help them design the system more effectively next time. There is no such thing as a perfect system, so they should be encouraged that they got theirs working to a certain standard.

**3.5 I can assign a copyright license to finished work**

Candidates should be able to apply a license to their finished work.

**Evidence:** Candidate work.

**Additional information and guidance**

Candidates need to be introduced to copyright licenses and how to obtain information about these via the Internet. For example, they should make a declaration that they license their work for free use and that it is their own work and any sources of information are referenced to their owner. They should not use copyright tools or information without first gaining permission (or have it provided directly in the license). Any further local constraints can be included in this work but some description of the AUP and copyright should be present. There is no need to have a detailed understanding of very complex terms and conditions at Level 1. At this stage an overview of the main purpose and key requirements is sufficient. They should appreciate that copyright is automatically assigned to them for any original work and that they can license their work in any way they please as a result.

**Moderation/verification**

The assessor should keep a record of assessment judgements made for each candidate guided by the above guidance. Criteria should be interpreted in the context of the general descriptors of QCF Level 1 qualifications. They should make notes of any significant issues for any candidate and be in a position to advise candidates on suitable routes for progression. They must be prepared to enter into dialogue with their Account Manager and provide their assessment records to the Account Manager through the on-line mark book. They should be prepared to provide evidence as a basis for their judgements through reference to candidate e-portfolios. Before authorising certification, the Account Manager must be satisfied that the assessors judgements are sound. In the event of missing evidence, the assessor will be requested to gather appropriate information before the award can be

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made.

**Source URL:** https://theingots.org/community/sil1u105x

**Links**
[1] http://theingots.org/community/ITQ_unit_development
[2] https://theingots.org/community/handbook2
[3] http://www.gimp.org/downloads/

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