Level 3 - Unit 6 - Specialist Software (4 credits)

Platinum - Unit 6 - Specialist Software

Relevant LINKS

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Handbook home page

Overview (Under Development)

The candidate can understand and use a specialist piece of software, not covered by any other unit. This could be something like 3D animation software like Blender [2] or Accounting Software such as GnuCash [3] or even some programming language such as Ruby on Rails [4].

A work activity will typically be 'non-routine or unfamiliar' because the task or context is likely to require some preparation, clarification or research to separate the components and to identify what factors need to be considered. For example, time available, audience needs, accessibility of source, types of content, message and meaning, before an approach can be planned; and the techniques required will involve a number of steps and at times be non-routine or unfamiliar.

Example of context – an example might be creating a short animation or a design for a new kitchen for a house. The example will depend on the specialist software used.

Activities supporting the assessment of this unit **[5]**

Example of work at this level **[6] (coming soon)**

Assessor's guide to interpreting the criteria

General Information

QCF general description for Level 3 qualifications

- Achievement at QCF level 3 (EQF Level 4) reflects the ability to identify and use relevant understanding, methods and skills to complete tasks and address problems that, while well defined, have a measure of complexity. It includes taking responsibility for initiating and completing tasks and procedures as well as exercising autonomy and judgment within limited parameters. It also reflects awareness of different perspectives or approaches within an area of study or work.

- Use factual, procedural and theoretical understanding to complete tasks and address problems that, while well defined, may be complex and non-routine.

- Address problems that, while well defined, may be complex and non-routine. Identify, select and use appropriate skills, methods and procedures. Use appropriate investigation to inform actions. Review how effective methods and actions have been.

- Take responsibility for initiating and completing tasks and procedures, including, where relevant, responsibility for supervising or guiding others. Exercise autonomy and judgement within limited parameters information and ideas

Requirements

- Standards must be confirmed by a trained Platinum Level Assessor or higher
- Assessors must at a minimum record assessment judgements as entries in the on-line mark 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 and files 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 3 learner 50 hours of work to complete.

Assessment Method

Assessors can score each of the criteria N, L, S or H. N indicates no evidence. L indicates some capability but some help 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 a S on all the criteria to achieve the full award.

Expansion of the assessment criteria

1. Candidates will input and combine information using specialist software

1.1 I can input relevant information accurately so that it is ready for processing
Candidates should be able to put data into the software free from errors so that it can be processed.

Evidence: will be provided assessor feedback.

Additional information and guidance

The type of specialist software will determine the input required. If the candidate is using a specialist animation software, for example, then the shapes and coordinates they input will determine the outcome of the character they are creating. If they are using something like an

accounting software package, then the numbers will need to be in the correct format and they will need to understand something like double entry and how this will affect the way the numbers are processed. A negative number in a debit based account will act differently on that category than a negative number in a credit account etc. A specialist software for a science experiment may need the candidate to be aware of the unit of measurement or other factors, for example energy characteristics.

1.2 I can select and use appropriate techniques to link and combine information within the application and across different software applications
Candidates should be able to demonstrate that they can use the software in conjunction with other applications.

Evidence: will be provided by candidate's portfolios and assessor feedback.

Additional information and guidance

If candidates are making a game with specialist software, the game will require text based instructions, audio and graphical elements. All of these will be created in other applications and may not comply with the needs to the game engine so they would need to be adjusted. If candidates were designing something like a school building in software such as Second Life, then they would need to pull in data feeds and videos from other applications or even websites and make sure that they show properly within the confines of the game. This will require a good level of understanding and skill in linking and combining disparate data sources and formats.

2. Candidates will create and modify appropriate structures to organise and retrieve information efficiently

2.1 I can evaluate the use of software functions to structure, layout and style information
Candidates should be able to demonstrate a high level of understanding about the way a specialist piece of software needs to be used.

Evidence: will be provided by candidate's portfolios and assessor observations and feedback.

Additional information and guidance

If the software is a programming language, it will have specific structures, layouts and conventions which will need to be used. Depending on what the language is based on, i.e. a derivative of C or some other high level language, will determine this as well. If they are using some animation software, then the structure will be determined by the nature of the animation and whether they are working on a complete animation, one character or some other elements. In all cases, they should evaluate if their chosen software is the best choice for their intended outcomes and how easily they can work with the inherent structures and conventions.

2.2 I can create, change and use appropriate structures and/or layouts to organise information efficiently
Candidates should be able to demonstrate competence in the use of their specialist software.

Evidence: will be provided by candidate's portfolios and assessor observations and feedback.

Additional information and guidance

Once they have evaluated their software and are comfortable with the way it operates, they can then prove that they can use it to the best of their ability. This may be evidenced by modifying an existing output from the software application, such as extending a program in a computer software package or modifying an exiting animation to perform different actions and movements.

2.3 I can manage data files effectively, in line with local and/or legal guidelines and conventions for the storage and use of data where available

Candidates should be able to demonstrate good data management skills.

Evidence: will be provided by candidate's portfolios and assessor observations and feedback.

Additional information and guidance

All applications will have their specific ways of organising data they use and produce. Candidates need to show that they have used the on-board facilities of the application to good effect. If they are using other people's material, they need to acknowledge the source and any associated copyright or license restrictions. Using something like a game design will likely use a great deal of graphic and audio and it would be too easy to overlook copyright infringements without due care and attention. This criterion also covers good data management in terms of backups for storage and retrieval.

3. Candidates will exploit the functions of the software effectively to process and present information

3.1 I can select and use appropriate tools and techniques to edit, analyse and format information

Candidates should be able to demonstrate competence with the use of their chosen software.

Evidence: will be provided by candidate's work and assessor observations and feedback.

Additional information and guidance

For level 3, the student should be at a professional level, or very close, and should exploit the features of the software in such a way that they produce an excellent outcome. If they are developing an animated character, the character should look and move as intended and not have any noticeable problems such as misalignment of limbs or similar. With programming, there should be a minimal amount of bugs and the work should be well documented to explain what they have done and why. If using software such as Revit, their buildings should be close to being possible to build as they can make it.

3.2 I can check information meets needs, using IT tools and making corrections as necessary

Candidates should be able to demonstrate best practice in working with software.

Evidence: will be provided by assessor observations and feedback.

Additional information and guidance

As with all projects, the candidates should be working to some kind of plan or goal so that they can refer to this as they work through the exercise and not lose focus. This also allows them to get feedback during the development and after to make sure that what they have created using the software was the intended one. It needs to be free from errors so any tools such as debugging tools in programming or pre-checks in animation software should be used extensively, as well as more basic tools such as spell-checkers. If they make a game, it would be ruined if the dialog was full of spelling errors for example.

3.3 I can identify and respond appropriately to quality problems to ensure that outcomes and fit for purpose and meet needs

Candidates should be able to demonstrate good quality control procedures.

Evidence: will be provided by candidate's portfolios and assessor observations and feedback.

Additional information and guidance

As above, working to a specification and continually referring back to this will ensure that they are always on tasks and working towards an agreed outcome. This could be something that they have

agreed with a client, for example, and the client can give them detailed feedback at every stage. It might be worth using some type of system such as a project management software to track that they are meeting these elements consistently and that they are acting effectively on any guidance and feedback received.

3.4 I can select and use presentation methods to aid clarity and meaning
Candidates should be able to demonstrate a clear and understandable process and outcome.

Evidence: will be provided by candidate's portfolios and assessor observations and feedback.

Additional information and guidance

At the end of the process, they will need to present their final work and in some cases also display the journey. The way they present this information and the clarity with which they do it will greatly aid the process and the audience should be in no doubt as to the outcome being met as intended. If the project is large and complex, they will need t use judgement in decicing what to present and what to leave out.

Moderation/verification

The assessor should keep a record of assessment judgements made for each candidate and make notes of any significant issues for any candidate. They must be prepared to enter into dialog 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 and through signed witness statements associated with the criteria matching marks in the on-line markbook. Before authorizing certification, the Account Manager must be satisfied that the assessors judgements are sound.

Links
[1] http://theingots.org/community/ITQ_unit_development
[2] http://www.blender.org/manual/contents.html
[3] http://www.gnucash.org/docs.phtml
[4] http://rubyonrails.org/
[5] http://www.theingots.org/community/ITQcourse1
[6] https://theingots.org/community/sites/default/files/uploads/user4/PupilFNC7.pdf